10th International Science Congress



ISC-2022 8th & 9th December-2022

SOUVENIR

organized by

International Science Community Association (Registered under Ministry of Corporate Affairs, Government of India)

in collaboration with



Dadasaheb Jotiram Godse Arts Commerce Science College Vaduj, Khatav, Satara, Maharashtra, India ।। न हिं ज्ञानेनं सदृश्य पवित्रमिह विद्यते ।। छत्रपती शिवाजी शिक्षण मंडळाचे,

दादासाहेब जोतिराम गोडसे

आर्टस, कॉमर्स,सायन्स कॉलेज बहुज ता. खटाव जि. सातारा





अध्यक्ष मा.दादासाहेब गोडसे उपाध्यक्ष मा.पृथ्वीराज ग<u>ोडसे</u>

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ग्रंथालय

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- शासकीय शिष्यवृत्तीची सुविधा
 स्पर्धा परीक्षा मार्गदर्शन
 कमवा व शिका योजना
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 - * सुसझ संगणक कक्ष (लॅब)
 - * राष्ट्रीय सेवा योजना (एन.एस.एस.)
 - * स्पोकन इंग्लिश कोर्स

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10th International Science Congress

ISC-2022

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8th & 9th December-2022

Focal Theme Global Research on Holistic Growth and Integrated Development

SOUVENIR

Organized by

International Science Community Association

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in collaboration with

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ISC-2022 Inaugural Ceremony

Thursday, 8th December 2022, Time 10:00 am

Inauguration By

Dr. P. S. Patil

Pro Vice-Chancellor Shivaji University, Kolhapur, Maharashtra, India

Hon. Shri. Dadasaheb Jotiram Godse

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Lecturer Central Department of Botany, Tribhuvan University, Kirtipur, Kathmandu, Nepal

ISC-2022 Valedictory Ceremony

Friday, 9th December 2022, Time 03:30 pm

Felicitation By

Hon. Shri. Pruthviraj Kuber Godse

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Professor and Head, Department of Chemical Sciences, Maharaja Ranjit Singh College of Professional Sciences, Indore, MP, India



10th International Science Congress (ISC-2022)

8th - 9th December 2022

at

Dadasaheb Jatiram Godse Arts Commerce Science College

Vaduj, Khatav, Satara, Maharashtra, India

Date	08:00 am to 10:00 am	10:00 am to 11:00 am	11:00 am to 01:00 pm	01:00 pm to 02:00 pm	02:00 pm to 03:30 pm	03:30 pm to 05:00 pm	05:00 pm to 06:00 pm
8th Dec. 2022	Registration & Breakfast	Inaugural Ceremony	Plenary Sessions	Lunch & Interaction	Guest Lecture/ Oral Presentations	Oral Presentations	Tea
9th Dec. 2022	Breakfast & Poster Presentation	Oral Presentations	Oral Presentations	Lunch & Interaction	Oral Presentations	Valedictory Ceremony	Certificate Distribution & Tea

Programme Schedule

Note:

Date 8th December 2022

12:30 pm: Sectional President, Sectional Secretary, Sectional Recorders are requested to assemble in conference control room for smooth conduction of sectional program.

05:00 pm *Tea*

Date 9th December 2022

08:00 am to 10:00 am: Poster Presentation

10:00 am: Sectional Programme (oral presentation) in continuation of first day.

02:30 pm: Group Photograph

04:30 pm: Certification Distribution

11th International Science Congress (ISC-2023)

Focal Theme: Human Welfare and Global Awareness

8th and 9th December 2023

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There are twenty sections namely: 1.Agriculture, Forestry and Horticulture, 2.Animal, Veterinary and Fishery, 3.Biological Sciences, 4.Chemical Sciences, 5.Computer and Information Technology, 6.Earth and Geology, 7.Engineering, Architect and Planning (Civil, Electrical, Electronics, Mechanical, Fire, Textile, CS etc), 8.Environmental Sciences, 9.Forensic, Medical, Dental and Nursing, 10.Family, Community and Consumer, 11.Material Sciences 12.Mathematical and Statistical Sciences 13.Pharmaceutical Sciences, 14.Physical Sciences, 15.Physical Education and Sports, 16.Educational Sciences, 17.Commerce, Law and Management, 18.Library Sciences 19. Language, Literature and Culture 20.Social and Humanity: Anthropology, Behavior, Sociology, Social Work, psychology, Economics, Political Science, Geography, Drawing, Music, Dance, Philosophy, History, Journalism, Media and NGO.

Publication of Abstract in E-Souvenir with ISBN No., Publication of full papers "Research Journal of Recent Sciences"

Awards	Important Dates	
International Young Scientist Best Oral Presentation Award (Each Section) International Young Scientist Best Poster Presentation Award (Each Section) International Best Oral Presentation Award (Each Section) International Best Poster Presentation Awards (Each Section)	Submission of Abstract(E-Souvenir with ISBN) uptoEarly Registration:Acceptance of Abstract upto:Last date of Submission of Full Paper :Late registration fees	30 th November 2023 31 st May 2023 30 th November 2023 30 th November 2023 From 1 st June 2023

Before June 1 st , 2023				
	Indian	SAARC	Foreign	
Delegates	Rs. 2550/-	\$ 45	\$ 75	
Research Scholar	Rs. 2050/-	\$ 40	\$ 50	
Spouse/Others	Rs. 1550/-	\$ 30	\$ 50	
	From July 1 st , 2023 to July 31 st ,	2023		
Delegates	Rs. 2750/-	\$ 45	\$ 100	
Research Scholar	Rs. 2050/-	\$ 40	\$ 50	
Spouse/Others	Rs. 1550/-	\$ 30	\$ 50	
	From August 1 st , 2023 to August 30	th , 2023		
Delegates	Rs. 3050/-	\$ 60	\$ 125	
Research Scholar	Rs. 2250/-	\$ 50	\$ 75	
Spouse/Others	Rs. 1550/-	\$ 30	\$ 50	
	From September 1st, 2023 to September	r 31 st , 2023		
Delegates	Rs. 3250/-	\$ 60	\$ 125	
Research Scholar	Rs. 2550/-	\$ 50	\$ 75	
Spouse/Others	Rs. 1550/-	\$ 30	\$ 50	
From October 1 st , 2023 to October 31 st , 2023				
Delegates	Rs. 3550/-	\$ 75	\$ 150	
Research Scholar	Rs. 2750/-	\$ 50	\$ 100	
Spouse/Others	Rs. 1550/-	\$ 30	\$ 50	
From November 1 st , 2023 and November 30 th , 2023				
Delegates	Rs. 3750/-	\$ 75	\$ 150	
Research Scholar	Rs. 3050/-	\$ 50	\$ 100	
Spouse/Others	Rs. 2050/-	\$ 30	\$ 50	

Registration contribution from December 1st to 7th, 2023 and on the spot, visit website

6th International Young Scientist Congress (IYSC-2023)

Focal Theme: Global biodiversity and Economic development &

Workshop on Intellectual Property Rights

8thand 9th May 2023 Organized by

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There are twenty sections namely:

1.Agriculture, Forestry and Horticulture, 2.Animal, Veterinary and Fishery, 3.Biological Sciences, 4.Chemical Sciences, 5.Computer and Information Technology, 6.Earth and Geology, 7.Engineering, Energy, Architect and Planning (Civil, Electrical, Electronics, Mechanical, Fire, Textile, CS etc), 8.Environmental Sciences, 9.Forensic, Medical, Dental and Nursing, 10.Family, Community and Consumer, 11.Material Sciences 12.Mathematics and Statistics 13.Pharmaceutical Sciences, 14.Physical Sciences, 15.Physical Education, Sports and Yoga, 16.Educational Sciences, 17.Commerce, Law and Management, 18.Library Sciences 19. Language, Literature and Culture 20.Social and Humanity: Anthropology, Behavior, Sociology, Social Work, psychology, Economics, Political Science, Geography, Drawing, Music, Dance, Philosophy, History, Journalism, Media and NGO.

Abstracts will be published in Souvenir E-Souvenir ISBN 978-93-86675-90-3 Paper Publication in "Research Journal of Recent Sciences" (ISSN 22772502).

Important Dates			
Conference & workshop Date	8 th - 9 th May 2023		
Submission of Abstract (E-Souvenir with ISBN) upto	30 th April 2023	30 th April 2023	
Early Registration	31st January 2023		
Acceptance of Abstract upto	30 th April 2023		
Last date of Submission of Full Paper	30th April 2023		
Registration Contribusion for Conference and Workshop: Indian/ SAARC (I	NR), Foreign (\$)		
From 1 st Jan. to 31 st Jan. 2023	Indian / SAARC	Foreign	
Delegates/ Students/ Research Scholar	2250/-	50	
Spouse/Others	1550/-	50	
From 1 st Feb 2023 to 31 st Feb. 2023	Indian / SAARC	Foreign	
Delegates/ Students/ Research Scholar	2550/-	80	
Spouse/Others	1550/-	50	
From 1 st March 2023 to 31 st March 2023	Indian / SAARC	Foreign	
Delegates/ Students/ Research Scholar	2750/-	80	
Spouse/Others	1550/-	50	
From 1 st April 2023 to 30 th April 2023	Indian / SAARC	Foreign	
Delegates/ Students/ Research Scholar	3050/-	100	
Spouse/Others	1550/-	50	
From 1 st May 2023 to 7 th May 2023	Indian / SAARC	Foreign	
Delegates/ Students/ Research Scholar	3250/-	100	
Spouse/Others	1550/-	50	

Award: 20 International Young Scientist Award (Each Section)

Registration contribution from May 8th & 9th on the spot, visit website

Abstracts / Papers should be submitted at earliest by email:

iyscongress@isca.net.co, iyscongress@gmail.com



10th International Virtual Congress (IVC-2023)

Focal Theme: Global Research: Together, Towards, Tommorow

Workshop on Cyber Security

5th - 10th August 2023

(Online Conference and Workshop <u>www.isca.net.co</u>)

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- ✓ Paper Publication in "Research Journal of Recent Sciences" (ISSN 22772502).
- ✓ 20 International Best Presentation Award (each section)
- ✓ Two certificates (conference and workshop)
- ✓ Contribution for Fellow Contributor: INR 750, USD 30

Important Dates	
Conference and Workshop Date	5 th - 10 th August 2023
Submission of Abstract (E-Souvenir with ISBN) upto	4 th August 2023
Acceptance of Abstract upto	4th August 2023
Last date of Submission of Full Paper	4 th August 2023

Abstracts / Papers should be submitted at earliest by email: <u>conferenceivc@gmail.com</u>, <u>conferenceivc@isca.net.co</u>

Registration contribution for conference and workshop:

Upto May 31 th , 2023	Indian	SAARC	Foreign
	Rs. 1050/-	\$ 30	\$ 40
From June 1 st , 2023to June 30 th , 2023	Indian	SAARC	Foreign
	Rs. 1350/-	\$ 40	\$ 50
From July 1 st , 2023 to July 31 th , 2023	Indian	SAARC	Foreign
	Rs. 1650/-	\$ 45	\$ 80
From August 1 st , 2023 to August 4 th , 2023	Indian	SAARC	Foreign
	Rs. 2000/-	\$ 50	\$ 100
From August 5 th , 2023 to August 10 th , 2023	Indian	SAARC	Foreign
	Rs. 2250/-	\$ 50	\$ 100





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	Up to 100 pages (A4)	Rs. 3050/-	\$ 225
	Up to 200 pages (A4)	Rs. 5050/-	\$ 325
Book/Procedding/Souvenir	Up to 500 pages (A4)	Rs. 7550/-	\$ 425
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With Warm Regards Dr. Ashish Sharma Editor-in-Chief and ISCA Founder Associate Mob.: + 91- 8057083382 Email: ashishsharma34@gmail.com



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Dr. Snehal Satish Shastri Memorial Lecture

ISCA-ISC-2022-01-Plenary Session-1 Global Research on Holistic Growth and Integrated Development

Sushila Devi Shrestha

Central Department of Botany, Tribhuvan University, Kirtipur, Kathmandu, Nepal Trichandra Multiple Campus, Tribhuvan University, Kathmandu, Nepal sushilashresthab@gmail.com



Abstract: Knowledge is applied for future possibilities, growth and necessary developments. A majority of the research involved creation of a holistic innovative community development approach. It encourages effective leadership, strengths and limitations with crimeless generation. This research may contribute significantly to theoretical and practical uniqueness is reflected in the authorized perspectives. This is capacity and helping communities with holistic perspective could bring progress. The research is to develop perceptions, beliefs related to the novel role, its future in constructive world. The proposed qualitative research will be based on national and international findings revealed a remarkable variety of holistic discipline. These opportunities include different research academic and purpose of knowledge-intensive organizations. The implications of the research existence, views about future avenues explore expanding study results, professionals. Research paper has indicated that international differences in happiness, greater for life evaluations, cultures, social, institutional, and economic circumstances. Holistic growth and well-being is making interpersonal aspiration. Nation, people are able to change standards in many occasions. Much hardship, poverty, disease, war and crime makes unseen difficulties. In existence life, focusing on happiness may seem a prosperous and peaceful years.

Keywords: Happiness, Holistic, International, National, Progress.

Dr. Preeti Choudhary Memorial Lecture

ISCA-ISC-2022-02-Plenary Session-02

Innovative Trends in Traditional Research

Prof. (Dr.) Abhijit H. Joshi

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Abstract: We need a paradigm shift in the global research architecture that supports holistic growth and integrated development. Every branch of science needs integrated research mechanism to be adopted. We all are aware that the world has increasingly grown more complex and we have a lot of challenges like population explosion, climate change, virus attack, etc. But every challenge is an opportunity. A lot can be done to address such ever-growing issues with our indigenous knowledge. Our indigenous knowledge is an integral part of culture and history which enriches the overall development of people. It plays a role in conserving the nature, food production, medicine and almost every aspect of life and has an immense power to enhance the lives of people. An integrated approach towards more research in the area of indigenous knowledge will play a pivotal role in future. Unfortunately due to hostile conditions and series of invasions, the Indian traditions could not scientifically progress. There is, in fact, a lot of potential for research by using modern tools, techniques and approach. The real question is how to "translate" this potential in actual benefits to science and people. This research will surely bring about holistic growth of people and the nation.



1. Agriculture, Forestry and Horticulture

ISCA-ISC-2022-1AFH-01-Oral

Screening of different rootstocks of pomegranate (*Punica granatum* L.) against root knot nematode

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Abstract: The study on "Screening of different rootstocks of pomegranate (Punica granatum L.)" against root knot nematode" was undertaken with a view to screen the various rootstocks under sick soil (pot culture) with view to identify root knot nematode tolerant/resistant pomegranate rootstocks. The investigations was carried out at glass house, PGI, Department of Plant Pathology and Entomology and Laboratory, Department of Agriculture, Entomology, Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist. Ahmednagar, during the year 2013 -2015. Eleven rootstocks genotypes were screened and among these rootstocks four viz., Daru, Jodhpur Red, Jallore Seedless and Bedana Suri were found to be moderately resistant to rootknot nematodes Meloidogyne incognita. The lowest mortality (13.33 %) was recorded in two rootstocks viz., Bedana Suri and Yercaud and it was at par with Daru (16.67%) and Jallore Seedless (20.00%). The highest mortality (40.00 % each) was recorded in Alandi and Muscat and it was at par with Ganesh and Patna-5 (33.67% each), Kandhari and Bedana Sedana (33.33% each) and Jodhpur Red (30.00%). The mortality ranged from 13.33-40.00 %. The average range of nematode galls was 25.33-36.00. The minimum nematode galls (25.33) were recorded in Daru and it was at par with Jodhpur Red (26.00). However, the maximum nematode galls (36.00) were recorded in the rootstock Yercaud. The final minimum (3286.67) nematode count/pot was recorded in the rootstock Daru (R_{11}). However, the maximum (5860.00) nematode count/pot was recorded in the rootstock Kandhari (R₄). The final root-knot nematode count/pot ranged from 3286.67-5860.00 at the end of the experiment (180 days after sowing). Thus, it is concluded that the rootstocks viz., Daru, Jodhpur Red, Jallore Seedless and Bedana Suri were found to be moderately resistant to root-knot nematode.

Keywords: Screening, Pomegranate, Rootstocks, Root knot nematode, Resistance.

ISCA-ISC-2022-1AFH-02-Oral Effect of chemical modifications on morphological, pasting and crystalline properties of Talipot palm (*Corypha umbraculifera*) starch

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Abstract: Talipot palm is an underutilized nonconventional starch source with a higher yield (76%), which can be used as an alternative to commercially available starch. This study focuses on the effect of chemical modification by acid thinning, acetylation, and oxidation on the physicochemical, morphological, functional, crystalline, and pasting properties. The FTIR spectra of native and modified starches showed strong peaks at 3420 cm⁻¹ and 2940 cm⁻¹ are indicating characteristics of O-H stretching vibration and C-H stretching, respectively. In addition, a characteristic peak was observed at 1730 cm⁻¹ and 1240 cm⁻¹ for acetylated starches, which confirms the esterification reaction. The morphological examination is noticed that the remarkable effect of the chemical treatment on the granules. The swelling power of talipot palm was decreased after the treatment, and acid thinning caused a greater reduction in swelling power, whereas the solubility was escalated after treatment. Acid treated starch did not show any characteristic peak in the viscosity profile. Acetylatilated and oxidized starches exhibited similar pasting profiles to the native counterpart with decreased pasting temperature, peak viscosity, hold viscosity, and final viscosity. All the starches showed A-type crystalline pattern and the relative crystallinity was decreased after modification.

Keywords: Acid thinning, Oxidation, Acetylation, Swelling power, Pasting temperature, Peak viscosity.

ISCA-ISC-2022-1AFH-03-Oral

Effect of different chemicals on seed germination and vegetative growth of Chironji (*Buchanania lanzan* spreng.)

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Abstract: The investigation entitled "Effect of different chemicals on seed germination and vegetative growth of chironji (Buchanania lanzan Spreng.)" was carried out during the year 2020 with the objectives to study the effect of different



chemicals on seed germination and vegetative growth. The experiment was conducted in randomized block design with local chironji seeds which were replicated three times. The treatments given classified as T_1 - Mechanical scarification (by hammering), T₂- Luke warm water, T₃- GA₃ @ 500 ppm (24 hrs.), T₄- GA₃ @ 750 ppm (24 hrs.) T₅- GA₃ @ 1000 ppm (24 hrs.) T₆- H₂SO₄ (a) 5 % (10 min.) and Control (Untreated). Treated seeds were sown in polyethylene bags (8"x 6") at 1 cm depth which were filled with Soil + FYM + Sand as 1:1:1 proportion. These bags were kept in partial shade and gave adequate irrigation. All treatments had a significant influenced on all parameters studied. Significant difference were observed in germination parameters viz., number of days for initial and complete germination, number of seeds germinate, germination percentage, survival percentage and vegetative parameters viz., seedling height, stem diameter, number of leaves, leaf area, number of internodes, fresh shoot weight, fresh root weight, shoot: root weight ratio, shoot length, root length and shoot: root length ratio. Results indicated significant impact of different chemicals on germination parameters and vegetative parameters. The minimum (2.00) days required for initial germination and complete germination (23.67 days), maximum number of seeds germinate (35.00), germination percentage (70.66%) at 30th days after sowing and also highest survival percentage (70.66%) was recorded in mechanical scarification and it was at par with GA₃ @ 500 (24 hrs) at 120th days after sowing The vegetative parameters, maximum seedling height (10.27 cm), stem diameter (0.41 cm), number of leaves (13.40), leaf area (28.38 cm²), number of internodes (11.20), fresh shoot weight (6.76 g), fresh root weight (4.17 g), shoot length (15.73 cm), root length (39.27 cm) was recorded in mechanical scarification. However, the maximum shoot: root weight ratio (1.81) and maximum shoot: root length ratio (0.62) was recorded in GA₃ @ 500 ppm and GA₃ @ 1000 ppm respectively at 120 days.

Keywords: Chironji (Buchanania lanzan Spreng). Seed germination, GA₃ Vegetative growth.

ISCA-ISC-2022-1AFH-04-Oral Sensory quality of *Basundi* blended with sweet Potato (*Ipomoeabatatas L*.)

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Abstract: The present study entitled "Preparation of *Basundi* Blended with Sweet Potato (*Ipomoea batatas*)" was carried out in the laboratory of Department of Animal Husbandry and Dairy Science, Post Graduate Institute, MPKV, Rahuri. The levels of sweet potato pulp for final experimental trials were finalized in preliminary trials on the basis of sensory evaluation. The levels of 8, 10 and 12 per cent sweet potato pulp and 5 and 6 per cent of sugar were selected for further study. The data generated during the course of this investigation was tabulated and analyzed using Completely Randomized Design (CRD) for treatment combination. However, effect of sweet potato and sugar levels and their interaction effect were analysed by Factorial Completely Design (FCRD) with three replications. The final experimental treatments comprising control as no addition of sweet potato pulp (T₀), addition of 8% sweet potato pulp T₁ (P₁S₁) and T2 (P₁S₂), 10% sweet potato pulp T₃ (P₂S₁) and T₄ (P₂S₂), 12% sweet potato pulp T₅ (P₃S₁) and T₆ (P₃S₂) and 5 and 6% sugar were taken in the study. Experimental *basundi*samples were analysed for Sensory qualities. The mean sensory score for colour and appearance, flavour, body and texture, and overall acceptability ranged from 7.13 to 8.24, 7.27 to 8.05, 7.02 to 8.15 and 7.14 to 8.11, respectively. The treatment combinations T3 (10 per cent sweet potato and 5 per cent sugar) found sensorily superior over the rest of treatment combinations. The mean sensory score for colour and appearance, body and texture, flavour and overall acceptability showed significant (P<0.05) differences. It indicated that by addition of different levels of sweet potato pulp in the basundi, sensory quality influenced significantly.

Keywords: Sensory, quality, Basundi, sweet Potato.

ISCA-ISC-2022-1AFH-01-Poster Studies on preparation of ready-to-serve beverage from Guava (*Psidium guajava* L.)

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Abstract: The experiment titled "Studies on preparation of ready-to-serve beverage from guava (*Psidium guajava* L.)" with the objectives to standardize the recipe for preparation of ready to serve beverage, to evaluate quality parameters and to study the economics of guava ready to serve beverage. The experiment was carried out in factorial completely randomized block design (FCRD). The experiment is comprised of eighteen treatment combinations which consist of two storage conditions ambient storage (S_1) and cold storage (S_2), three pulp levels 10% (P_1), 12% (P_2) and 14% (P_3), three TSS levels 10°B (T_1),



12°B (T₂) and 14°B (T₃). The fully matured fruits of Sardar (L-49) were selected for preparation of ready-to-serve (RTS) beverage of guava. Glass bottles of 200 ml were used as a packaging material up to 90 days of storage. Prior of actual experiment, preliminary trails were conducted to standardize the levels of acidity percent and percent of black salt which were standardized to 0.40 percent and 0.2 percent, respectively. The result indicated that, the RTS with treatment $S_2P_3T_1$ (Cold storage + 14% pulp + 10 °Brix TSS) was recorded higher rating for colour, flavor, taste, texture & overall acceptability followed by $S_2P_3T_2$ (Cold Storage + 14% pulp + 12°Brix TSS) recorded the second best for above characters. During the storage period treatment $S_2P_3T_1$ (Cold storage + 14% pulp + 10 °Brix TSS) & $S_2P_3T_2$ (Cold storage + 14% pulp + 12°Brix TSS) conducted by treatment $S_2P_3T_3$ (Cold storage + 14% pulp + 14°Brix TSS) gave better performance on organoleptic characters followed by treatment $S_2P_3T_3$ (Cold storage + 14% pulp + 12°Brix TSS) whereas treatment $S_1P_2T_2$ (Ambient storage + 12% pulp + 12°Brix TSS) gave poor performance throughout the storage period.

Keywords: Guava, ready to serve beverage.

ISCA-ISC-2022-1AFH-02-Poster Introduction of local Earthworm Species for Vermicomposting, Satara

District, MS, India

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Abstract: Bioxidation and stabilisation of organic material via the cooperative action of earthworms and mesophilic microorganisms" is how vermicomposting is defined. Earthworm activity results in the production of vermicompost, which is high in macro- and micronutrients, vitamins, growth hormones, enzymes including lipase, cellulase, and chitinase, as well as immobilised microflora. Vermicomposting is carried out by exotic and local earthworm species. It was observed that local species are equally capable of converting organic waste into manure and there is scope for introduction of new indigenous species for vermicomposting.

Keywords: Vermicompost, New Species, Agriculture, Satara, Earthworm.

ISCA-ISC-2022-1AFH-03-Poster Need for apiculture activities to be restarted in Satara Tahsil, Satara district, MS, India

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Abstract: Apiculture is now a day's not practiced in many places, due to which production of fruit and crops may raise problem. It is now required to start apiculture at village level by creating awareness. This study is to identify the farmers problem regarding the apiculture practices and to help them to solving it. **Key words:** Apiculture, Farmers, Awareness, Activities, Problems.

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2. Animal, Veterinary, Fishery and Marine

ISCA-ISC-2022-2AVFM-01-Guest Speaker

Holistic approach in biological research

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Abstract: Holism in Biology is an approach that takes into account the effects of the whole organism and the environmental context in every field. Actually it is a broad or whole field of Nature or environment to consider the full range of implications of a holistic approach for every field in Biology. Nowadays plant and animal species are disappearing faster than ever recorded in history. We are to blame, but solutions are possible according to our holy books, our traditions, in our religion, but it seems as we have forgot them. This paper describes the significant role of our traditions and ethos. Actually ethos for our environmental, health and safety management. Systematic management means the application of principles of management as conveyed through ancient wisdom brought from our sacred literature. As a country whose culture has its roots in religion, it does draw its lessons from the religion of the land. Indian ethos for management has its own basic culture which is directed by our revered Vedas, Puranas, Upanishads. If we recollect the knowledge and use Natural resources in holistic way, we can save our environment. This paper presents a brief historical overview and explains some of the basic distinctions which are necessary in analyzing what holism is all about.

Keywords: Holistic, Biology, Implication, Ethos, Sacred.

ISCA-ISC-2022-2AVFM-01-Oral Effect of replacement of concentrate mixture by hydroponic maize fodder on blood serum profile of Sangamneri Goats

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Abstract: The experiment was conducted to study the "Effect of replacement of concentrate mixture by hydroponic maize fodder on blood serum profile of Sangamneri goats" at AICRP on Goat Improvement and Department of Animal Husbandry and Dairy Science, MPKV, Rahuri. Thirty Sangamneri male goat kids of same age and weight were allotted in treatments T₀. T₁, T₂, T₃ and T₄ replaced 0, 20, 40, 60 and 80 % concentrate by hydroponic maize fodder, (soybean straw, Lucerne and Green Maize fed in equal amount to all treatments. Serum albumin (gm/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 2.41 - 2.59 gm/dl. Serum globulin (gm/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 3.78 – 4.08 gm/dl. Serum blood urea nitrogen (mg/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 13.73 – 15.46 mg/dl. Serum protein (gm/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 6.16 - 6.60 gm/dl. Serum cholesterol (mg/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 82.25 - 90.79 mg/dl. Serum triglyceride(mg/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 54.72 -59.08 mg/dl. Serum uric acid (mg/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 0.44 – 0.52mg/dl. Serum creatinine (mg/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 1.07 – 1.27 mg/dl. Serum glucose (mg/dl) in all treatments for the period 0, 30, 60 & 90 days average ranged from 51.81 – 54.88 mg/dl. The blood serum profile (albumin, globulin, blood urea nitrogen, total protein, cholesterol, triglycerides, uric acid, creatinine and glucose) does not influence by replacing concentrate with hydroponic maize fodder. Keywords: Hydroponic maize, Blood serum profile and Sangamneri goat.

ISCA-ISC-2022-2AVFM-02-Oral

Status of Dairy Farmers in Bhokardan Tehsil of Jalna District, India

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Abstract: The present investigation entitled "Status of Dairy farmers in Bhokardan Tehsil of Jalna District" was collected from farmers from a Bhokardan Tehsil of Jalna district in Maharashtra. To study the feeding status of dairy animals in respect to concentrate, green and dry roughages and to suggest the recommended practices of feeding for higher milk production, and to identify the constraints in feeding. Random selection of 10 villages made with 20 livestock owners in Bhokardan Tehsils.



Thus, the total sample size comprised of 200 farmers. Most farmers (34.50 per cent) engaged in dairy business was between 31-40 years of age. Mainly illiterate (18.50 per cent) and persons with only primary to secondary level of education (64 per cent) were engaged in dairy business. Dairy farmers possessing 1-2 milch buffaloes, crossbred and indigenous cow share to the extent of 64.24, 82.50 and 80.27 per cent respectively. People prefer stall feeding over grazing. Dairy farmers use their cultivated field bunds as grazing site and specific grazing land was available in the area. (79.00 per cent) Dairy farmers were also engaged in agriculture and dairy is their secondary source of income after agriculture. There was a huge gap of about (94.25 per cent) found mineral mixture feeding. Followed by urea treatment to poor quality roughages *i.e.* (92.00 per cent). And minimum gap of about (15.50 per cent) was seen in providing clean and fresh water to the animals. Most of marginal dairy farmers *i.e.* (89.60 per cent) dairy farmers expect ensured supply of feed and fodder. Thereafter (83.72 per cent) dairy farmers expect easy loan facilities and (88.00 per cent) dairy farmers expect timely receipt of milk sale. High cost of animal feed, Unavailability of proven sire, inadequate availability of green and dry fodder around the year and less availability of veterinary hospitals were the major problems faced by the farmers.

ISCA-ISC-2022-2AVFM-03-Oral

Study on diversity and relative abundance of insects from Nashik region, Maharashtra, India

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Abstract: Insects represent the most species rich taxa of the animal kingdom. They are extremely important ecosystem components and help to perform various activities which are necessary for an ecological balance. Insect fauna are found almost everywhere but their abundance and diversity in some terrestrial ecosystems is still unknown. They have significant influence on agriculture, human health and natural resources. During this study several species of insects were collected from various habitats like grasslands, agricultural fields etc. The present study reveal that to assess and compare the abundance, species richness and diversity of insects from Chamber leni, Nashik. At the foot of this place is a beautiful garden, grassland area and agricultural fields are present. There is a total 39 insects species under 7 orders and 6 families were collected from study area. Based on the data, order Hemiptera was found to be the dominant order with 12 species, followed by Lepidoptera and Orthoptera with 5 species each, Diptera with 7 species, Coleoptera with 6 species, Odonata with 2 species and Dictyoptera with 2 species. The diverse habitats present in the study area to provide a favorable climate for insects. **Keywords:** Taxa, Ecological, Terrestrial, Abundance, Dominant, Chamber Leni, Grassland.

ISCA-ISC-2022-2AVFM-04-Oral

Heterogeneity of Plant Bugs (Hemiptera- Heteroptera) from Kalwan taluka, Nashik district, Maharashtra, India

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Abstract: Plant bug are belonging to the order Hemiptera class insecta and phylum Arthropoda. Hemiptera is fifth largest group and diversified order included in class insecta. Hemiptera play a key role in pollination and detrimental effects by feeding on trees. Their body size ranges from less than 1mm to 10cm. Heteropterans live in virtually all terrestrial and aquatic ecosystem. Hemiptera has piercing and sucking type of mouthparts, which are well adapted for drawing sap from plants and blood from the animals. Plant Bugs show hemimetabolous type of metamorphosis as the nymphal stages having great resemblance in structure that of adult. Hemiptera order has been deliberated by many peasants but the important contribution given by Distant.Present survey deals with the assortment of Plant bugs (Hemiptera- Heteroptera) from Kalwan taluka, Nashik district of Maharashtra. During the year 2020-2021. Kalwan is a small city in northern Maharashtra located very close border state of Gujrat, about 40 miles north from city of Nashik having latitude 20.4891°N and longitude 74.0271°E. Black soil and enough water are available for cultivation of crash crop, due to which many insects are attracted on plants. The Taxonomic survey was focused on order Hemiptera such as family Coreidae, Pentatomoidae, Pyrrhocoridae and Reduviidae. In the study period total 10species were recorded. Out of these families, the members of family Pentatomidae were found to be maximum. The superfamily Pentatomidae are commonly known as stink bugs, they are mostly phytophagous in nature. A presence large scutellum is special characteristic of this bugs.

Keywords: Assortment, Hemiptera, Coreidae, Piercing, Pentatomoidae.



ISCA-ISC-2022-2AVFM-05-Oral Studies of Beetles Diversity from Igatpuri taluka, Nashik district, Maharashtra, India

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Abstract: The beetle belonging to dominant ordercoleoptera of animal kingdom. Beetles are found everywhere in nature habitats except marine and the polar region. The Beetles has hard sheathed forewings formed. Besides the pest, most of beetles acts as beneficial insects, they also act as predator, improving soil fertility and protect livestock health. The present beetles diversity study was carried out from Igatpuri taluka Nashik district Maharashtra. The present study during the year 2019-2020. Igatpuri is a city and boom town in the Western Ghats mountains of Maharashtra. Igatpuri is near by the highest peaks in Sahyadri that is western Ghats, most of them forts bullied inSatavahana dynasty. The geographical location of Igatpuri altitude 19.6963°N to and longitude 73.5611°E. It is 45 km away from Nashik and 130 km from Mumbai. Igatpuriareaconsistsof sloping agriculture land, tropical dense forest therefore fully rich vast diverse variety of beetles, flowering plants, agricultural crops. The proposed study fulfills the knowledge about diversity for organisms at the order level of beetles. Beetle are important controls of agricultural pests. The survey focused on the order coleoptera such as family Coccinellidae, Meleoidae, Scarabaeidae andCereambycidae were reported. In the study period total 15 species were reported from four families.

Keywords: Coleoptera, Scarabaeidae, beetles, Coccinellidae, Meleoidae.

ISCA-ISC-2022-2AVFM-06-Oral

Length–Weight Relationships of *Salmostoma boopis* (Day, 1874) from Bhima River, India

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Abstract: Fish morphometric measures and the connection between length and weight play a significant role in the evaluation of taxonomic and biological research on fish. The link between length and weight reveals details about the health and growth habits of fish. Fish biologists frequently conduct length-weight relationship (LWR) studies because they can shed light on the dynamics of fish populations and the growth patterns of fish stocks. Salmostoma boopis is small indigenous fish native to Indian fresh water. It is found abundantly in the catch of fishermen from Bhima river of Maharashtra throughout the year. Salmostoma boopis from the Bhima river at the Hatwalan site were included in the length-weight connections in the current study. A total of 131 specimens were taken between April 2021 and March 2022 to examine the correlations between length and weight (LWRs). The slope ('b' value) was determined to be 2.84, whereas the intercept ('a' value) was 0.009. S. boopis has a b value less than 3, which indicates negative allometry, according to the LWRs study of the species, even if these values are within the predicted range (2.5 to 3.5). The R² value for the species in the current study was discovered to be more than 0.80, which showed the model's suitable fitness for growth and good health.

Keywords: Length-weight relationship, Salmostoma boopis, Conservation, Bhima river

ISCA-ISC-2022-2AVFM-07-Oral

Length weight relationship of small indigenous fish *Parambassis ranga* (Hamilton, 1822) from Ujani wetland of Maharashtra, India

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Abstract: Length-weight relationship parameters are useful in fisheries science to estimate weight of individual fish from its length. It can always be used for evaluating condition indices and to compare life history and morphology of populations of given species. Fish can attain either isometric growth, negative allometric growth or positive allometric growth. These growth patterns are associated with no change in body shape as fish grows, shape becomes slender as it increases in weight



and becomes relatively stouter as it increases in length. *Parambassis ranga* commonly called Indian glassy fish was investigated for the study of length-weight relationships (LWRs) from Ujani wetland, a dam constructed on Bhima river of Maharashtra state of India. During the study period of November 2021 to October 2022, total of 300 samples were collected from local fishermen. During the present study intercept (a value) was found to be 0.0089 and slope (b value) was 3.2303 which is in expected range of 2.5 to 3.5. The slope value was more than 3 i.e. above isometric growth that indicates positive allometric growth of fish in habitat. The r^2 value for goodness of species was found to be 0.909 that indicates wellness of species.

Keywords: Parambassis ranga, Ujani wetland, Length- weight relationship, small indigenous fish.

ISCA-ISC-2022-2AVFM-01-Poster Studies on feeding of azolla meal on growth performance of kadaknath poultry

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Abstract: The present investigation entitled "Studies on feeding of Azolla meal on growth performance of Kadaknath poultry" was carried out to assess the effect of Azolla meal on Body weight, Dressing percentage and Economics of Kadaknath poultry bird's production. 192, Chicks of day old straight run commercial Kadaknath breed were procured from Government hatchery, Nagpur (Maharashtra). They were randomly and equally distributed into four treatment groups T1, T2, T3 and T4 with 48 numbers of chicks in each group. Azolla meal was added in experimental ration at different levels. The dietary treatments consisted of one basal control (T1), supplemented with 2.5% Azolla meal (T2), 5% Azolla meal (T3) and 7.5% Azolla meal (T4). The corresponding average live body weights at the end of eighth week of age were 701.50, 736.25, 787.72 and 846.35 gm for treatment T1, T2, T3 and T4, respectively. The average weekly body weight gains at eighth week of age were 112.24, 120.43, 132.92 and 148.20 gm. for treatment T1, T2, T3 and T4, respectively. The average dressing percentage among the different treatment groups varied between 70.54 to 73.24 per cent. Numerically higher dressing percentage was recorded in treatment T4 (73.24). The net profit per bird was highest in T4 (Rs. 257.42), T3 (Rs. 233.21), T2 (Rs. 210.35) and T1 (Rs. 194.17). The result therefore concludes that supplementation of 7.5 per cent dried Azolla meal was beneficial to improve the growth performance of birds.

Keywords: Azolla meal, growth rate, dressing percentage and Kadaknath poultry.

ISCA-ISC-2022-2AVFM-02-Poster

Diversity of Millipedes from Satara region, Satara district, MS, India

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Abstract: Class diplopoda is the world's third largest group of species behind Insecta and arachnida. It includes class diplopoda, chilopoda, Pauropoda and symphyla. Class diplopoda also called as millipede are detritivorous and are found in damp and shady places. They are slow moving and multi-legged arthropods. Behind the annelids they are second forest decomposers. Class diplopoda is one of the most neglected group of species because of its habitat and nocturnal nature of most of species. A comprehensive study of this subject is essential, and millipede conservation measures need to be taken. **Keywords:** Millipede, Decomposers, Diversity, Conservation, Satara Region.





3. Biological Sciences

ISCA-ISC-2022-3BS-01-Guest Speaker

Next Generation Bio-Nanocomposites based on animal Originated Materials: A promising answer to the Evolving Threats of human Health and Environment

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Abstract: Based on scenarios of rising drug resistance in pathogens, WHO estimated that, the burden of deaths from antimicrobial resistance (AMR) could balloon to 10 million lives each year by 2050. On this basis, by 2050, the death toll could be a staggering one person / three seconds. As antibiotics available to us become less effective, risks of many treatments which rely upon antibiotics becomes higher. In addition to AMR, other health related problems includes cancer, presence of toxic compounds including metals and pesticides in water, insect originated diseases like zika virus, dengue, malaria etc. are increasing at alarming rate. The amalgamation of nano-technology with biology has opened up immense opportunity in this direction including fighting with antibiotic resistant microorganisms, production of nano based anticancer drugs, effective against insect vectors, development of simple colorimetric sensors for on-site detection of metals and pesticides in water. Hence it was felt that, search for innovative materials became predominant part of recent research related to nanotechnology. Until now, around 1814 nano based products are manufactured and marketed worldwide. Recently most of the researchers are working in the field of nanoscience are influenced by 'Green Nanotechnology' (GN). There are plenty of reasons why researchers are focusing on green nanotechnology rather than conventional chemical and physical methods of nanoparticle synthesis, which mainly includes increased production cost, cyto-toxicity, phyto-toxicity, ecosystem hazards, production of hazardous by-products etc. In green nanotechnology, researchers are using plethora of biological materials mainly plants, micro-organisms, algae etc. for synthesis of nanoparticles. But use of plants and plant products for nanoparticle synthesis at mass scale requires huge plant materials which ultimately results in over exploitation of forest ecosystem. The use of micro-organisms and algae requires costly nutrient mediums and automatically increases cost of products. Hitherto, rarely animal waste, animal by-products are used in green nanotechnology. Application of animal byproducts or metabolites has a great opportunity in synthesis of bio-nanocomposites. As animal by-products or metabolites contains prosperity of biomolecules like proteins, amino acids which acts as capping and reducing agents. In our recent research work we successfully used metabolites of insects like B. mori and animals like A. fulica for the synthesis of different types of bio-nanocomposites. The as synthesized animal metabolite based bio-nanocomposites were used for different pharmaceutical activities like antimicrobial and anticancer as well as for larvicidal activity against zika virus vector A. *aegypti*. We also studied the potential of these nanocomposites for developing the colorimetric biosensor to detect environmental, soil and water pollutants like metals and pesticides from agricultural products. Furthermore, we developed alcohol free bio-nano based hand-wash, reusable masks and fruit & vegetable disinfectants.

Keywards: Biomaterials, metabolites, Bio-nanocomposites, Green nanotechnology, Healthcare, Biosensor.

ISCA-ISC-2022-3BS-01-Oral

Characterization of two noteworthy medicinal plants of Fabaceae family

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Abstract: The chemical characterization of the leaves of *Bahunia variegata* and *Sesbania grandiflora* of Fabaceae family were carried out to evaluate its bioactive potential. Fresh leaves of these plants were collected and powdered for analysis. The proximate analysis of the leaves showed that the proportion of moisture content, volatile matter, ash content and fixed carbon were 5, 63, 18 and 14% respectively in *Bahunia variegata* and 5.16%, 67.4%, 17.64% and 9.8% respectively in *Sesbania grandiflora*. The results of FTIR revealed the strong bonds between C-H, C-H, C=C, N-O, O-H, S=O, C-H and C-Br at peak value 2916.43, 2848.71, 1627.24, 1545.85, 1315.85, 1031.72, 777.91 and 667.25 cm⁻¹ respectively in *Bahunia* and C-H, C-H, C=O, N-H, C-H, S=O, C=C, C=C and C-Br at the peak value of 2916.16, 2848.52, 1723.17, 1589.17, 1382.499, 1058.32, 815.87, 708.97 and 629.57 cm⁻¹ respectively in *Sesbania*. The results of TGA depicts that the highest weight loss occurred at temperature of 489.09°C in *Bahunia* and486.64°C in *Sesbania*. The samples were also subjected to SEM, EDS and XRF analysis that were used to investigate the microstructure and the chemistry of range of material. These medicinal plants were widely used in traditional health system and with the execution of the study, it was confirmed that the leaves of selected



medicinal plants are potential source of bioactive compounds that are important for the well being of humans. These plants might become pharmacologically important as well as confirm the medicinal practices used by earlier studies. **Keywords**: Proximate Analysis, FTIR, TGA, SEM, medicinal plant.

ISCA-ISC-2022-3BS-02-Oral

ISC-2022

Approaches to develop weeds as Antimicrobials

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Abstract: The evolution of antibacterial agent resistance is a serious issue for human health. The need for new medications to address this issue is consequently great, yet as history shows, the time it takes for new medications to acquire resistance is frequently brief. Conventionally, Antibacterial medications have been created based on their capacity to prevent bacterial growth, which continues to be the foundation of most methods for finding novel antimicrobial drugs. This review article focuses on the use of weeds as antimicrobials and methods to create newer, more effective ones. A weed is usually outlined as a plant that grows out of place and is competitive, persistent and pernicious. Weeds are always a part of civilization and history speaks that humans have been always battling weeds within the crops they grow. Therefore, utilizing antimicrobial properties of weeds will be boon to human beings. In this regard we are utilizing *Ipomoea cairica* plant as antimicrobial agent for *Escherichia coli, Salmonella typhi, Aspergillus niger* and *Penicillium chrysogenum*. **Keywords:** Antimicrobials.

ISCA-ISC-2022-3BS-03-Oral

The protein contents of Black Soldier Fly (BSF), *Hermetia illucens* (L) reared on sericultural waste material (excreta of Silkworm Larvae, litter of mulberry leaves in rearing bed, dead larvae and dead pupae of Silkworm)

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Abstract: Attempt deals with rearing of Black Soldier Fly (BSF), *Hermetiaillucens* (L) reared on Excreta of Silkworm Larvae, Litter of mulberry leaves in rearing bed, dead larvae and dead pupae of Silkworm. The larval weight of BSF of the control group (Reared on Poultry Feed), first group (reared on Excreta of Silkworm), second group (reared on Litter of mulberry leaves in rearing bed of Silkworm Larvae), third group (reared on the dead larvae of Silkworm) and fourth group (reared on the dead pupae of Silkworm) on twenty first day was found measured 354.81 (\pm 39.82), 426.76 (\pm 112.78), 493.49 (\pm 91.786), 589.48 (\pm 77.413) and 786.32 (\pm 89.886) mg respectively. The Total protein contents and soluble proteins of whole-body BSF of control group on twenty first day were found measured 119.93 (\pm 39.82) units and 168.93 (\pm 31.259) units respectively. The percentage change (increase) in the total protein and soluble proteins contents of whole-body homogenate of larval stages of BSF of the first, second, third and fourth groups was 77.878 and 16.279; 106.387 and 23.352; 147.96 and 50.221; 146.49 and 69.469 respectively. Utilization of BSF for treating the seri-waste is environmentally protective and exert significant influence on production of protein rich biomass.

Keywords: Excreta of Silkworm Larvae, Litter of mulberry leaves, dead larvae, dead pupae of Silkworm and *Hermetiaillucens* (L).

ISCA-ISC-2022-3BS-04-Oral

Biodiversity of Bhakuchi Wadi wetland of Sangli District, Maharashtra, India

Alka Inamdr

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Abstract: The wetlands are suitable habitats for variety of animals, birds and many aquatic plant forms, which form a typical food chain, food web and all responsible for several biological products. These fresh water ecosystems are very important in



relation to their biological and ecological function. The poor growth of aquatic macrophytes in studied reservoir. It may be attributed to its rocky bottom. In aquatic ecosystem, the phytoplankton play an important role of primary producers. They have a unique ability to fix inorganic carbon to build up organic substances through primary production. In Chlorophyceae 16 genera were recorded over 21 species. The Cyanophyceae represented by 7 genera and 7 species. Bacillariophyceae represented by 5 species. and Dinophyceae was represented by 3 species. The reservoir is secondarily being used for reservoir capture fishery. The aquatic birds were observed in the vicinity of Bhakuchi wadi reservoir. Total 23 species of local and migratory aquatic birds were observed such as cormorant, herons, gees, egrets and ducks. Attempts have been made to observe the diversity of macrophytes, phytoplankton, fish diversity and birds to obtain the baseline data from Bhakuchi wadi reservoir of Sangli district for the period of June 2018 to May 2020.

Keywords: Biodiversity, Bhakuchi wadi reservoir, Sangli district, macrophytes, phytoplankton and birds.

ISCA-ISC-2022-3BS-05-Oral Prevalence of Muscardine disease in different silkworm hybrids (Bombyx mori L.)

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Abstract: A study was conducted in Dr. Babasaheb Ambedkar Marathwada University campus Aurangabad, Maharashtra State, India for analyzing the prevalence of Mascardine disease during the rainy, winter and summer season in bivoltine x bivoltine hybrids viz. CSR2 x CSR4, CSR4 x CS2 and multi X bivoltine hybrid PM x CSR2 Observation on Muscardine disease was recoded till the onset of spinning. Analysis of results shows that disease prevalence was more in bivoltine x bivoltine hybrids compare to multi x bivoltine hybrids. PM x CSR2 was found to be more resistant towards Muscardine disease compared to other hybrids under agro climatic conditions of Aurangabad.

Key words: Muscardine, Silkworm, Bombyx mori L., Agro climatic conditions, Aurangabad.

ISCA-ISC-2022-3BS-06-Oral

Achieving food sustainability through sustainable Diets: Way to a sustainable future

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Abstract: Attaining food sustainability has become an urgent need to ensure a healthy life for present and future generations. The Sustainable Development Goals adopted by United Nations in 2015 also emphasize on the importance of sustainable food systems so that by 2030 the entire mankind can enjoy health, peace & prosperity. A greater part ofworldtoday is affected by various health disorders like Obesity, Diabetes, CVDs, micronutrient deficiencies, under nutrition, etc - showing the need to reform the current food systems.Proper nutrition education & establishment of sustainable food practices can reduce the incidence rateof such disorders.Sustainable diets focus on encouraging food habits that are nutritionally adequate,affordable, and culturally acceptable and are environment friendly.The present paper highlights on achieving food sustainability with the help of sustainable diets and minimizing the impact on environment by adopting local food & dietary practices.This thus will help to establish a sense of food and health security worldwide therefore leading to a sustainable future. **Keywords:** Food sustainability, Health, Local food, Nutrition, Sustainable diets.

ISCA-ISC-2022-3BS-07-Oral

Study of diversity and abundance of zooplankton in and around Karjat, Dist. Ahmednagar, India

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Abstract: The Diversity of zooplankton and distribution was studied in and around Karjat city, Dist. Ahmednagar. Between June 2021 and May 2022. Sample were collected from the many samplingstations of Diches, in and around Karjat, Dist Ahmednagar, Maharashtra, India. The water was collected directly from each selected sampling site of Diches. The samples were transferred to the bottle and brought to the laboratory with outdisturbances. The water samples were collected by



weekly intervals from the sampling site for a periodof Monsoon to winter. Sample were collected by using plankton collecting net with 50 ml bottle attached to the apex. collected sample were preserved in 10% formalin and plankton were observed and identified under the microscope with its standardidentification and its monographs as well as keys which were suggested by APHA. The zooplanktonic study from in and around Karjat had been distributed into 4 groups i.e. Protozoans, Rotifers, Cladocera and Copepod. The distribution of various species depended the physic-chemical parameter such as temperature, conductivity, pH, chloride, and free CO_2 content of water. In the present study, among all groups of zooplanktons, the Rotifers was found dominant in all groups. The local hydrological catchment regions induce more or less temporary floor within dichesthere by controlling the production of soil humidity indicates that was also present some physicochemical similarities with small lake and streams beaches are unique ecosystemcombining wetland and stream characteristics the ditches ecosystem including beds sidewas and margins provide stratification of microhabitat ranging from aquatic to wetland and terrestrial type. In term relative abundance of zooplankton, the area near town recorded the highest abundance, followed by area of away from town were low population. The spatial distribution of zooplankton revealed that the highest number of zooplankton species (32.20%) was recorded near town.

Keyword: Zooplankton diversity, Abundance, Karjat Dist. Ahmednagar.

ISCA-ISC-2022-3BS-08-Oral

ISCA-ISC-2022-3BS-09-Oral

Mate locating behaviour of hypolimnas bolina and hypolimnas misippus

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Abstract: Researchers have been attracted to butterflies since ages and aspire to learn more about them whether it is their life cycle, habitat association or courtship behavior. In this paper mate locating behaviour of two butterflies of genus Hypolimnas i.e. Hypolimnas bolina and Hypolimnas misippus have been studied. The reasons to choose these two butterflies are – i. They show a well marked sexual dimorphism, ii. The females of both the species show mimicry. The male Hypolimnas bolina is black in colour with white egg-spots two on forewing and one on hind wing with a blue border, While, the female resembles members of genus Euploea (common crow). Similarly a male of hypolimnas misippus is black with prominent egg-spot with borders while female resembles butterflies of genus chrysippus (plain tiger). During the study attempts were made to find answer to the following questions – i. In the mate locating behavior of genus hypolimnas what is more important visual cues or chemical cues? ii. Preferencial bias of male butterflies to physical characteristics like size and colour. iii. Can strong chemical cues overcome shortcomings of physical characteristics? For the study hypolimnas butterfly dummies were used. These butterfly dummies were made from a coloured printout of butterfly picture cut and paste on a stick. Five dummies of varying sizes and five dummies of varying colour were prepared for both hypolimnas species. Dummies of 5 different sizes were used. one with the original size as that of the butterfly, two bigger and two smaller than the original butterfly in order to observe their preferences to a particular size. Similarly, dummies of different colours were made the one with the true colour, two darker and two lighter than the original. These dummies were kept in the field to study the mate locating behavior. During the experiments it was found that male prefer the bigger and brighter dummies but never tried to copulate them until they were rubbed with a live butterfly in order to transfer pheromones.

Keywords: Mate locating behavior, mimicry, visual cues, pheromones.

Effect of Air Pollution on Fruiting, Seed Setting and Morphology of Plants Species in Indore City, India

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Abstract: Post independence rapid industrial development in India has changed the entire national scenario. The population density has also greatly increased around industrial and urban areas; people have adopted faster means of transportation, thus the number of auto-vehicles increased beyond imagination. All these activities have posed a serious air pollution problem in and around urban areas. The ambient air quality is greatly deteriorated and adversely affecting the growth and development of all life forms. Plants are also responding to this deteriorated air quality by showing reduced growth even at very low concentration of air pollutants. The urban air contains different primary and secondary pollutants, such as SO_2 , NO_x , CO, CO_2 , O_3 , and particulates. The concentration of photochemical oxidants like ozone is also increasing day by day in urban ambient air.

Keywords: Air Pollution, Ambient Air Quality, Viability, Fruiting, Counting.



ISCA-ISC-2022-3BS-10-Oral

Dynamics of Epimorphic Regeneration in Planaria

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Abstract: In Recent years stem cell research has been very promising and advance scientific arena due to emergence of new diseases. *Planaria* (Phylum: Platyhelminthes) flatworms constituting of Neoblasts responsible for characteristic process of regeneration. *Planaria* neuronal regeneration as compared to epimorphic regeneration in other model organisms shows better promise in stem cell research. Present study focuses on morphollactic regenerative potential of *Planaria* with respect to nervous system and its wide range of applications in regenerative medicine. Collection of *Planaria* was done from various freshwater stations around Pune. Culture was maintained using distilled water in aerated tanks to prepare and cultivate *Planaria* neells in dark and asexual conditions and were fed with sheep liver and egg yolk. Sequential cuts along different axis were made for regenerative studies. They were examined for span of 15 days. *Planaria* regeneration was examined using different stimulants and there effect was studied. Present study infers that the neuronal regeneration can have applications in stem cell research and regenerative medicine. Induced and facilitated regeneration was studied. Cell signaling pathways and roles in *Planaria* neoblast arrangement can aid in studies of cancer biology, regenerative medicine and stem cell therapy. *Planaria* may emerge as an effective model organism for studies in studies cell research.

Keywords: Neoblasts, Regeneration, Planaria, Regenerative medicine, Morphollactic regeneration.

ISCA-ISC-2022-3BS-11-Oral

A Study on Characteristics of fish mucus and their Antifungal activity

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Abstract: In their aquatic habitat, the fishes are simultaneously exposed to environments comprising various pathogenic micro-organisms, so that they need a constant mechanism to combat these pathogens and eliminate potential infections. The integumentary layer in fishes is not only the main surface of exchange between them and the external environment, but they also possess other important functions, including the protection of fish from pathogenic attacks. Recently, the integumentary mucus of the fishes has gained importance in the field of biomedical research, because of its ability to tackle infections caused by bacteria, viruses, and fungi, by providing innate immunity to the fishes. It is being studied for its potential applications in human medicine. This review outlines the potency of fish skin mucus, as an important and effective source of antifungal drugs against several human pathogens and the treatment of their resulting clinical infections.

Keywords: Mucin, Antimicrobial peptide, Immunological defence, Epithelial cells, Viscous colloid.

ISCA-ISC-2022-3BS-12-Oral

Study of Rare Snakes species Diversity in Satara district, MS, India

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Abstract: The Satara district Maharashtra has a good cover of forest with places of habitat to support the wildlife several groups of animals are recorded in this area and have always been attracted to researchers. Among them snakes is definitely a focus of a great fascination. They are widely distributed but rarely observed faunal species. In Satara district observed a total 07 species of rare observed snakes belonging to seven families in which 03 species are non-venomous, 02 species semi venomous and 02 are venomous snakes.

Keywords: Diversity, Rare snakes, Satara, Maharashtra.

ISCA-ISC-2022-3BS-01-Poster

Strategies for crystal violet dye sorption on biochar derived from Seaweed and evaluation of residual dye toxicity

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Abstract: The present study aimed to determine the sorption behavior of crystal violet (CV) dye on Seaweed Biochar (SWB) prepared at 400°C, 600°C, 800°C and 1000°C. Specimen of brown seaweed Sargassum Spp. was collected form Malvan coast, Maharashtra. They were washed thoroughly initially with seawater on the spot and finally with fresh water in the



laboratory to remove sand particles and macroscopic epiphytes. They were shade dried for 4 days, followed by oven dry for 12 h at 60°C. Then the material was hand crushed and using a mixer grinder it was converted to coarse powder. This coarse powder was taken for the preparation of biochar. Maximum sorption (86 %) of CV dye (2000 ppm) was demonstrated on SWB (600°C) within 75 min of incubation at pH 11 and 30°C temperature. Biochar assisted removal of dyes is one of the affordable and effective way for treatment of textile effluents. However, cheaper and commonly available feedstock material was the essential factor to treat a huge amount of generated textile effluent. In the present research attempt, biochar derived from seaweed biomass demonstrated maximum removal of CV dye at a higher concentration from the aqueous solution. **Keywords**: Biochar, Crystal violet, Sorption, Seaweed.

ISCA-ISC-2022-3BS-02-Poster The Zingiberene for the silk yield in Silkworm, *Bombyx mori* (L) [Race: Double Hybrid - (CSR6 x CSR26) x CSR2 x CSR27)]

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Abstract: Zingiberene is constituent of *Zingiber officinale* (L), structurally monocyclic sesquiterpene and possess immense pharmacological activity. The present attempt was aimed to utilize methanol solution of zingiberene for topical application at forty-eight hours after the fourth moult to the fifth instared larvae of silkworm, *Bombyx mori* (L) [Race: Double Hybrid - (CSR6 x CSR26) x CSR2 x CSR27)]. The topical application of methanol solution of zingiberene was found significant influence on the parameters of the silk cocoon and silk fibre. The weight of whole cocoon (deflossed), silk shell weight, weight of pupa and silk shell percentage or ratio in the group recipient of topical application of methanol solution of zingiberene at 48 hours after the fourth moult was recorded 2.887^{**} (± 0.786); 0.839^{**} (± 0.158); 2.048 and 29.061^{***} respectively. The length of silk fibre (in meter); weight of silk fibre (in gram) and denier scale silk fibre obtained through reeling the cocoons harvested from the group of larvae recipient of topical application of zingiberene at 48 hours after the fourth moult were recorded 1478.36^{*} ($\pm 229.53.51$); 0.829^{**} (± 0.119) and 5.045^{***} respectively. As a terpene compound, Zingiberene shows probable activity analogous with natural Juvenile Hormone (JH) and may have future aspects of its use as growth promoting agent in silkworm, *Bombyx mori* (L).

Keywords: Zingiberene, Topical application, Methanol Solution, Bombyxmori (L),

ISCA-ISC-2022-3BS-03-Poster

Insecticidal and repellent activity of *Syzygium aromaticum* L. against Rice weevil, *Sitophilus oryzae*

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Abstract: A synthetic chemical are hazardous to human health and environmental ecosystem. In the present study to access the clove buds (*Syzygium aromaticum*) insecticidal fumigation efficacy against the rice weevil (*Sitophilus oryzae*). The experiment was conducted laboratory condition in Complete Random Method (CRM) with five different treatment of clove bud dust or powder *viz*. 1g/kg, 2g/kg, 3g/kg, 4g/kg and 5g/kg. The result showed that *Syzygium aromaticum* have oviposition and insecticidal repellent and fumigant toxicity against rice weevil (*Sitophilus oryzae*). The concentration of 0.4% was more efficient against weevil than 0.1%, 0.2%, 0.3% and 0.5% concentrations. Therefore, clove dust have ethanobotanical and effective natural alternative for the pest management against stored food grain pests without using chemical insecticides. It may more efficient than chemicals insecticides because of their economical and advantageous ethanobotanical formulation. **Keywords:** Ethanobotanical, *Syzygium aromaticum*, pest management, rice weevil.

ISCA-ISC-2022-3BS-04-Poster Floristic Inventory of Someshwar Devrai in Someshwar Science College, Someshwarnagar, Baramati, India

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Abstract: The need for conservation of biodiversity is well understood in plant researcher community. The day-by-day declining of the species diversity and narrowing of habitats of once wide spread species is the reason for fetching attention of



researcher towards most efficient way of conservation i.e. ex-situ conservation. The feasibility of ex-situ conservation is due to the easy monitoring of germplasm of plant species into a controlled area. Ajit Dada Udyan's Someshwar Devrai was developed with the motive of ex-situ conservation. This research papers comprises inventorying of 102 plant species that were planted in Someshwar Devrai premises.

Keywords: Floristic, Inventory, conservation, biodiversity, germplasm.

ISCA-ISC-2022-3BS-05-Poster

Plateaus of Western Ghats: Faunal Diversity and Potential Conservation Sites, Satara district, MS, India

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Abstract: Satara district is blessed with different plateau areas. It falls under the Sahyadri Sub Cluster of the Western Ghats. On the plateau areas wind mills are located for the green power generation. The land at the base of wind mill is rich in aquatic flora and fauna. As many seasonal ponds are developed. Survey of the area resulted in finding of rare animals. This area has potential of being developed in protected area or breeding of such animals. **Keywords:** Satara District, Plateau, Diversity, Fauna, Rare species.

ISCA-ISC-2022-3BS-06-Poster

Ichthyofauna of Tributary Uttarmand from Upper Krishna River of Maharashtra, India

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Abstract - Freshwater ecosystems especially rivers, streams and wetlands are highly threatened ecosystems on the earth. We sampled a tributary of River Krishna known as River Uttarmand from Maharashtra. River stretch is around 19 kms and we sampled total (SadaWaghapur, Chafal, Majgaon, Umbraj) 4 sites from August 2021 to November 2021 by usingboth gill net and cast net. We have recorded total 17 fish species belonging to 14 genera and 8 families were identified, 9 species belongs to Cyprinidae family. Two Near Threatened species, one endemic species and one invasive species are recorded during sampling. The river is being influenced by anthropogenic activity, which necessitates the implementation of conservation action plan for endangered and near-threatened fish species. This inventory provides first baseline information on fish fauna and their current status in Uttarmand River.

Keywords: Ichthyofauna, Uttarmand, Upper Krishna, tributary, anthropogenic activity, conservation.

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ISC-2022



4. Chemical Sciences

ISCA-ISC-2022-4CS-01-Guest Speaker

Adsorptive extraction of U(VI) from aqueous medium by magnetite Biocomposite

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Abstract: Water pollution from heavy metal particles and natural squanders is a major global concern. Magnetite nano composites appear to be effective adsorbents for the removal of bothersome metal particles from water. They are also promising for water cleaning because their physiochemical properties, low-cost technique, and ease of recovery in the presence of an attractive field. The aim of this study is look into the potential applications of plant-mediated magnetite bio composite adsorbents in water sanitization. The magnetite assisted plant mediated new magnetic bio composite was made in this study employing the tree bark of the *phyllanthus* family plant i.e. Amla, and a chemical co precipitation technique. The composite was successfully investigated utilizing FTIR, FE-SEM, XRD, and EDS. U (VI) extraction from aqueous solutions. The findings revealed that the pH of the solution, contact time, and initial concentration all had a substantial impact on adsorption capabilities. A higher pH (pH =7) encourages more U (VI) removal. Temperature also influences adsorption. Adsorption isotherm followed the Langmuir model among all the applied models i.e. Freundlich and Temkin isotherm The greatest adsorption capacity recorded was 121.95 mg/g, and a two-stage kinetic pattern was seen during the adsorption of uranium (VI): rather quick initial adsorption in a few minutes, followed by a large period of slower uptake. As the temperature is raised, the uranium (VI) loading per unit weight of the sorbent increased. The uranium adsorption by magnetite was efficient, with an equilibrium period of 40 minutes for uranium (VI) adsorption. To analyze the kinetic data, the pseudo-1st order kinetic model, pseudo 2nd order model, as well as intraparticle diffusion model was performed, but the pseudo 2^{nd} order kinetic performed the best. The thermodynamic parameter ΔG^0 was calculated, and uranium (VI) adsorption was validated by the negative ΔG^0 values at various temperatures, indicating that the adsorption mechanism was spontaneous. Keywords: Uranium (VI), Magnetite, Extraction, Nano Bio-composite, Aqueous phase.

ISCA-ISC-2022-4CS-01-Oral

Comparative study of in-situ synthesized silver Nano and Biancaea Sappan Extract on SA/CMC blend films

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Abstract: The main objectives of the current research were to study and compare the effect of in-situ synthesized silver nano and baincaeasappan extract on Sodium alginate (SA), Carboxymethylcellulose (CMC) biodegradable polymer blend films. It was also aimed to evaluate the physicochemical and barrier properties of in-situ synthesized silver nano (AgNPs) and baincaeasappan (P) extract on SA/CMC blend films prepared by solvent casting technique. The prepared blend films were characterized by using Fourier Transformer Infrared Spectroscopy (FTIR), and Mechanical properties (UTM). Further, Moisture Adsorption (MA), Water Solubility (WS), and Chemical Resistance (CR) were studied. The results indicated that the incorporation of silver nano and extract (SA/CMC/AgNPs/P) showed improved mechanical and barrier properties compare to SA/CMC blend films and SA/CMC/AgNPs films. The prepared blend films have the potential to serve as food packaging applications.

Keywords: Biodegradable, Silver nano, Sodium alginate, Mechanical, Barrier Properties

ISCA-ISC-2022-4CS-02-Oral

Estimation of Uranium in Rock/Soil/Fruit nearby Bodal Mines of Rajnandgaon District (India) by LED-LF-2a fluorimetry

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Abstract: A simple, rapid, cost-effective, accurate, and precise differential, laser-induced fluorimetric method (LIF-2a) for the direct determination of Uranium in rock, soil & fruits has been described. Interference studies of some common major,



minor, and trace elements likely to be present in different geological materials uranium fluorescence are studies using different fluorescence-enhancing agents like sodium pyrophosphate & orthophosphoric acid. Iron quenches uranium fluorescence when it is present above the ratio of (Iron to Uranium) 100. Uranium is separated in ethyl acetate & 2,3 Dihydroxynephtalene by solvent extraction and then striped back into pyrophosphate buffer solution(pH~7) prior to its LED-LF-2a fluorimetric determination. This method has been applied for the determination of Uranium in rock, soil, and fruits including certified reference materials with a high degree of accuracy and precision.

Keywords: Uranium; Solvent extraction; 2,3-Dihydroxynapthalene; Laser Induced fluorimeter; Mineralized rock/Soil/Fruits.

ISCA-ISC-2022-4CS-01-Poster

Development of novel ion selective electrode for the determination of magnesium in clinical samples

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Abstract: Ion selective electrodes are the electrodes that respond selectively to a particular ion in presence of others. A graphite electrode coated with polyvinyl chloride membrane containing 2-hydroxymethyl-15-crown-5 as the ionophore has been developed. The novel electrode exhibitedwide dynamic range, Nernstian slope andgood selectivity to magnesium ions with respect to alkali, alkaline earth and transition metal ions. Application of the developed electrode in the determination of magnesium in clinical samples is studied. The results obtained by using the developed magnesium selective electrode were compared with ICP-AES method.

Keywords: Magnesium, ion selective electrode, potentiometry, clinical analysis.

ISCA-ISC-2022-4CS-02-Poster Structural elucidation of oligosaccharides by partial acid hydrolysis studies from seeds polysaccharide of *Cassia glauca* Lam. Plant

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Abstract: Cassia glauca Lam. plant belongs to the Family-Caesalpiniaceae, is a large evergreen shrub uptoan 10m in height. It occurs in Himalayan region of Northern India, Malaysia, Peninsula, North Australia, Pakistan, China, South America and Tropical Asia. Bark and leaves are medically used for the treatment of diarrhoea, skin infection, diabetes, asthma and other human diseases. Seeds oils are also used in indigenous system of medicine for skin and leukoderma diseases Seeds yielded a water soluble polysaccharide as D-galactose and D-mannose in 1:4 molar ratio by TLC, Column and Paper chromatographic analysis. Present investigation mainly deals with the isolation identification, characterization and structural elucidation of oligosaccharides obtained after partial acid hydrolysis of seeds polysaccharide Seeds polysaccharide upon partial acid hydrolysis followed by column chromatography over charcoal- celite column and paper chromatography of hydrolysate afforded two disaccharides, one tetrasaccharide were characterized as. [I] 4-0- β -D- trisaccharide and mannopyranosyl-(1-4)- $O-\beta$ -D-mannopyranose; [II] 6-O- α -D-galactopyranosyl-(1-61-0- α - D-mannopyranose; [III] 6-O- α -D-galactopyranosyl-(1-61-0- α - D-galactopyranosyl-(1-61-0- α - D-galactopyranosyl-(1-61-0-6)-O- α -D-mannopyranosyl-(1-4)- O- β -D-mannopyranose and [IV] 6-O- α -D-galactopyranosyl-(1-6)-O- α -Dmannopyranosyl- $(1-4)-0-\beta$ -D-mannopyranosyl- $(1-4)-O-\beta$ -D-mannopyranose. The D-galactopyranose unit is glycosidically attached to (1-6)-D-mannopyranose units with a-type linkages at the branch of of non-reducing end residues of Dgalactopyranose. The single repeating unit D-mannopyranose units are attached by (1-4)- β -type linkages of the main polymer chain with other D-mannopyranose units. Its significance can only be adjusted in the earlier proposed structure of seeds polysaccharide of Cassia glauca Lam. plant.

Keywords: Oligosaccharides, partial acid hydrolysis, Cassia glauca Lam. Seedspolysaccharide.



ISCA-ISC-2022-4CS-03-Poster Synthesis, characterization and biological studies of Titanium (III) metal complexes of Schiff bases derived from salicylaldehyde and 2- hydroxy-1naphthaldehyde compound

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Abstract: Metal complexes of Schiff bases have played a central role in the development of coordination chemistry. Most of the bidentate Schiff bases have structures quite suitable for chelation with metal ion Studies on the chelation tendency of various organic compounds have supported the hypothesis that formation of strain free chelate rings and enhances the biological activity. The complexes of Titanium (III) with Schiff bases derived from the condensation reaction of salicylaldehyde and 2-hydroxy-1-naphthaldehyde with 3-nitro aniline, 4-nitroaniline, phenylthiourea, 3-aminophenol and 2-aminopyridine have been prepared and characterized by elemental analyses, molar conductance, magnetic properties and IR spectral data. All the six ligands function as bidentate coordinating ligands with metal ions through phenolic anionic oxygen and azomethine nitrogen. Octahedral geometry has been proposed for these metal chelates. Complexes have been screened for their antimicrobial activity.

Keywords: Synthesis, antimicrobial activity, Schiff base, octahedral.

ISCA-ISC-2022-4CS-04-Poster

Multi-component Burcherer-Bergs Synthesis of Chromene Spirohydantoins and hypoglycemic activity studies

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Abstract: A Series of Spiro hydantoins were synthesized from 4-methyl-pyrano chromenediones and carbaldehydes by modifying multicomponent standard Burcherer-Bergs conditions. Starting materials 4-methyl-pyrano chromenediones and carbaldehydes were synthesised using pechmann condensation and Vilsmayer Hack formylation from phenols. The yield increased in the modified experimental conditions to an acceptable range. Synthesized molecules were screened in vitro for their potential as hypoglycemic agents using α -amylase inhibitory assay.

Keywords: Pechmann condensation, Fries rearrangement, Chromene, Spiro hydantoin, Burcherer-Bergs, Hypoglycemic activity.

ISCA-ISC-2022-4CS-05-Poster

Adsorption of organic pollutants from contaminated water

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Abstract: Water is a limited natural resource and fundamental for life and health. Nowadays increasing public concern and regulation have challenged the environment problem associated with wastewater.Indeed the removal of contaminants from wastewater is still far away from a satisfactory solution.Different processes are used for the treatment of wastewater. However these technologies are either frequently ineffectively or they generate secondary products, they are too expensive. In fact selection of particular wastewater treatment technology should not be based on its efficiency aspects. The main objective of dissertation is the removal of various contaminants in water including metals, dyes and pharmaceuticals products, organic pollutants through environmentally – friendly technologies. The first consist in a physicochemical treatment by adsorption on activated carbon. The second is about a biological treatment. Organic pollution is the term used when large quantities of organic compounds. It origi- nates from domestic sewage, urban run-off, industrial effluents and agriculture wastewater. Sewage treatment plants and industry including food processing, pulp and paper making, agriculture and aquaculture. During the decomposition process of organic pollutants the dissolved oxygen in the receiving water may be consumed at a greater rate than it can be replenished, causing oxygen depletion and having severe consequences for the stream biota. Wastewater with organic pollutants contains large quantities of suspended solids which re- duce the light available to photosynthetic organisms and, on settling out, alter the character- istics of the river bed, rendering it an unsuitable habitat for many invertebrates. Organic pollutants include pesticides, fertilizers, hydrocarbons, phenols,



plasticizers, biphenyls, de- tergents, oils, greases, pharmaceuticals, proteins and carbohydrates. Many researches have given considerable attention aimed at establishing to the removal effi- ciency of organic pollutants by adsorption technique. To decrease treatment costs, attempts have been made to find inexpensive alternative activated carbon (AC), from waste materials of industrial, domestic and agricultural activities.

Keywords: Organic pollutants, hydrocarbons, biota, fertilizers, plasticizers, biphenyls, detergents.

ISCA-ISC-2022-4CS-06-Poster

Absorbance of natural dyes: prospects of application as sensitizer in dye sensitized solar cell

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Abstract: Natural dyes are colorants derived from plants. The majority of natural dyes are flowers from plant sources. In the present study, carotenoids, anthocyanin, lutein were extracted from crysanthemum, jatropha integerrima, ixora chinesis, calendula officinalis flowers. These dyes further were subjected to photophysical investigation. UV-Visible absorption spectroscopy indicates absorption of dyes in 400-700 nm (visible) range. Of them, maximum absorption of carotenoids dye was found in 450 nm. Such types of absorption behaviors of dyes extract from natural sources may be further used in dye sensitized solar cell in future. The conversion of solar energy to electricity utilizing solar cells represents one of the most promising and environmentally friendly methods to energy production. As a result, there have been huge efforts in a wide variety of solar cell technologies. In Dye Sensitizered Solar Cells (DSSCs), a thin film of nanoparticles of metal oxide, mostly titanium oxide (TiO₂) is synthesized on top of conducting glass electrode. The excited dye then releases electron, by photoelectric effect, which eventually reaches to the load via TiO₂ or ZnO Nano crystalline Nano crystals. With TiO₂-based dye-sensitized solar cells efficiencies of up to 11% have been obtained using standard ruthenium polypyridyl complexes as a sensitizer in the laboratory condition. While, very recently, slightly improvement in efficiency (12%) was reported with the Zn porphyrin dye. Further improvement in efficiency and durability would certainly facilitate widespread utilization of this technology.

Keywords: Natural dyes, Optical properties, Extraction, Dye sensitizer solar cell, Titanium oxide, Zinc oxide, Ruthenium polypyridyl, Fluorine dopped tin oxide (FTO) plates.

ISCA-ISC-2022-4CS-07-Poster

One POT synthesis of substituted benzimidazole derivatives and their characterization

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Abstract: Benzimidazole derivatives play an important role in medical field. The broad research in the application of benzimidazole derivatives made it important for mankind. The benzimidazole derivatives exhibits pharmacological activites such as anti-material, anti-histamine, antidibatics, anticancer, antifungal, antiviral, anti-inflammatory, analgesics anti-HIV benzimidazole and its derivatives play a very important role as therapeutic agents. The substituted benzimidazoles are summarized in this review to know about the chemistry as well as pharmacological activites.

Keywords: Benzimidazole, anti-fungal, anti-histaminic, anti-convulsant, anti-inflammatory.

ISCA-ISC-2022-4CS-08-Poster

Improve the solubility of BCS Class 2 Drug by natural Gum as enhancer with the technic of Solid Dispersion

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Abstract: In this study solid dispersions (SDs) of ibuprofen were prepared by melt dispersion technique usingnatural mucilage of Lemon seed as carrier. Physical mixtures (PMs) of ibuprofen were also prepared with the same carrier and inthesamedrug-carrierratio (1:0.5,1:1 and1:1.5) to compare the dissolution profile. The solid dispersions and physical mixtures were investigated for drug loading, saturation solubility and dissolution behavior. Saturation solubility study was carried out in phosphate buffer (pH 7.4), 0.1 N HCL solution and distilled water. Solid dispersions were found effective to enhance the



solubility of ibuprofen significantly in all the media. Dissolution test was carried out in two different media, phosphate buffer (pH 7.4) and 0.1 N HCl. Solid dispersion containingLemon seed mucilage at the ratio of 1:1.5 (drug: carrier) showed faster and higher drug release and was found to be most effective among all the solid dispersions. Drug carrier interactions were studied by comparing Fourier Transform Infrared Spectroscopy (FT-IR) of solid dispersions with pure drug which revealed that the SDs were stable. So, solid dispersion may bean effective technique to enhance dissolution rate of ibuprofen. **Keywords:** Ibuprofen, Lemon seed mucilage, solid dispersion, saturation solubility.

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6. Earth and Geological Sciences

ISCA-ISC-2022-6EG-01-Guest Speaker Bioleaching of Copper from low grade Bornite using Halophillic Pseudomonas species N-21

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Abstract: Bioleaching is a process of extracting minerals from ores using microorganisms. The extraction of copper from low grade ores is today's need because of gradual depletion of high grade ore. The conventional methods used for extraction of copper from ore is either Pyrometallurgy or Hydrometallurgy, however both the are not free from the environmental pollution problems and economically very expensive, and requires lots of energy. Bioleaching of mineral is the only method considered as most convincing way to solve these problems, requires very less energy and is free from environmental pollution and other problems. By considering this, In the present study Halophillic Pseudomonas species N-21 is explored for bioleaching of copper from low grade ore Covellite. Pseudomonas species N-21. Isolated from hyper saline soils of Kolhapur district of Maharashtra, India on 9 K medium. It was identified using Bergey's manual of systematic bacteriology. Bioleaching study was carried out in both shake flask as well as bioreactor. Results showed that in the shake flask Pseudomonas species N-21. Tolerates 60 g/L of Bornite when supplemented with 0.5 g/L of Yeast extract. At 120 rpm and 37^oC temperature about 86% of copper can be extracted after 12 days by shake flask method and 90% can be extracted by bioreactor study in 8 days. Present study indicated the usefulness of Pseudomonas species N-21. in bioleaching of copper from low grade ore Covellite can be used as a potential candidate for bioleaching as a pollution free process.

Keywords: Bioleaching, Covellite, Ores, Saline soils, Pyrometallurgy.

ISCA-ISC-2022-6EG-01-Oral Limestone deposits of Sangari Khanmoh of district Srinagar Kashmir India

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Abstract: The surface outcrop mapping of limestone deposits of Sangari (Khanmoh) was carried out in the summer of 2022, as a part of the re-appraisal of the limestone deposits of district Srinagar. The main objective of the investigation was to delineate different limestone bandsfor determination of grade and tonnage, and their suitable use in allied industry. The area of the investigation lies in the interior part of Dun valley near Khanmouh which is about 6 km in length and 1.5 kilometer wide valley. The Dun valley is covered on three sides with 700 meter high mountain ridges. The main geological formations present in the Dun valley are limestone and shale of Triassic age with Panjal Volcanic Group of Permo-Carboniferous age forming the basement. The rocks of the Sangari area are interbedded, siliceous, argillaceous and magnesium limestone and shale of Triassic age. The Sangari limestone deposit strikes northwest-southeast to north-south with dip 45 ⁰due northeast. In order to assess the qualitative nature of the Sangarilimestone deposit which is located along the right side of Sangari Stream for its suitability in the industrial sector, thirty one channel samples from different lithological units along the dip direction of the deposit were collected for assaying purposes. Each sample was collected for a thickness of two meters or more depending upon the variation in the lithological characters of the limestone bands. From the perusal of the analytical result it appears that the limestone bands of Sangarishow highsilica and low calcium content and would not be suitable for cement manufactureas per the broad chemical specifications of limestone for cement manufacturing suggested by the Bureau of Indian Standardsand Indian Bureau of Mines. The Dun valley is having six prospected blocks and out of these six blocks, three blocks have already been leased out in the past.

Keywords: surface geological mapping, channel sampling, lithounits.



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7. Engineering, Energy, Architect and Planning

ISCA-ISC-2022-7EEAP-02-Oral

Construction challenges during tunnelling underneath the Mithi River, Mumbai, India

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Abstract: Tunnelling underneath the waterbody is the most challenging part of the underground project and requires specific study, design, monitoring, and highly skilled professionals that can complete the task with the help of modern and innovative engineering. This paper tried to cover construction challenges faced during the tunnelling underneath the Mithi river at Mumbai Underground Metro Line -3 twin tube, 5.50 m finished diameter (Colaba- Bandra- Seepz) including 152 m NATM tunnel and 4 nos. of cross-passages, which made project more precious and challenging. Apart from tunnelling underneath the river, tunnel alignment was curved also and TBM mining becomes more challenging. In this case study, willdiscuss the challenges from the geological investigation to the construction of TBM tunnelling, NATM tunnel and cross passage (CP) underneath the Mithi river. As the overburden thickness from the river bed to the tunnel crown portion was about 5 m with weathered basaltic breccia rock; challenges were complete the geological investigation, water seepage, tunnel segment design, tunnel alignment deflection, the opening of cross passage and chances of deflection in the tunnel during CP excavation through NATM methods. This paper would be beneficial for taking precautionary measures during the tunnelling underneath the water body for the future tunnel projects.

Keywords: TBM tunnelling, geological challenges, segment lining, construction challenges, NATM, Water seepage.

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8. Environmental Sciences

ISCA-ISC-2022-8EVS-01-Guest Speaker

The clean development mechanism has changed the economical scenario of Indore Municipal Corporation using carbon credits for sustainable development

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Abstract: Kyoto Protocol in 1997 has given the chance to improve environmental problems through carbon credits. The carbon dioxide emission should be minimised to exchange of carbon credits in international market for this the Indore Municipal Corporation has taken waste management to reduce their carbon footprint. The clean development mechanism has the potential to achieve sustainable development.

Keywords: clean development mechanism, Carbon credits, sustainable development.

ISCA-ISC-2022-8EVS-01-Oral Preparation and physicochemical assessment of bioactive films based on chitosan and starchy powder of white turmeric rhizomes (*Curcuma Zedoaria*) for green packaging applications

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Abstract: In the current study, the bioactive films of chitosan/white turmeric (CH/WT) were prepared by employing solvent casting technique and analysed their physicochemical and biological properties for active packaging applications. The successful inclusion of white turmeric into the chitosan matrix is confirmed by Fourier Transform Infrared Spectroscopy. Due to the presence of hydrogen bonding interaction, the active films exhibited good tensile properties, smooth surface morphology, miscibility, water resistance and UV barrier properties. The incorporation of white turmeric reduced the water vapour transmission rate and oxygen permeability (p < 0.05) in contrast with pristine film. The prepared blend films revealed soil degradation rate more than 60% within 15 days. Furthermore, the blend films exhibited lesser water solubility, moisture content and swelling index after addition of white turmeric to chitosan (p < 0.05). The prepared films revealed extensive antimicrobial activity against gram- positive and gram-negative bacteria. The antioxidant activity and total phenolic content were improved upon the incorporation of white turmeric. Moreover, the oil absorption rate of the blend films was decreased by 46% in comparison with pristine film. Overall, white turmeric incorporated chitosan films were employed as a green packaging material to extend the shelf life of the foodstuff.

Keywords: Mechanical, Thermal, Biodegradable, Oil resistant, Antimicrobial.

ISCA-ISC-2022-8EVS-02-Oral Heavy metals pollution determination from Leaves of Shrubs at Roadside Plants in Kathmandu Valley, Nepal

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Abstract: Nepal is urbanizing country in Asia and Kathmandu Valley belongs in metropolitan area of this country. Valley has observed development in these years. This research was to determine heavy metals pollution and its content in plant species at roadside of Kathmandu in 2016 to 2018. In the research, leaves of three different plant species *Euphorbia pulcherrima, Jasminum mesnyi* and*Nerium oleander* from different sites (heavily polluted, moderately polluted and less polluted) in two season's summer and winter were taken. The methods for extraction and digestion of leaves powder samples, bulk elemental analysis were applied. The digested samples were analyzed on ICP-OES equipment. The metals (Beryllium, Cadmium, Cobalt, Chromium, Cupper, Iron, Manganese, Nickel, Lead, Vanadium and Zinc) were determined by ICP-OES results. It concluded that Iron (Fe) value is in the first order at all 3 sites and in 2 seasons. Cobalt (Co) is at last with 3 sites and in 2 seasons. This study finds elements at the polluted sites in plants of Kathmandu. Plants are available with flowersand



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have been successfully grown in urban areas. Air pollution is common in environment. Study provides effectiveness. Capital city is beatifying with plants and good air. **Keywords:** ICP-OES, Leaves, Metals, Pollutants, Soil.

ISCA-ISC-2022-8EVS-03-Oral Growth behaviour and phosphate solubilization by *Enterobacter cloacae* exposed to salinity

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Abstract: Salinity is one of the major abiotic stresses affecting growth, development and activities of microorganism present in environment. The current study was carried out to analyse growth behaviour and phosphate solubilization potential of *Enterobacter cloacae* challenged with salt stress (0.25M and 0.5M). Growth kinetics was performed using tryptone soya broth (TSB) medium amended with NaCl (0.25M and 0.5M). It was observed that the growth rate of bacteria was not impacted by high salt concentrations and it was observed to be 1.04 generation/h, 1.03 generation/h, and 1.03 generation/h at 0M, 0.25M s and 0.5M salt stress respectively. Amount of Soluble phosphate estimated using NBRIP broth media amended with NaCl. Amount of Soluble phosphate was 32.68 mg/L at 0M, 32.45mg/L at 0.25M and 29.6151203mg/L at 0.5M. **Keywords:** Growth behaviour, Phosphate solubilization, phosphate solubilizing bacteria, salinity.

ISCA-ISC-2022-8EVS-04-Oral

Sorption studies of U (VI) on Bark Functionalized Magnetite Bio-Composite and its Extraction from Aqueous Medium

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Abstract: Water pollution from heavy metal is a major global concern. This research aims to investigate the use of a plantmediated magnetite bio composite adsorbent for cleaning water. In this investigation, the bark of the *Aeglemarmelos* tree was used to produce a magnetite-assisted plant-mediated magnetic bio composite for U (VI) extraction from aqueous solutions was studied using FTIR, SEM, XRD, and EDS, with favorable findings. The results showed that adsorption capabilities were greatly affected by solution pH, contact time, and initial concentration. pH (pH =7) encourages U (VI) removal and temperature also influences adsorption in addition to that adsorption isotherm followed the Langmuir model isotherm. The highest adsorption capacity recorded was 131.58mg/g. The uranium adsorption by magnetite was efficient, with an equilibrium period of 40 minutes for uranium(VI) adsorption. To analyze the kinetic data, pseudo 2ndorder kinetic performed the best. The thermodynamic parameter ΔG^0 was calculated, and uranium (VI) adsorption was validated by the negative ΔG^0 values at various temperatures, indicating that the adsorption mechanism was spontaneous.

Keywords: Uranium (VI), isotherm, exclusion, Nano Bio-composite

ISCA-ISC-2022-8EVS-05-Oral Determination and Removal of Th(IV) by Fixed-bed Column technique using Bio-adsorbent

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Abstract: To estimate concentration levels, it is necessary to develop a quick and effective method for detecting thorium in sand and rocks. The reported spectrophotometric (DDBQ) method for determining Th(IV) in sand is simple and selective. Sand samples were collected from various locations of Durg districts in order to investigate the specific activity of ²³²Th. In our sampling locations, thorium concentrations ranged from 0.7mg/l to 30mg/l, which has an indirect effect on human health. In this study, fixed-bed column experiments were used to investigate the removal of Th(IV) from Karanja leaves. Column experiments were discovered to be a function of pH-3, initial concentration-2 mg/l, column bed-height-5cm, flow rate-100ml/min, and flow time-40min. To identify the best fitting parameters, the experimental data was validated using the Thomas model, Yoon-Nelson model, and Bohart-Adams model. The best correlation values are 0.818 for the Thomas and Yoon-Nelson models.

Keywords: Thorium, Karanja, fixed-bed column, Models (Yoon-Nelson), DDBQ.



ISCA-ISC-2022-8EVS-06-Oral

Investigation of Antibacterial and Antifungal properties of eco-friendly Morinda citrifolia leaf extract incorporated methylcellulose films for food packaging

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Abstract: The modern world's reliance on plastic leads to several environmental issues like pollution, the creation of landfills, global warming, etc. Hence, most of the researchers are attempting to steer their research toward greener methods. Food packaging is the major contributor to plastic waste in the environment, causing significant harm to the ecosystem. In order to substitute these plastics, research on biodegradable polymers containing plant extract for food packaging materials drawing much attention. However, we still exploit nature through extracts from fresh fruit, leaves, and other plant parts, and so on. These excessive uses of fresh plant parts as an alternative may reduce oxygen production and CO_2 consumption, contributing to global warming. As a result of this study, the antibacterial and antifungal activities of films made from fresh (MGN-2) and aged (MGN-3) leaf extracts were examined. The equivalent synergistic effect against pathogens indicates that MGN-3 films potentially protect food from microbial attacks and spoilage.

Keywords: Antibacterial, antifungal, methylcellulose, food packaging, Environment.

ISCA-ISC-2022-8EVS-07-Oral

Physicochemical characteristics of fresh water wetland in Indapur Tehsil of Maharashtra, India

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Abstract: Water is the principal factor that influencing the wetland environment and its flora and fauna. These multifarious hotspot are habitats for a variety of life forms and plays crucial role for the conservation of regional diversity. Wetlands are also important for mitigating climate change and maintaining global ecology. About 1% area of earth is occupied by wetlands, while they support about 20% of the species richness globally, hence it is become important to study the physical and chemical properties of water to know the its relationship with organism or plant. The present study was carried out to analysesof water quality of two important lakes from Indapur tehsil; Bhadalwadilake and Shetphal Haveli lake from July 2022 to November 2022. Total five parameters like pH, Temperature, Electric conductivity, Total Dissolved Solids (TDS) and Salinity were investigated on monthly basis. The results of this study reveal that, highest pH were recorded in August (8.2) and October (7.9) atShetphal Haveli and Bhadalwadi wetland respectively while TDS was highest in July (757) and lowest (260) in month September at Bhadalwadi lake. The highest temperature was recorded in month of September at both selected site.

Keywords: Conservation, Flora and fauna, Wetlands.

ISCA-ISC-2022-8EVS-08-Oral

Isolation and study of Bacteria using Dye as a Sole Carbon Source from Mangrove Soil

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Abstract: The mangrove forests are among the world's most productive ecosystems also mangrove soil is complex and highly variable with a mixture of organic matter, minerals, gases, liquids and organisms that together supports life. It offers various microbes a special ecological niche for various microorganisms. Having a synthetic origin, dyes also have complex aromatic molecular structures which make them more stable and more difficult to biodegrade. Due to their toxic, mutagenic



and carcinogenic properties, the release of dyes and their metabolites into the environment is a source of concern. This present work focus on the utilization and degradation studies of selected dyes using bacteria isolated from mangrove soil. Bacteria were enriched in minimal media containing respective dyes and bacteria were isolate on the selective agar medium. Since the media contained only dye as a carbon source it can be interpreted that the isolates are using dye as a sole carbon source. Seven types of bacterial colonies were isolated and studied. From these colonies, two isolates MG3 and BTB1 were identified as Enterococcus faecalis by Vitek automated identification system with 87% probability. These two isolates were isolated from the selective media containing malachite green and bromothymol blue dyes respectively. **Keywords:** dye degradation, bacteria, malachite green, bromothymol blue, bioremediation

ISCA-ISC-2022-8EVS-09-Oral

Monitoring and evaluation of groundwater quality in Gariyaband district of Chhattisgarh, India: factors controlling fluoride enrichment

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Abstract: Groundwater is one of the most valuable natural resources of Chhattisgarh. Most of the villages of gariyaband districtpopulation rely on groundwater for especially drinking purposes. For this reason, thirty-two groundwater samples were collected, 22 physico-chemical parameters including F-were analysed from various locations of gariyaband district. These parameters have been compared with the standard guideline values as recommended by the WHO for drinking and public health. The abundance of major ions in groundwater is in the following order: $Mg^{2+}>Ca^{2+}>Na^+ = K^+>CO_3^{-2} = HCO_3 > SO_4^{-2}> Cl^-$. The range of fluoride concentration is 0.9–6.2 mg/l and pH of groundwater is from 5.6 to 7.3. The general dominance of cations were in the order of $Mg^{2+}>Na^+>Ca^{2+}>K^+$, while dominance of anions were in order of $Cl^->HCO_3^->CO_3^{-2}>SO_4^{2-}>F^->NO_3^-$. Fluoride shows a significant positive correlation with Cl^- (r = 0.53), TH(r = 0.67), Mg^{2+}(r = 0.68), Fe^{2+}(r = 0.61). **Keywords:** Groundwater chemistry, Fluoride enrichment, Correlation, Gariyaband, Chhattisgarh

ISCA-ISC-2022-8EVS-02-Poster

Reed bed constructed wetland: A sustainable wastewater treatment

system

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Abstract: Environmental pollution and its effects on human health are key issues for a sustainable ecosystem. The aim of sustainability and sustainable development is to balance the preservation of our natural surroundings with the advancement of technology and the economy. Rapid industrialization and increasing population have unfortunatelyhiked up the number of pollutants in our surroundings. One of these pollutants is wastewater. Improving socioeconomic development and quality of life requires effective water management. Over a long period of time, a number of treatment systems are documented, however only a few are commonly employed for technological and economic reasons, and there is a severe lack of sustainable wastewater and sanitation infrastructure in peri-urban, and rural areas throughout India and the majority of other developing nations in Asia and Africa. In order to treat wastewater locally and reuse or recycle it, Reed beds are considered to be sustainable and ecological wastewater treatment. Compared to traditional systems, these are more useful with easy operation and maintenance which are very powerful in casting off organics and suspended solids, while they also help eliminate nitrogen and phosphorus. However, these systems have not found widespread use, due to lack of awareness, and local expertise in developing the technology on a local basis. In this article, the importance and study of many successful cases of this technology in Indian cities, along with their application in treating wastewater have been taken into consideration.

Keywords: Sustainable, Economical, Wastewater management, Reed bed, Applications.

ISCA-ISC-2022-8EVS-03-Poster Management of Water hyacinth, *Eichornia crassipes* using compost waste technology and assess seed germination

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Abstract: Chemical fertilizers pollute the soil and water having hazardous effects to human health and environmental ecosystem. Water hyacinth (*Eichornia crassipes*) become a serious challenge to aquatic ecosystem, humanity and the



environment. Investigation of compost waste of water hyacinth was carried out under laboratory condition. The experiment was conducted using the mixture of water hyacinth and animal manure in the ratio of 2:3 in addition to compositing bacteria. The result revels that organic compost of the water hyacinth along with cow dung increases seed germination, essential elements and plant growth. It plays and important role to control acidity soil pH and soil fertility. The result concludes that the compost of water hyacinth become eco-friendly bio-fertilizer and economically valuable than chemical fertilizer. Water hyacinth compost plays alternative role against chemical fertilizer and non hazardous to the human health and environment. Re-utilization of water hyacinth from the same ecological niche reduce the water pollution to elevate the overall biomass useful to agriculture and nature.

Key words: Biomass, Eichornia crassipes, niche, non hazardous, re-utilization

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9. Forensic, Medical, Dental, Nursing and AYUSH

ISCA-ISC-2022-9FMDNA-01-Oral

Dietary directives for longevity of life-Ayurvedic perspective

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Abstract: The aim of Ayurveda is to promote and preserve the Health, Strength and longevity of the healthy person (swastha) and to cure the disease. In present era, diet and lifestyle are major factors which influence susceptibility to many diseases. Ayurveda places special emphasis on food and believes that healthy nutrition nourishes the mind, body and soul. In Ayurveda, food is one of the key pillar (Upasthambha) of life. Ayurveda explains good mental health is essential for a healthy person and that can be achieved through proper food selection and dietary schedule .Many guidelines are explained in Ayurvedic texts, which are titled as Ahara vidhi vidhan, where the laws of do's and don'ts about diet is given. In today's world, altered habits of food consumption are leading to various diseases. So, Ayurvedic dietary guidelines should be followed to prevent these diseases. Ayurveda concept of food not only deals with eating nutritious food, but also deals with major factors of food like taking suitable anupana (adjuvants), time, the manner and the place in which it is taken etc. On this background present article focuses on dietary directives in Ayurveda.

Keywords: Ayurveda, Food, Dietary guidelines, Health

ISCA-ISC-2022-9FMDNA-02-Oral

Holistic approach of Ayurveda in prevention of disease and promotion of health

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Abstract: Ayurveda is more than just a medical system, as it does not only deal with medicine and the cure of ailments but it actually deals with all aspects of life and can be literally translated as the knowledge or science of life. The rationale for the acceptance of Ayurveda worldwide is because of its role in promotion of health, prevention of diseases and mitigation of diseases. Meticulous care of body, mind and soul helps in physical, mental and spiritual growth of an individual, which can be attained by following different principles of Ayurveda like Dinacharya (daily regimen), Rutucharya (seasonal regimen) etc. The holistic approach of Ayurveda, treating the patient as a whole i.e. intervention targeted towards complete physical, psychological and spiritual well-being, makes this science a great option in lifestyle diseases. The branch of Preventive medicine in allopathic science has an objective of prevention of disease and promotion of health through means of vaccination, nutrition, screening etc. To combat emerging challenges of healthcare like cancer, diabetes, hypertension, rheumatoid arthritis, skin diseases, lifestyle disorders etc, there is a need for functional integration of Ayurveda and allied medicinal systems.

Keywords: Ayurveda, Dinacharya (daily regimen), Rutucharya (seasonal regimen), Health.

ISCA-ISC-2022-9FMDNA-03-Oral

Estimation of stature from length of fingers in humans

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Abstract: In mass casualties, commingling, mutilations, or sunder of organs in natural calamities, murders, or accidents it is difficult to identify the individuals. Therefore, identifying and determining the stature of a person from the obtained evidence is a task for forensic sciences. There is a constant relation between every body part and the height of a person. Research on relationships between different parts such as foot length etc has been done, but not much data has been collected so far for defining the relation of all the finger lengths and the height. Hence this project/survey was undertaken in which measurements of finger length of both left and right hands along with the height of individual were collected. About 150 samples of different heights and age groups were gathered. Using statistical data, a mathematical formula was derived. In the end, we can infer that the height of an individual can be determined with its finger length with great precision. **Keywords:** stature, finger length, mutilations.



ISCA-ISC-2022-9FMDNA-01-Poster

Vedic concept of food for Healthy and Long Life

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Abstract: Avurveda is a holistic system of natural health care that originated from Vedas. Aahar (healthy food) is life of living being. Vedic aahar -"A balanced way of life," was practiced in ancient India providing nutritious & tasty food. Ancient Indian food makes a balanced meal providing the 6 tastes (Shad rasas) thereby enhancing immunity. If Vedic aahar is followed properly, it helps to increase health and enhances life span. Upanishad said that purity of food helps in purifying the inner self and hence mind and intellect. Aacharya defines the Aahar in detail and explain intake of food. Aahara plays vital role to maintain health, prevent diseases and helps in disease management. So it is very important to know the concept of Vedic aahar in present era.

Keyword: Vedic Aahar, Ancient, Health, Disease management, Shad rasas

ISCA-ISC-2022-9FMDNA-02-Poster A study on antimicrobial activity of some biomaterials collected from Northern-Western Ghats, India

Bhagwan M. Chimate, Gaurav G. Kamble, Siddhesh V. Meher, Shubham A. Pathak, Varsha R. Dhole, Renuka P. Sukale, Shubhangi B. Khobare, Nuren S. Hawaldar, Masooma J. Sayyed, Vaishnavi S. Kabadi and Ravindra D.

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Abstract: Nature harbours variety of animals, plants and microbes thus serves as an important source of raw materials for various purposes. Large number of plants are having medicinal properties and these are being used by people residing in country sides. The Phyllanthus emblica and Psidium guajava has been used as an important traditional herbal medicine in Southeast Asia since ancient times. The present investigation, puts a light on presence of phytocompounds and antibacterial activity of Phyllanthus emblica and Psidium guajava leaves extract. The extraction of powder was done by using two different solvents viz., methanol and ethanol. Antibacterial activity of the leaf extracts carried out against the bacterial strains such as Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa and Klebsiella pneumoniae by simple agar well diffusion method. The methanolic and ethanolic extracts of Phyllanthus emblica leaves exhibited maximum zone of inhibition (ZOI) against Staphylococcus aureus which was noted as 17 mm. Moreover, the methanolic extracts of Psidium guajava leaves exhibited 25 mm ZOI while its etahnolic extract exhibited 29 mm ZOI against *Pseudomonas aeruginosa*. The present investigation clearly demonstrate that the Phyllanthus emblica and Psidium guajava leaves extract exhibits stronger antibacterial effects. These findings support the traditional use and developing herbal medicines against oxidative stress and infectious disease.

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10. Family, Community and Consumer

ISCA-ISC-2022-10FCC-01-Oral

Efficacy of lifestyle modification approaches for management of nonalcoholic fatty liver disease in obese diabetic patients

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Abstract: Non-alcoholic fatty liver disease has a strong association with overweight and obesity. Similarly, the prevalence of non-alcoholic fatty liver disease in diabetic patients is very high. It has been scientifically noted that weight reduction improves liver function but whether lifestyle modification counselling is one of the methods to obtain the desired results is debatable. The present study was planned to investigate the impact of lifestyle modification counselling on the management of type-2 diabetic male non-alcoholic fatty liver disease obese patients. To conduct the study 50 newly diagnosed type-2 diabetic male non-alcoholic fatty liver disease obese patients were selected as sample. Out of these 50 subjects, 23 were found to be obese and thereby selected for this experimental research. Standard techniques were used to assess the height and weight of the patient. BMI was calculated by the formula given by Thurnberg et al. A standard liver profile of the patients was created by routine pathological tests. A three-month program based on the Fantastic Lifestyle changes were assessed twice (pre-post). Results reveal a significant weight loss in type-2 diabetic male non-alcoholic fatty liver disease obese patients after three months of lifestyle counselling. It was also found that SGOT and SGPT values in liver profile were also decreased and came within acceptable limits. It was concluded that lifestyle modification is a good method to manage weight in type-2 diabetic male non-alcoholic fatty liver disease obese patients and thereby reducing the liver inflammation also. **Keywords:** Lifestyle modification counselling, liver disease, diabetes, obesity.

ISCA-ISC-2022-10FCC-02-Oral Effect of Lifestyle Counselling on Stress Resistance among COVID-19 Patients

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Abstract: India has seen its worst possible outbreak of coronavirus during the second wave. In a few months, the number of coronavirus cases is decreasing steadily and life is coming to near normal. But the danger has not been averted as yet and people are still apprehensive about the possible future outbreak of coronavirus. The adverse effect on the physical and mental health of coronavirus has been documented in several studies. One such study conducted reported that the prevalence of stress among coronavirus patients is whooping 41.6%. Hence it is essential to manage stress among coronavirus patients. This study was conducted to see the impact of lifestyle-related individual counselling on the management of stress among COVID-19 patients. To conduct the study 50 coronavirus patients from both sexes were selected. The study area was the Raipur district of Chhattisgarh. The age range of these patients falls between 30 to 45 years of age. To assess stress among subjects, Stress Resistance Scale prepared by Ajwani and Varwandkar (2009) was used. The Fantastic Lifestyle Assessment Checklist was used to measure the lifestyle of selected coronavirus patients. Individual counselling was given to each subject based on lifestyle modifications with timely follow-up. The data were collected thrice i.e. pre-test, after 15 days and after 30 days (post-test) for this single group experimental design. Repeated Measures ANOVA was used for data analysis. It was found that the individual counselling of one month significantly enhanced the stress resistance in COVID-19 patients and the post-test gain score on the stress resistance scale and lifestyle modification checklists also correlated statistically and positively. It was concluded that lifestyle modification through individual counselling is an effective method to manage stress among COVID-19 patients.

Keywords: COVID-19, Counselling, Lifestyle, Stress



ISCA-ISC-2022-10FCC-03-Oral

Lifestyle Disorders: An emerging health problem (Causes and Prevention from Nutritional point of view)

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Abstract: Lifestyle disorders are the major health issues observed all over the world. They can be defined as diseases linked to one's lifestyle. These are chronic in nature and cannot be transmitted from one person to another, also known as non-communicable diseases (NCDs). The major causes for dealing with NCDs are poor nutrition, a lack of physical activity, lack of sleep, chronic stress, undesirable behaviour and addictions of different types. Most countries are facing this problem with increased death rates in the population. The major lifestyle diseases include diabetes, cardiovascular disorders, respiratory disorders, and cancer. With increased modernization, the prevalence of NCDs has increased, and the quality of life has been affected. Treating these diseases is both time-consuming and expensive. Lifestyle disorders are preventable if the proper nutrition is followed. The review focuses on ways to prevent the risk of developing NCDs in adults and improve the quality of life of patients with the help of modern nutrition.

Keywords: Non communicable diseases, diabetes, cardiovascular diseases, respiratory diseases, cancers.

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11. Material Sciences

ISCA-ISC-2022-11MatS-01-Oral

Preparation and Evaluation of ZnO nanoparticles integrated CMC/Xanthan gum polymer composite films

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Abstract: The use of renewable and biodegradable resources for the preparation of polymer films as packaging materials has drawn attention in the food industry due to their natural and sustainable qualities. Despite these advantages, they lack some material qualities such as mechanical and barrier properties, limiting their application in the packaging field. These material qualities of polymer compositefilms can be improved by incorporating appropriate active components such as nanoparticles, plant extracts, etc. In the present work, carboxymethylcellulose (CMC) and xanthan gum(XG) polymercompositefilms integrated with ZnO nanoparticles were prepared by using the solvent casting method, and they were evaluated for their material qualities such as WVTR (water vapor transmission rate), Moisture adsorption (MA) and UV barrier properties. The results have shown that ZnO nanoparticles-incorporated polymer composite films exhibited low WVTR, moisture absorption, and a low percentage of transmittance with good barrier properties. Thus, prepared polymer composite films have the potential to further develop as food packaging materials.

Keywords: CMC, ZnONPS, Barrier properties, Xanthangum.

ISCA-ISC-2022-11MatS-02-Oral Structurally Modified Differently Architecture Electrospun Poly(methyl methacrylate) [PMMA] Nanofibers with Advanced Properties for Manifold Applications

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Abstract: Electrospinning is an amazing technique to produce nanofibers with ultrafine properties. Preparation of three types of PMMA nanofibers with different architectures like pure, surface roughened and coaxial hollow forms throughelectrospinning of very rare combination of PEO – PMMA nanofibers which is reported for the first time recently by ourselves are dealt here. Pure PMMA nanofibers are prepared by dissolving PMMA in a mixture of chloroform and acetone, followed by electrospinning. Surfaceroughened PMMA nanofibers are prepared by selective dissolution of PEO from PEO– PMMA blend and Coaxial hollow PMMA nanofibers are prepared by that of PEO from PEO–PMMA coaxial electrospun nanofibers. Pure PMMA nanofibers are 60-150 nm, PEO – PMMA blend nanofibers are 75-150 nm and PEO – PMMA coaxial nanofibers are 110 nmin diameters. Structural modification and advanced structural and optical properties of PMMA nanofibers with different architectures are proved by FESEM, TEM, FTIR, AFM, PLetc. analyses. Structurally modified PMMA nanofibers are found to be better host matrices than pure PMMA nanofibers for various nanoparticles, quantum dots etc. with magnificent applications. Superiority of structurally modified PMMA nanofibers in various fields. **Keywords**: PMMA, nanofiber, polymer, structural modification, selective dissolution.

ISCA-ISC-2022-11MatS-03-Oral

Fabrication of Silver decorated Graphene Oxide nanoparticle-based Chitosan/Copovidone composite Films – A study of Spectroscopic and Biological Properties

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Abstract: The current study is driven towards fabricating eco-friendly films mainly used for active packaging purposes. Chitosan (CS), copolymer Poly (1-vinylpyrrolidone-co-vinyl acetate) (PVPcoVA), Graphene oxide (GO) and Silver coated



Graphene oxide (AGO) was employed in the preparation of these films. The effect of GO and AGO on the spectroscopic and biological properties was evaluated in this study. The films were prepared by adding GO and different compositions of AGO to the CP matrix using the feasible and user-friendly solvent evaporation method. The composite films were able to block the harsh effect of UV light indicating their potential to inhibit oxidative deterioration. The films were transparent enough to allow minimal light to pass through them which was confirmed by UV-Visible spectroscopy, thereby suiting consumer demands to have a knowledge of the packaged food products. Enhanced microbiological sensitivity was exhibited by the composite films. The AGO embedded films depicted higher resistance to pathogens such as Escherichia coli (Gram-negative bacteria), Staphylococcus aureus (Gram-positive) and Candida albicans (Fungus) prominently responsible for degrading the quality of food. Hence it can be inferred that the films were found to inhibit microorganisms, thereby allowing the obtained composite films to be employed as active packaging materials.

Keywords: Eco-friendly films, Active Packaging, Chitosan, Poly (1-vinylpyrrolidone-co-vinyl acetate), Graphene oxide, Nanoparticles, UV blocking.

ISCA-ISC-2022-11MatS-04-Oral Enhanced redemission from CaZrO₃:Eu³⁺ Nano-phosphors prepared by Sol-gel technique

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Abstract: Alkali metal ions codoped CaZrO₃:Eu³⁺ nanophosphors series prepared by sol gel technique were further reheated to 750 °C to improve crystallinity of the product. The crystal structure and surface morphology of materials were determined by X-ray diffraction (XRD) and scanning electron microscopy (SEM) technique. XRD results confirmed orthorhombic perovskites structures of CaZrO₃:Eu³⁺. The surface morphologies of materials were consisting of small, coagulated, cubical particles with smooth and regular surfaces. The characteristic strong red emissions of Eu³⁺ ions in CaZrO₃:Eu³⁺, M (M=Li⁺, Na⁺, K⁺) mainly at 613nm is due to ${}^{5}D_{0} \rightarrow {}^{7}F_{2}$ transitions and other weaker emissions were also observed at 575, 592, 654, and 698-705 nm corresponding to ${}^{5}D_{0} \rightarrow {}^{7}F_{2}$ transitions was observed in CaZrO₃:Eu³⁺ if co-doped with Li⁺ ions. **Key Words:** CaZrO₃:Eu³⁺, M (M=Li⁺, Na⁺, K⁺); Orthorhombic; Sol gel; Photoluminescence.

ISCA-ISC-2022-11MatS-01-Poster Lignin as eco-friendly and multi-effect rubber compounding ingredients for greener rubber products

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Abstract: This work reports the use of bio-based lignin and its ability to work as multi-effect ingredient in rubber compounds as a sole or partial replacement of synthetic ingredients. Lignin is the second most abundant source of biomass after cellulose in the world and found in all plant wall cells. Lignin is produced mainly as a byproduct of the paper industry, separated from trees by a chemical pulping process. After many years of study, the structure of native lignin remains unclear. It contains many functional groups such as methoxyl, phenolic hydroxyl, and few terminal aldehyde groups, -SO₃, Carbonyl and alcoholic hydroxyl groups, phenyl propane units, C-C and C-O-C linkages. There are many possible bonding patterns between individual units. Rubber products are a very complex material containing several ingredients and most of them are non-renewable petroleum based materials. Replacement of synthetic materials with sustainable, bio-based material is the current need. Lignin shows its ability as Filler, accelerator, antioxidant and plasticizer by partially or completely replacing synthetic ingredients and helps in reduction in pollution, gives cost benefit, improves productivity. For lignin filled compound, data shows reduction in curing time, viscosity, improvement in before and after thermal ageing mechanical properties and Chemical resistance etc.

Keywords: Sustainability, elastomer, bio-based lignin, filler, plasticizer, accelerator, antioxidant.



ISCA-ISC-2022-11MatS-02-Poster Influence of Potassium sorbate on plasticized Chitosan/PVA active films for food packaging applications

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Abstract: Presently, the pollution caused by the excess usage of plastic in every sector has become an unsolvable riddle. The food packaging industry is a major contributor to plastic waste, and these petroleum-derived plastics cause environmental problems due to their non-biodegradable nature. The current work is focused on the preparation of biodegradable and environmentally friendly active packaging films by using the solvent casting technique. The effect of potassium sorbate on the varying ratios of plasticized chitosan (CS) and PVA films was studied. The prepared CPE films are subjected to FT-IR, TGA, drTG, WCA, and mechanical analysis to evaluate the potential of active films. The CPE-3 film showed acceptable tensile strength and elongation values, exhibited a hydrophobic nature against the contact of water, and were thermally stable as compared to other films. Hence, CPE-3 film is likely to be considered for food packaging applications with some alterations.

Keywords: Chitosan, PVA, Potassium sorbate, Plasticizer, Food packaging.

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12. Mathematics and Statistics

ISCA-ISC-2022-12MSS-01-Poster

ISCA-ISC-2022-12MSS-01-Oral Natural Coherence of Mathematical structures with Biological Objects: A Study

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Abstract: The present paper deals with the critical analysis of the mathematical coherence of mathematics in Biology. It is a fact that there is no field of any stream where mathematics is not used. Mathematics is a unique branch which is very useful in all branches of studies. The use of mathematical applications in various fields has made a revolution in the word. Humans are basically mathematical in nature. The habits of logical thinking, reasoning, analytical thinking is developed in man by this faculty of humans. Mathematics has a good coordination with biology. The symmetry in nature and shapes of the natural objects has a connection with mathematics. All the biological objects in Nature have coherence with mathematical objects. **Keywords**: Mathematics, Biology, patterns, coherence, natural, Plants, Flower.

Fractional differential equations which can be transformed into separable variables

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Abstract: Fractional calculus, a popular name used to denote the calculus of non-integer order, is as old as the calculus of integer order as created independently by Newton and Leibniz. In contrast with the calculus of integer order, fractional calculus has been granted a specific area of mathematics only in 1974, after the first international congress dedicated exclusively to it. Before this congress there were only sporadic independent papers, without a consolidated line. It is nowadays well established that several real life phenomena are better described by fractional differential equations, where the term fractional, used for historical reasons, refers to derivative operators of any real positive order. Applications of fractional differential equations are commonly found in bioengineering, chemistry, control theory, electronic circuit theory, mechanics, physics, seismology, signal processing and so on. An historical perspective on fractional calculus. Unlike standard calculus, there is no unique definition of derivative. Other useful definitions include Caputo definition of fractional derivative, the Grunwald-Letinikov (G-L) fractional derivative, and Jumarie's modified R-L fractional derivative. We study some types of fractional differential equations which can be transformed into separable variables, regarding the Jumarie type of modified Riemann-Liouville fractional derivatives. We use a new multiplication of fractional functions and product rule for fractional derivatives to obtain the solutions of these fractional differential equations. Furthermore, some examples are given to demonstrate our results.

Keywords: Fractional differential equations, separable variables, Jumarie type of modified Riemann-Liouville fractional derivatives, new multiplication, product rule.

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13. Pharmaceutical Sciences

ISCA-ISC-2022-13PCS-01-Oral

A promising wound healing material fabricated by poly (vinyl alcohol)/ chitosan/*Basella alba* stem extract

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Abstract: Commercial wound dressing films are causing serious problem on the human well-being due to the risk of infection and high cost. Thus natural extract based bio-composite wound dressing films are gaining much attention. Herein, the study outlines the preparation of poly (vinyl alcohol)/chitosan/*Basella alba* stem extract (BAE) based bio-composite film through solvent casting technique and well characterized for wound healing application. Incorporation of BAE into poly (vinyl alcohol)/chitosan matrix has shown significant improvement in flexibility of the films were confirmed by mechanical test results, swelling ability were enhanced with increase in BAE content. Additionally, BAE integrated poly (vinyl alcohol)/chitosan film has excellent biocompatibility was displayed by cytotoxicity results. Moreover *in-vitro* scratch assay and cell adhesion test results illustrated prominent wound healing and adhesion. Overall results of the present work proclaim that developed bio-composite film could be utilized as a biomaterial in wound care applications. **Keywords**: *Basella alba*, mechanical, swelling, wound healing, cytotoxicity.

ISCA-ISC-2022-13PCS-02-Oral Only Biomedicines-Physiology act as a Preventive-Natural-Vaccine against Pandemic Helping Steady-Opening Wildlife-Conservation Global-Research Holistic-Growth Integrated-Development Ecology

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Abstract: The most-infectious-fast-spreading-new-variant, Omicron-SARS-CoV-2, hard-to-track opening-a-new-chapter in the COVID-19-pandemic has affected our lives economy education, and the highest number of Covid 19 deaths due to lackof-vaccines and we-are-now-gasping-for-air. To overcome the mysteries, it has already been observed that the different biomedicines are highly-effective against COVID-19-diseases by boosting natural immunity. So, the objectives-of-presentcase-studies are to follow and confirm; the consumption of biomedicine meals, at-random in the Kanchannagar, Burdwan-Municipality, Purba Bardhaman District, and counted-some surprise-potential-individual-case-reports. As a results in the 'New-Year-2023'; biomedicines-physiology of meals will give the "Booster-Protection Against 'Omicron OR Future-All-Possible-Variants or Any Pandemic' Improving Global-Education-Health-Case-Reports-Medical-Research-Science-Technology-Communication", and in future, this will be the most-effective 'Future-Booster-Biomedical-Green-Technology Vaccines' for its; natural consumption, popular and regular use as traditional-medicines, easily tackle many diseases and complications, and future use in different pharmacological medicines preparation, extremely low-toxicity, and potential efficacy, many potential different phytochemicals in a diverse range, eco-friendly-side effects-free, cost-effective, easily prepare-able, easily-available, easily-manufacture-able, easily-equitable, easily-marketable and easily-supply-able, etc. and develop the best quality biomedical and life-scientific information on all aspects of pharmacology and its analytical nanoparticles studies or proper side-effects free effective medicines or drugs also. And the world will retain in previous forms because of the "Only Biomedicines-Physiology Act as a Preventive-Natural-Vaccine Against Pandemic Helping Steady-Opening Wildlife-Conservation Global-Research Holistic-Growth Integrated-Development-Ecology".

Keywords: Biomedicines-Physiology; Preventive-Natural-Vaccine; Pandemic; Steady-Opening; Wildlife-Conservation; Global-Research; Holistic-Growth; Integrated-Development-Ecology.



ISCA-ISC-2022-13PCS-02-Poster

ISCA-ISC-2022-13PCS-01-Poster Artemether: Synthesis of Artemether from Artemisininas an antimalarial drug

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Abstract: Artemisinin and artemether are potent antimalarial drug which is used in other parasitic infections was extracted in crude form by soxhlet extraction method using ethanol as a solvent and purified by crystallization techniques using a combination of ethyl acetate:Methanol mixture (9.5:0.5 ratio). Artemetherconcentration in A*rtimisiaannua* is very low hence the synthesis trials were conducted by using artemisinin anda methylated derivative of artemisinin was synthesized as a white powder.



Artemetherwas successfully synthesized and characterized by detailed 1H-NMR, IR spectral analysis. Artemether is used to treat acute, uncomplicated malaria.

Keywords: Artemether, Artemisinin, antimalarial, drug delivery

Assessment of pharmaceutical properties of the mucus of a terrestrial snail, *Cryptozona semirugata*(*Beck*, 1837)

Pramod C. Mane, Deepali D. Kadam, Dipali R. Hagawane, Paurnima R. Bhalchim, Vidya R. Jadhav, Shraddha S. Gadekar, Madhuri N. Gawari, Manisha V. Pardeshi, Pallavi V. Bagad, Sonal B. Talape, Swati S. Gawari, Sakshi Bhalerao and Ravindra D. Chaudhari^{*}

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Abstract: In modern societies worldwide, zootherapy is an important alternative among many other known therapies. Wild and domestic animals or their by-products were used to form important ingredients in the preparation of medicines. Over 50% of commercially available drugs are based on bioactive compounds extracted from different animal species. Now a day it is realized that there is urgent need of research on identification of new bioactive compounds having anti inflammatory, anti oxidant and iron chelating activities. Thus keeping in mind the importance and need of research on identification of new bioactive compounds having anti inflammatory, anti oxidant and iron chelating activities. Thus keeping in mind the importance and need of research on identification of new bioactive compounds having anti inflammatory, anti oxidant and iron chelating activities, we felt that there is an urgent need to generate some data on this topic. In the present investigation, we are reporting the presence of such novel bioactive compounds in the mucus of a terrestrial snail, *Cryptozona semirugata*. The result of this study indicated that, in case of anti inflammatory activity, 40µg/ml of mucus exhibited maximum protection of 58.19 %. Moreover, total anti oxidant activity was found to be highest 9.16 mM of ascorbic acid equivalent/ml of sample at 100 µg of mucus concentration. Furthermore, iron chelating activity of mucus was found to be highest 33.75 mM of ascorbic acid equivalent/ml of sample at 100 µg of mucus concentration. In conclusion, *Cryptozona semirugata* mucus exhibits better anti inflammatory, anti oxidant and iron chelating properties. Considering the biological activities of *Cryptozona semirugata* mucus and beneficial health effects, the mucus can be utilized to develop different pharmacological compounds.

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14. Physical Sciences

ISCA-ISC-2022-14PS-01-Poster

The Production of Biogas using Kitchen Waste

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Abstract: Due to the increasing demand for fossil fuels and a number of renewable sources of energy have been studied. Considering the present, a peak demand for energy in our country. An attempt is made to alternate fuel like Biogas production from kitchen waste. Kitchen waste is the best alternative for biogas production in a community level biogas plant. It is produced when bacteria degrade organic matter in the absence of air. Biogas contains around 55-80% of methane, 30-40% of carbon dioxide. The calorific value of biogas is appreciably high (around 4700 kcal). The digester consists of inclusions like inlet, outlet, gasline. Initially cow dung (inoculum) was added. After initial gas production, cow dung was co digested with food waste. Main ingredients of the food waste included rice, vegetables, banana peels etc., The kitchen waste had slightlyhigher solids and volatile solids (9.3% and 94.9%) content compared to cowdung (8.5% and 93.1%). The digester consists of the food waste included rice, vegetables, banana peels etc., vegetables, banana peels etc., the kitchen waste had slightly higher solids and volatile solids and volatile solids (9.3% and 94.9%) content compared to cowdung (8.5% and 93.1%).

Keywords: Anaerobic Digestion, small scale digester design, kitchen Waste, Biogas yield.

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15. Physical Education, Sports and Yoga

ISCA-ISC-2022-15PESY-01-Oral

Significance of Pratyahar in the management of Lifestyle disorders

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Abstract: Pratyahar is the 5th limb of Ashtangas from Yoga Sutras of Maharshi Patanjali. It is a practice of withdrawing the senses from external objects to be replaced by inward awareness. When the mind is withdrawn from the external senses, it rests in its own natural state. Science of Yoga offers the most effective way to deal with various psychosomatic disabilities that contemporary medicine has just rediscovered. In today's world, lifestyle behaviors like excessive usage of smart phones, unhealthy diet, sedentary routine, and over indulgence in sensory pleasures results in the development of debilitating chronic diseases like heart disease, diabetes, metabolic syndrome, cancer etc. While modern medicine provides treatment and management of various diseases, yoga provides preventive and rehabilitative methods in addition to management of diseases. According to the recent survey by WHO, the proportion of total global deaths due to chronic diseases is expected to increase to 70 percent by 2030.So it is imperative to include the holistic and integrated approach of yogic science to face the current challenges in health care. This paper attempts to develop the techniques of Pratyahar for integrating the practice in daily life, with the assessment of research articles and ancient text on yoga.

Keywords: Pratyahar, lifestyle behaviours, disorders, senses, health, chronic diseases.

ISCA-ISC-2022-15PESY-02-Oral A comparative study of the psychological profiles of SAI Academy and Madhya Pradesh Academy (India) national level male hockey players

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Abstract: The purpose of the study was to find out the comparative result of the Psychological Profiles of Sai Academy and Madhya Pradesh academy National Level Male hockey Players. The subject's age ranged between 17-24 years, they all were selected randomly from the Sai academy and Madhya Pradesh junior and senior hockey teams, and the experts has made two groups of 50 - 50 players, one group made up of Madhya Pradesh academy hockey players and another group made up of Sai academy hockey players, those who are continuously participating at National level. The experts used questionnaires of Rainer and Martin's Sports Competition Anxiety Test and the Eysenck, Maudsley Personality Inventory; the questions addressed various aspects of Sports Competition Anxiety and Personality traits of hockey players respectively. The questionnaire has filled by the sai academy and Madhya Pradesh academy junior & senior hockey teams players respectively. For the evaluation of questionnaire Two Sample T-test was employed, and the findings reveled that there was a significant difference found i.e. 2.8 in their Personality parameters, it means sai academy hockey players were better in their Personality as compare to Madhya Pradesh academy hockey players and found Insignificant i.e. 0.11 in the SCAT, which means there was no difference in Sports Competition Anxiety of sai academy hockey players and Madhya Pradesh academy hockey players. Sports Psychology can help a lot in assessing the personality and sports anxiety characteristics of the players or individuals performance in hockey not only demands systematic training to develop physical and physiological variables but also demands training and considerations of psychological characteristics for success in this field. Keywords: Sports Competition Anxiety, Training, Personality, Psychological Profiles, Hockey.





16. Educational Sciences

ISCA-ISC-2022-16EduS-01-Guest Speaker Environmental Awareness of Higher Education Students

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Abstract: Environment is defined as "all of the biotic and abiotic (social, cultural, physical, climatic, physical) factors that affect a living organism or a living community during its lifetime". The environment is a setting that has existed since the first living creature on earth. For many livings creature, especially for humans, living in harmony with the environment has not been a problem. However, when the two main functions of life (nutrition and reproduction) were threatened by environmental conditions; environmental problems have arisen and therefore ecological science has gained importance. The main reason for the rapidly growing environmental pollution that leads to the deterioration of the human-nature balance is undoubtedly the industry which started in the 17th century and developed rapidly in the 19th century. Environmental issues became the international priorities all though they were seen as local or regional concerns, because they have become extraneous to economic growth, health, nature and aesthetics. Consumption of resources for products produced for world market (dominated by the North) causes primarily local environmental degradation - not global. Every human being has the right to decent life, but today there are elements in our environment that tend to militate against the attainment and enjoyment of such a life. Allotment of Time that is allotted by teachers and students in sensitizing themselves on environmental issues are very insufficient enough to realize environmental problems and solutions. Environmental education is simply taken up as a subject that is either additional, a substitution or of less importance. It is not taken as a discipline that actually enables us to fulfill the objectives of the other disciplines because it is pointless to decorate messy or burnt home. One basic trend that has been examined in school is environmental education is either taught once in a week or twice. The time table of school or college that is been framed also reflects the lack of curiosity in environmental education as it is mostly kept after lunch or once or twice in a week as mentioned above. Lack of Organization of Environmental Activities Since we have already talked above about insufficient allotment of time for environmental programs and awareness including burden of existing curriculum, it is obvious that educational institutions hardly spare their time in organizing environment friendly activities. We suddenly get to see plantation activity or cleanliness activities once in a year being performed by students either on World Environment Day or as NSS activity. Except on these days there is no opportunity given to learners to actually sense environmental issues and address them. Environmental awareness activities like mentioned above is limited to plantation of trees or community cleanliness activity only but in actual there are lot of things that can be done like field visits, slogan writing, awareness rallies debates on environmental issues and human deeds behind it, poster making competitions, slogan writing, symposiums related to environment and issues related to it.

Keywords: Environmental, Awareness, Higher Education Students.

ISCA-ISC-2022-16EduS-01-Oral

Internal Evaluation Vs External Mode of Evaluation

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Abstract: Evaluation is a methodological area that a widely spread internationally and distinguishable from traditional social research. Evaluation method develops some form of outcome or change. Evaluation make judgements about the worth and effectiveness of educational intentions, processes and about the relationships. There is choice between external and internal evaluation depending upon systematic assessment of the worth or merit of some object. Perhaps to view evaluation would be not as a profession but as a 'trans discipline' like logic or statistics: 'a discipline in its own right, but one that services other disciplines and is an integral part of other disciplinary endeavours' Thus the 'Great House' of evaluation should have room for both internal and external evaluators if it wishes to continue to grow.

Keywords: Internal evaluation, External evaluation, Methodologies.



ISCA-ISC-2022-16EduS-01-Poster Changing Patterns of Geometry Syllabus in Primary School to Higher Education and its Applications in Daily Life with Special Reference to NEP

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Abstract: This article examines the syllabus of Geometry regarding to its application in different fields from fundamental to higher education and this study compared with NEP recommended Syllabi of Mathematics for different levels of education system. It is useful to design the syllabus of Mathematics in School and college levels. These potential are discussed on the basis of historical advancements in the quality and relevance of geometry in school and higher education. The goal is to highlight the true relevance of mathematics in careers and daily life, as well as the genuine benefits and drawbacks of altering mathematics curriculum patterns from elementary to higher education.

Keywords: Geometry, Changing syllabus, Applications, NEP.

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17. Commerce, Law and Management

ISCA-ISC-2022-17CLM-01-Oral Role of India's Consumer Goods Market in the Sustainable Economic Development

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Abstract: India is one of the densely populated developing countries of the World. Soft Ware Boom has generated employment opportunities to the Indian potential youth and that has increased the per capita Income of the population. As the purchasing power increased, demand for the consumer goods has raised and that resulted in rapid Economic Growth. Concentration of technical as well as non-technical labour, demand for goods and services, has made India an interesting destination for Foreign Direct Investment. India is the priority for the Multinational Companies as it is the third largest economy in the world in the aspect of purchasing power. FMCG is the fourth largest sector in the Indian Economy and is expected to double by 2025. Indian Government on promoting manufacturing FDI, has launched a new scheme called "Gati Shakti", for providing investors a one stop solution by obtaining approvals and giving licences to do business. As per the data of World Bank, India's convenience of doing rank business India's ease of doing business rank has improved from 142 in 2014 to 63 in 2022. Indian consumer market is playing major role in the sustainable development of the Nation. **Keywords:** Consumer Goods, Economic Growth, Business, Foreign Direct Investment, Development.

ISCA-ISC-2022-17CLM-02-Oral

Recent Trends in E-Commerce

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Abstract: E-Commerce stands for electronic commerce. E-Commerce is doing business online. It deals with selling and purchasing goods and services through internet and computer networks. E-Commerce enables us to order for goods sitting at the home. The customers can select any required products from variety of products that are available on websites. The payment for the product can also be done using debit card, credit card. The study also found that E-Commerce provides the various types of opportunities to the wholesalers, retailers, producers and the people. **Keywords:** E-Commerce, on-line shopping, Internet, Business, Consumer.

ISCA-ISC-2022-17CLM-03-Oral

Study of M-commerce in India

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Abstract: M-Commerce means substituted of goods in excess of the internet through the use of Mobile phones or M-Commerce is about the explosion of application and services that are becoming accessible for internet enabled mobile device is involves new technologies, services and business models. The object of this paper is to focus m-commerce status in India and also find out future direction of m-commerce. The significant growth of m-commerce application is remarkable in India. In present situation the numbers of users have increase on mobile phone and consuming huge bandwidth of mobile internet providers. Through this paper identify the issue for the future growth of E-commerce trend M-commerce with its present volume transaction in India, and identify critical challenges of m- commerce would become for present scenario in India. **Keywords**: E-commerce, M-Commerce.





18. Library Sciences

ISCA-ISC-2022-18LS-01-Oral Communication and Analytical Skills of Staff in University Library Service

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Abstract: Libraries are created to meet the information needs of defined groups of people in a definite environment. University library staff are trained to meet the information needs of its users in academic environment with relevant information resources that enhances the accomplishment of its tripartite functions of teaching, learning and research. Work attributes and skills of staff in this respect is paramount, therefore, a study was conducted to examine how communication and analytical skills of staff influence service delivery in university libraries. Two objectives, research questions and hypotheses were formulated to guide the study. The research design adopted for the study was ex-post facto design. The population of the study consisted 271 respondents (68 professionals and 203 para-professional librarians) in universities of Uyo, Calabar and Benin. Total sampling technique was used to sample 271 respondents. The researcher developed an instrument entitled "Communication and Analytical Skills Questionnaire (CASQ)" for data collection. The researcher with the help of research assistants administered copies of the questionnaire to respondents in the selected universities. The obtained data were analysed using mean and standard deviation to answer research questions and dependent t-Test to test hypotheses at 0.05 level of significance. The result revealed that analytical and communicative skills of staff significantly influence service delivery in federal universities in South-South Nigeria. It was recommended among others that staff of university libraries should possess the relevant skill of communication as they do not only interact with users but make use of language, images, sound and new digital tools and technologies to enhance effective service delivery.

Keywords: media literacy, service delivery, communication, staff skills, academic libraries.

ISCA-ISC-2022-18LS-02-Oral

Reading Material: Care, Need and Importance

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Abstract - In the past times, books were bound with chains to prevent them from being stolen. The emphasis was on preservation rather than the use of books. Today, however, more emphasis is being placed on usage than protection. Just as we can prevent reading material theft by using modern technology, reading materials can also be stolen by misusing this technology. Given the need to collect rare books, different types of reading materials and changing media, what precautions we should take to prevent them from being stolen, and from deterioration because of adverse effects of weather or similar reasons? This has been discussed in this research paper.

Keywords: Reading material, Prevention of books, Modern technology, Book theft.

ISCA-ISC-2022-18LS-03-Oral

Library services and web services

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Abstract: The present era is characterized with innovation online tools with the advent and the innovation of ICT, Libraries are facing so many new challenges in order to provide exact information at quick rate, The COVID-19 pandemic Library professionals have adopted various innovative services in online mode, virtual Library facility and procured online databases, websites are working on this to solve all these problems. Websites can be considered as a new weapon of ICT which is experience all the time taking services and transforming tem into rapid services with www & web services. Application of internet & web technologies processing in Libraries will result in a meaningful more interactive and fully accessible with Internet and web services in Libraries.

Keywords: Web service & Library service.



ISCA-ISC-2022-18LS-04-Oral

A Review of Literature on Library services for visually impaired and disabled students in digital era

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Abstract: The availability of information to the blind and visually impaired has recently improved significantly. The reason is that only a small portion of published works have been made available in the modified formats due to the sluggish and expensive manufacture of formats readable to them (such as Braille and audio). The availability of text-to-speech software, which reads aloud digital text shown on a computer screen, has substantially improved the situation with the advent of digital formats. Due to this, everyone else, even those who are blind or visually challenged, can access digital information without paying any extra fees. In this context, digital libraries on the Internet whether they contain full-text publications or secondary information sources are especially crucial. Discussions of the current digital libraries and collections will be conducted from the viewpoint of blind and visually impaired users while also taking accessibility concerns into account in terms of user interface and information-seeking behavior. The goal of the current study is to critically review, evaluate, summarize, compare, contrast, and correlate various scholarly papers and other pertinent sources of information published on library services for people with visual impairment in Higher Education, with a focus on India.

Keywords: Library services, visually impaired, digital era, digital libraries, digital formats.

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19. Language, Literature and Culture

ISCA-ISC-2022-19LLC-01-Oral

Challenges involved in Teaching English at U.G. level in rural area: A case study of D.J.G. Arts, Commerce, Science College, Vaduj, India Sachin G. Kamble

Dept. of English, D.J.G. Arts, Commerce, Science College, Vaduj, Tal. Khatav, Dist. Satara, Maharashtra, India

Abstract: English is a window of the world. It occupies the prestigious place in our country. It is Lingua Franca of the world. It is either as a medium of communication or official language. One can observe its vast presence all over the world. Most of the Indian students, especially rural, when they hear word 'English', they feel uneasy. As a result, teachers who teach English face many challenges. Students also find learning English challenging. The research paper deals with pertinent challenging issues like: Why the students find English difficult to learn? What are the reasons for this? And what are the remedial measures to be taken to alleviate these problems?

Keywords: challenges, problems, teaching, learning, teacher, students.

Diaspora within Diaspora: A New-age reading of Jean Kwok's *girl in translation*

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Abstract: "A 'Diaspora' is one who lives in two countries but belongs to none."- Salman Rushdie. Mobility of animates from one place to other, either forced or willful, is called 'migration' and it is an age-old phenomenon. This migrated population is known as Diaspora. Diaspora Studies have become an important topic of concern in the modern era. However, it has gone tremendous changes in the modern times. Diaspora means a man or a group of men living on a land outside his homeland. Dominancy of the natives over the Diaspora is a frequently recorded fact. Diaspora experience is not limited to the conflict between the natives and the outsiders living on that land. In the course of time, the scenario changed and the old members of the Diaspora and they think of themselves as the natives at least in front of the new and fresh members. This thinking gives birth to a new concept Diaspora within Diaspora. Jean Kwok is a new generation ABC (American Born Chinese) novelist with her three works, of which *Girl in Translation* displays Diaspora experiences within the peer groups. This paper explores the same.

Key-words: Migration, Mobility, Diaspora, ABC, Natives, Dominancy, Homeland.

ISCA-ISC-2022-19LLC-03-Oral

सन १९४२ च्या स्वातंत्र्य लढयातील मा वसंतदादा पाटील यांचे कार्य

संतोष तुकाराम कदम

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सारांशः वसंतदादा पाटील यांनी सन १९४२ च्या क्रांतीकार्यात ब्रिटीश विरोधी कारवाया केल्या होल्या. सांगली व परिसरामध्ये त्यांनी ब्रिटीशांमध्ये दहशत निर्माण करून ब्रिटीश सत्तेला प्रचंड विरोध केला. भारतास स्वातंत्र मिळाले. त्यामध्ये दादांचे योगदान मोठे होते हे निश्चितच भारत स्वतंत्र झाल्यावर दादांनी आमदार, मंत्री, मुख्यमंत्री, राज्यपाल इ. महत्वाची पदे भुषविली. आधुनिक भारताच्या इतिहासातील एक गौरवशाली पर्व होऊन गेले. सन १८१८ नंतर पटवर्धन सरदारांनी इंग्रजाची बाजू घेऊन त्याच्या जहागिरी शाबूत ठेवल्या सांगलीच्या पटवर्धन संस्थानाशी ईस्ट इंडिया कंपनीने सन १८२० ला स्वतंत्र्य तह केला.^१ व संस्थानला संरक्षण दिले. सन १८१८ ते १८२५ पर्यंत सांगली संस्थानात ब्रिटीशांच्या विरोधात असंतोष दिसत नाही. सन १९००



नंतर सांगली संस्थानात स्वातंत्र्य चळवळीची बिजे दिसू लागतात. सन १९२१ नंतर सांगलीचे वामनराव पटवर्धन,

ग.रा.अभ्यंकर यांच्या प्रयत्नाने 'दक्षिण संस्थान हितवर्धक' सभा स्थापन झाली. स्वातंत्र्य चळवळीस जोर आला.

ISC-2022

Challenges Involved in Teaching English at U.G. Level in Rural Area: A Case Study of D.J.G. Arts, Commerce, Science College, Vaduj, India

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Abstract: English is a window of the world. It occupies the prestigious place in our country. It is Lingua Franca of the world. It is either as a medium of communication or official language. One can observe its vast presence all over the world. Most of the Indian students, especially rural, when they hear word 'English', they feel uneasy. As a result, teachers who teach English face many challenges. Students also find learning English challenging. The research paper deals with pertinent challenging issues like: Why the students find English difficult to learn? What are the reasons for this? And what are the remedial measures to be taken to alleviate these problems?

Keywords: challenges, problems, teaching, learning, teacher, students

ISCA-ISC-2022-19LLC-05-Oral

कृषीमध्ये आधुनिक जलसिंचन तंत्रज्ञानाचा वापर

खाडे एस.एन.

भूगोलशास्त्र विभाग, दादासाहेब जोतीराम गोडसे आर्टस, कॉमर्सए, सायन्स कॉलेज वडूज ता. खटाव जि. सातारा, भारत sudamkhade68@gmail.com

सारांश: एकविसाव्या शतकात कृषीचे स्वरूप बदलत चालले आहेण् याची सुरूवात साधारणपणे विसाव्या शतकाच्या मध्यापासून झाली खाजगीकरणए उदारीकरण आणि जागतिकीकरणाचे वारे वाहू लागलेण् भारतीय अर्थव्यवस्था आणि भारतीय कृषीवर देखील याचा प्रभाव पडलेला आहेण् कृषीमध्ये प्रगत तंत्रज्ञानाचा उपयोग जगात सर्वत्र झालेला आहे आणि होत आहेण् कृषी प्रगतीसाठी उच्च पैदास बी बीयाणेए नॅनो बियाणेए नॅनो संवर्धनए तुषार सिंचनए ठिबक सिंचन जलसाठवण, खत तंत्रज्ञान कीडनाशक तंत्रज्ञान पद्धती हरित गृह तंत्रज्ञानए सेंद्रीय शेती अशा आधुनिक तंत्रज्ञान पद्धती वापरात येत आहेतण् उच्च पैदास पिकांच्या जातीची लागवड आणि खतेए जलसिंचन व कीडनाशके यांसारख्या कृषी आदांनाच्या वापरामुळे अन्नधान्य उत्पादन वाढत आहेण् म्हणून आधुनिक तंत्रज्ञानाची गरज आहेण् कृषीच्या पुनरूज्जीवनासाठी डॉण् एम एस स्वामीनाथन यांनी जलसाठवणए मृदा आरोग्यए गुणसंवर्धनए योग्य तंत्रज्ञान आणि सुधारित संधीचा विकास आणि प्रसार, कृषी उत्पादनाच्या बाजारेपेठेसाठी पायाभूत सुविधा आणि नियमितता या तंत्राचा वापर करण्याच्या शिफारशी केलेल्या आहेतण् कृषीमध्ये नॅनो तंत्रज्ञान अन्नोधोगात क्रांतीसाठी एक साधन ठरले आहेण् कृषी विकासातील वेगवेगळ्या तंत्रज्ञान प्रणाली मध्ये जलसिंचन तंत्रप्रणाली मध्ये जलसिंचन तंत्रप्रणालीचा अभ्यास आणि उपयोग कृषीसाठी महत्त्वपूर्ण ठरत आहेण्

मुख्य मुद्दे: कृषी, जलसिंचन तंत्रे

ISCA-ISC-2022-19LLC-06-Oral

समाज आणि मानवतावादाची मूल्ये

धनाजी नारायण कठरे दादासाहेब जोतीराम गोडसे आर्टस, कॉमर्स, सायन्स कॉलेज वडूज, ता. खटाव जि. सातारा, भारत dhanajikathare67@gmail.com

सारांश: मानवतावादाला इंग्रजी मध्ये भ्नउंदपेउ असे संबोधले जातेण् त्याचा अर्थ आहे मानवण् मानवतावादाच्या चिंतनाचा केंद्रबिंदू मानव आहेण् मानवी कल्याणासाठी जे तत्व उपयोगी आहेण् त्याचा संबंध Humanism शी आहेण् मानवी जीवनमूल्ये ही अंतिम मूल्ये होत हे मानवतावादाचे प्रथम सुत्र आहेण् मानव हा समाजशील व राजकीय प्राणी आहेण् समाजात राहिल्याने त्याला सुरक्षितता लाभते आणि त्याच्या गरजांची पूर्तता होतेण् मानवाच्या मुलभूत गरजांची पुर्तता होणे आवश्यक असते समुहाने राहिल्याने संरक्षण प्राप्त होते व गरजांची ही पूर्तता होतेण् इतर प्राणी आणि मानव यामध्ये फरक असा की मानवाला बुद्धी आणि वाचा असतेण् स्वहित साधणेए जिविताचे रक्षण करणे आणि स्वातंत्र्य उपभोगणे या गोष्टींना मानवतावादात अतिशय महत्त्व आहेण् जिवित स्वातंत्र्य आणि संपत्ती या तीन गोष्टींना मानवाने अतिशय महत्त्व दिलेण् स्वतरूचे हित साधणे अथवा न साधणे या बाबतीत त्याला स्वातंत्र्य आहेण् मानवाच्या



हातातच त्याचे जीवन म्हणजे इतिहासए ऐतिहासिक परिस्थिती निर्माण करण्याचे अथवा बदलण्याचे त्याला स्वातंत्र्य आहेण् सत्यासत्यए हित.अहितए नीतिअनीतीए पवित्र.अपवित्र आणि व्यापक अर्थाने योग्य.अयोग्य काय याचा निर्णय मानव घेत असतोण् मानवच सर्व अस्तित्वाचा मानदंड आहेण् अशा विचारांनी प्रेरित झालेले आंदोलन मानवतावादी होयण् अशा विचारसरणीचे मूलगामी समर्थन करणारे तत्वज्ञान मानवतावाद होयण्

ISCA-ISC-2022-19LLC-07-Oral

साहित्य, समाज आणि संस्कृती

केंजळे एस.एस.

मराठी विभाग, दादासाहेब जोतीराम गोडसे आर्टस, कॉमर्स, सायन्स कॉलेज वडूज ताण् खटाव, जि. सातारा. भारत sskenjle@gmail.com

सारांश: साहित्य, समाज आणि संस्कृती मराठी साहित्याचा मराठी समाजाशी आणि संस्कृतीशी सबंध असतोचण् संस्कृतीए समाज आणि साहित्य यांचे परस्परसंबंध स्पष्ट करताना काही महत्वाच्या विचाराचा ऊहापोह ;चर्चाद्ध या पेपर मध्ये केली आहेण् कारण लेखकांचा संबंध समाज व संस्कृतीशी येत असतोण् तो संस्कृतीचा जतनकर्ता व वाहक असतोण् तसेच समाजाचे तानेबाणे साहित्याशी जोडलेले असतातण् लेखक हा समाजाचे प्रतिनिधीत्व करतोण् तर संस्कृतीचा वाहक असतोण् समाज व संस्कृतीतून त्याला वगळता येत नाहीण् याची चर्चा साहित्यए समाज आणि संस्कृती या पेपर मध्ये केली आहेण् साहित्यात समाजाचे प्रतिबिंब असतेण् किंवा साहित्य हा समाजाचा आरसा आहेण् या सारखी विधाने असत्य वाटतातण् असे का वाटतेण् यांची चर्चा या अनुषंगाने केली आहेण् लेखक हा सामाजिकतेचा दर्शक असतोण् त्यांची भूमिका व त्याची निर्मिती समाज सापेक्ष असतातण् प्रदेशए भाषाए संस्कृतीए यांचा परस्पर संबंध आहेण् यावर प्रकाश टाकला आहेण् तर विचारवंत ष्तेनष् च्या तत्वज्ञानाचा ओझरता आढावा घेतला आहे.

ISCA-ISC-2022-19LLC-08-Oral

English Language for sustainable development

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Abstract: Social development is one of the major areas in sustainable development keeps people in the key position in society so as to build a nation. Language is the source of communication which develops significant potentials among people. It provides a proper channel to express and share ideas to create a mutual understanding. The means of communication could assist in establishing discourse and negotiation on micro as well as macro levels. English is an entrance to the global network of human contacts. Global interrelationship of people enables the exchange of knowledge and experience from different cultures and contexts. The present paper introduces the sustainable development and conceptualizes language with in its frame. Moreover, it explores the interdependence of language, literacy and development. Furthermore, it focuses on the goals and conflicts in language selection for the medium of instruction. Finally, some of the implications are included in the paper. Finally, educational institutions should give strong foundation in first language and an introduction to additional languages combined with critical thinking skills and strategies to promote interlinguistic transfer .This may quench the learners' current and future need. Continuing forms of education could help learner eventually to maintain and develop the languages in their repertoires.

Keywords: Sustainable, discourse, negotiation, implications, interlinguistic, repertoires.

ISCA-ISC-2022-19LLC-09-Oral

एकनाथ आवाड यांच्या जग बदल घालुनि घाव या आत्मकथनातील सामाजिकता

धनराज आवळे

दादासाहेब जोतिराम गोडसे कला, वाणिज्य, विज्ञान महाविद्यालय, वडूज, जि. सातारा, भारत

सारांश: मण् फुलेए राजर्षी शाहू महाराज आणि डॉण् बाबासाहेब आंबेडकर यांच्या विचार प्रवंतनामुळे उपेक्षित असलेल्या घटकामुळे जागृती निर्माण झालीण् व्यक्तीगत सामाजिक पातळीवर आत्मभान आलेल्या समाजातील शिक्षित तरूणांना दिशा मिळालीण् हजारो वर्षाची अस्पृश्यतेची लत्करे तो वेशीवर टांगण्यासाठी सज्ज झालाण् त्यातून आत्मकथनाकडे वळला त्यापैकी एकनाथ आवाड यांचे ष्जग बदल घालूनि घावष् हे आत्मकथन होयण् एखाद्या गरीब पोतराजाच्या पोराकडून कुणाच्या काय अपेक्षा असणारघ् बापासारखं पोतराज व्हावं किंवा जातीची पांरपारिक कामं करत लाचारीनं जगत राहावंण् पण एकनाथ



आवाड यांनी मळलेली वाट धुडकावलीण घर सोडलंए गाव सोडलंए कष्ट करत शिक्षण घेतलंण जगण्याची लढत आपली वाट आपण शोधलीण पण स्वतरूच्या सुखात समाधान मानलं नाहीण आदिवासी नि दलितांना वेठबिगारीतून बाहेर काढलंण अस्पृश्यता आणि जातीभेद या विरोधात गावोगांव संघर्ष मांडलाण हजारो भूमिहीनांना गायरान जमिनी मिळवून दिल्याण त्यांना सेंद्रीय शेती शिकवलीण बचत करून छोटे मोठे व्यवसाय करायचा मंत्र दिलाण अन्यायावर घाला घालत नवं जग घडवण्याचा नवा पॅटर्न उभा केला.

ISCA-ISC-2022-19LLC-10-Oral

महिला उद्योजकतेचा विकास

प्प्रियांका समीर इंगळे

दादासाहेब जोतिराम गोडसे आर्ट, कॉमर्स, सायन्स कॉलेज, वडूज ता. खटाव जि सातारा, भारत priyankaingale1598@gmail.com

सारांश: कोणताही देश जोपर्यंत महिलांच्या खांद्याला खांदा लावून चालत नाही तोपर्यंत प्रसिध्दीच्या शिखरावर पोहोचू शकत नाहीण् उदयोजक म्हटलं की पुरुषांची प्रतिमा डोळ्या समोर येतेए परंतु उदयोजक म्हणून महिलाची प्रतिमा समोर आण्याचा प्रयत्न या आधारे करण्यात येत आहेण् उदयोगात महिलांचा समावेश करुन त्याच्या क्षमताचाए उपजक गुणांचाए शक्तीचा उपयोग उदयोग व व्यवसाय क्षेत्रात होणे अत्यंत महत्वाची बाब आहेण् त्यासाठी प्रस्तुत माहिती ही अर्थव्यवस्थेतील उदयोजक महिलांची गरज दर्शविणारी आहेण् या यशस्वी महिला उदयोजकांची माहिती घेण्यात आली आहेण् त्याच प्रमाणे माहिला उदयोजकतेचा कितपत विकास झाला आहे याचा आढावा घेतला आहेण् तसेच महिला उदयोजकतेची गरजए महिला उदयोजकतेसाठी शासनाची असलेली धोरणेए बँकांच्या असलेल्या खास कर्ज योजना त्याच बरोबर महिला उदयोजिकांना कोणत्या अडचणींना सामोरे जावे लागते याविषयी विचार मिळालेल्या महितीच्या आधारे मांडण्यात आलेले आहेतण् महिला सक्षमीकरण करणे काळाची गरज आहेण् त्यामुळे महिलांना संधी देणेएअधिकार देणेए प्रात्साहित करणे गरजेचे आहे.

मुख्य विचारः महिला उद्योजकता, महिला उद्योजक काळाची गरज, महिला उद्योजकांच्या अडचणी, महिला उद्योजकांसाठी खास कर्ज योजना इत्यादीण्

ISCA-ISC-2022-19LLC-11-Oral Thematic analysis of 'The Vultures' by Vijay Tendulkar

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Abstract: The present research paper studies late 1960s innovations and practices about IndianEnglish drama by major dramatists of several Indian languages like Vijay Tendulkar, BadalSirkar and GirishKarnad. Most of the playwrights composed their dramas in their first language and it was available across the Globe through translation in English. Thus a new genre in literature came in focus i.e. Indian Drama in English Translation. One of the versatile dramatists of the Indian drama is Vijay Tendulkar. He wrote vigorously in his mother tongue, Marathi and was the one of the most criticized author in Marathi literature. The Marathi people could not bear his spartan attacks on the social institutes like education, marriage, joint families, etc. His focus was on the social and cultural downfalls in the lower and middle- class families. In the Vultures, he has shown the awful nature of a middleclass family through their depravity, selfishness, hatred, jealousy. **Keywords:** Language, Culture, Society, degeneration, immorality.

ISCA-ISC-2022-19LLC-12-Oral

Feminism: Equality Gender in Literature

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Abstract: Men and women have their own background and culture, the community has separated the notions on two genders. Most of the world community assume that men as superior and women as inferior. So feminist theory is a tool for women to



fight for their rights foe freedom in the world of politics, social, economic and literature. Feminism is a born because women are tired of being subordinate to everything through feminism women are able to show themselves. Women are no longer dangerous creatures and creatures that have been in the minds of men. But women are also able to work and be productive with men.

Keywords: Feminist, Gender, Equality.

ISCA-ISC-2022-19LLC-13-Oral वस्तू व सेवा कर प्रणाली आणि जीएसटी संकलनात झालेली वृद्धी

संजय पाटील

दादासाहेब जोतीराम गोडसे आर्टस, कॉमर्स, सांयन्स कॉलेज, वडूज ता. खटाव जि. सातारा, महाराष्ट्र, भारत spatil311970@gmail.com

गोषवारा: वस्तु व सेवा कर प्रणाली ही एक कर पध्दतीतील लक्षणीय आर्थिक सुधारणा आहे. या कर प्रणालीचा उद्देश देशाच्या अर्थव्यवस्थेला नवसामर्थ्य प्राप्त करून देवून कर भरणेची प्रक्रीया सोपी, पारँदर्शक व सोयीस्कर करून करचुकवेगिरीला आळा घातला जावा. त्यातुन देशाच्या अर्थव्यवस्थेला नवसामर्थ्य प्राप्त करून देणे.यातून करसंकलनात वृद्धी होवून केंद्र सरकार व राज्य सरकारची वित्तीय तूट कमी होणेस मदत झाली आहे. 1954 मध्ये फ्रान्समध्ये सर्वप्रथम वस्तू आणि सेवा करप्रणाली सुरु झाली. 1 जुलै 2017 पासून जी. एस. टी भारतात लागू करण्यात आला. केंद्रिय वस्तू व सेवा कर (CGST), राज्य वस्तू व सेवा कर (SGST), केंद्रशासीत प्रदेश वस्तू व सेवा कर (UTGST), एकात्मिक वस्तू व सेवा कर (IGST). असे प्रकार आहेत. सर्व वस्तुसाठी एकच दर ठेवता वेगवेगळा दर ठेवला आहे.0%, 5%, 12%, 18% आणि 28% अशा चार वेगवेगळ्या दराने कर विभागणी केली आहे. जीएसटी पोर्टल आणि माहिती तंत्रज्ञानाचा भक्कम पाया यांच्या आधारावर जी एस टी ही इमारत उभी आहे. सर्व करदात्यासाठी जी एस टी पोर्टल ही समान आणि एकमेव यंत्रणा आहे. नोंदणी, देयके, चलननिर्मिती, विवरणपत्र आदी सर्व प्रकारच्या सेवा एकाच ठिकाणी मिळतील अशी रचना आहे. संपूर्ण देशामध्ये एकसमान करपध्तीसाठी वस्त व सेवा कर प्रणालीचा अवलंब करण्यात आला. केंद्र व राज्यांना म्हसूल जमा होईंल अशी तरतुद आहे. करचुकवेगिरीस वाव नाही. करचुकवेगिरीस पायबंद बसूण सरकारचा महसूल वाढला आहे. सन 2020.21 च्या तूलनेत 2021.22 वर्षात 36 टक्क्याहून अधिक जीएसटी संकलन झाल्याचे दिसून येते. पहिल्या महिन्यात ऑगस्ट 2017 मध्ये वस्तू व सेवा कर 95633 कोटी रु. संकलीत झाला होता. मार्च 2022 मध्ये 142095 कोटी रुपये झाला आहे. ऑगस्ट 2017 च्या तलनेत मार्च 2022 मध्ये जीएसटी संकलनातील वाढ 49 टक्के आहे. सन 2020-21 या आर्थिक वर्षात जीएसटी कर संकलनात चढ- उतार दिसून येत आहेत.वस्त् व सेवा कर संकलन सार्वजनिक उत्पन्नाचा प्रमुख स्त्रोत बनला आहे. 2020-21 च्या तुलनेत 2021-22 मध्ये जीएसटी कर संकलनात 31 टक्के वृध्दी दिसुण येत आहे.

ISCA-ISC-2022-19LLC-14-Oral

बँटवारे की पीडा का गवाह उपन्यासः 'जिंदा मुहावरे': नासिरा शर्मा

क्षितिज यादवराव धुमाळ

हिंदी विभाग, दादासाहेब जोतिराम गोडसे आर्ट्स,कामर्स, सायन्स कालेज, वडूज, ता. खटाव जि. सातारा, महाराष्ट्र, भारत kshitij.dhumal75@gmail.com

सारांश: अंग्रजों से आजादी प्राप्त होते ही हिंदुस्थान के विभाजन की त्रासदी को भारत और पाकिस्तान के करोडो लोगों ने अनुभव किया । प्रस्तुत उपन्यास में संकीर्णता के कारण बिघडी हुई समाज व्यवस्था, वतन छोडकर दूसरे प्रदेश में जाने की वेदना, संाप्रदायिक स्थितियाँं आदि का अंकन हुआ है। भ्रष्ट प्रशासन व्यवस्था पर भी प्रश्न चिन्ह उपस्थित किया गया है। राजनीतिक स्वार्थ से प्रेरित विभाजन के कारण विस्थापितों की कारुण्यजनक स्थिति के साथ ही कौमी आंदोलनों से निर्माण असुरक्षा, अर्थप्राप्त के लिए गैरमार्गो का अवलंब आदि का बेबाक चित्रण प्रस्तुत उपन्यास के मूल्यांकन की विशेषताएँ वतन के प्रति प्रेम की भावना को अधोरेखित किया गया है। विभाजन यह ऐतिहासिक हादसा तो है ही किंतु वह दो धर्मों के मानवीय मनों की टुटन शीलता को भी वाणी देता है।



ISCA-ISC-2022-19LLC-15-Oral

Feminism: Equality Gender in Literature

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Abstract: Men and women have their own background and culture, the community has separated the notions on two genders. Most of the world community assume that men as superior and women as inferior, so feminist theory is a tool for women to fight for their rights foe freedom in the world of politics, social, economic and literature. Feminism is a born because women are tired of being subordinate to everything through feminism women are able to show themselves. Women are no longer dangerous creatures and creatures that have been in the minds of men. But women are also able to work and be productive with men.

Keywords: Feminist, Gender, Equality.

ISCA-ISC-2022-19LLC-16-Oral महात्मा जोतिबा फुले और डॉ. बी. आर. आंबेडकर जी के शिक्षा विषयक दृष्टिकोन और राष्ट्रीय शिक्षा नीति: एक चिंतन

बाबासाहेब तुकाराम साबळे

हिंदी विभागाध्यक्ष, दादासाहेब जोतीराम गोडसे आर्टस्, कॉमर्स, सायन्स कॉलेज, वडूज ता. खटाव जि. सातारा, महाराष्ट्र, भारत babasahebsabale2@gmail.com

सारांश (Abstract): भारत सरकार ने शिक्षा नीति में सुसंघटित और विकास को केंद्र में रखकर उसमें सुधारवादी दृष्टिकोन अपनाया है। प्रत्येक सरकार अपनी शिक्षा नीति की भूमिका में आदर्श कार्य प्रणाली की घोषणा करती है. जिसमें शिक्षा नीति में गुणवत्ता के साथ-साथ नई तकनीकी शिक्षा अवगत हो इसकी चिंता करता है। भारत सरकार काल के अनुरुप शिक्षा नीति में हमेशा के तरह शिक्षा का स्तर उँचा उठाने की कोशिश करता है। शिक्षा नीति में परिवर्तन लाने का भी कार्य करता है। उसमें देश के सर्वांगिण विकास में शिक्षा को विशेष स्थान प्राप्त होता है और विश्व में शैक्षिक क्षेत्र में अपना देश महाशक्तिशाली बन सके इस उदात्त दृष्टिकोन और उद्देश से ही शासन शिक्षा नीति में परिवर्तन करके उसमें सुधार लाने का प्रयास करता है। आज संपूर्ण भारत में राष्ट्रीय शिक्षा नीति में काफी परिवर्तन हुआ है। उसका एक अलग इतिहास बनता है। स्वतंत्रता पूर्व और आजादी के बाद भी शिक्षा नीति में सुधारवादी दृष्टिकोन पाया जाता है। जिसमें स्वातंत्र्य पुर्व काल में लॉर्ड मैकाले से लेकर चार्ल्स वुड के साथ लॉर्ड कर्जन, सार्जेन्ट आदि का राष्ट्रीय शिक्षा नीति के संदर्भ में विविध विद्वानों का विशेष उल्लेख मिलता है। ठीक उसी प्रकार स्वतंत्र भारत के प्रत्येक शासन की शिक्षा विषयक यही भूमिका रही है। बल्कि उसमें गुणवत्ता और नवीनता की दृष्टि में काफी संशोधन के साथ नई शिक्षा नीति का समावेश किया है। सन 1968 से लेकर सन 2021 तक भारत वर्ष में राष्ट्रीय शिक्षा नीति में लगभग सुधारवादी दृष्टिकोन अपनाया है। इसके अलावा शिक्षा नीति में बदलाव के आधार पर या गुणवत्ता के नाम पर परी शिक्षा नीति में व्यापारीकरण का दृष्टिकोन होगा। शिक्षा क्षेत्र हमेशा के लिए अपने कब्जे में रखकर आम आदमी को शिक्षा से वंचित रखना इस उद्देश से शिक्षा नीति की परियोजना तैयार हुई होगी। अगर ऐसा होगा तो शिक्षा का संपूर्ण अधिकार किसी एक समाज की कटपूतली बन जाऐगी। उससे बचना है तो महात्मा जोतिबा फूले और डॉ. बाबासाहेब आंबेडकर जी के विचारों का शिक्षा नीति में समावेश होना जरुरी होगा।



ISCA-ISC-2022-19LLC-17-Oral Sovereign Power, Disciplinary Power and Biopower: A Foucauldian analysis of Harold Pinter's "The Press Conference"

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Abstract: Harold Pinter, a strong proponent of individual autonomy against the authoritarian state, has critiqued the domineering aspects of modern states in all his political plays including "The Press Conference". A modern state, though formulated on the humanitarian foundations of democracy and republic, is ultimately a macrocosmic manifestation of the kinds of power relations which function at all the elementary levels in a given societal framework. The knowledge systems or epistemes pervasive and entrenched in the given context at a particular time period produce the power relations "blindly" and these power relations, in turn, "blindly" produce reality, a uniform hierarchical order, the general truth, the standard behaviour or norms. A society accepts the discourses which align with their preconceived norms reject those which don't. The slightest deviation from the "normal" is seen as a threat and is diabolized. The power, thus, is exercised to maintain the status quo or the standard behavioural norms. Harold Pinter's play "The Press Conference" grasps the essence of modern states on the verge of becoming totalitarian regimes with the neoteric origination of "Sovereign power"," disciplinary power" and "biopower". The modern state which Pinter portrays through his play "The Press Conference" is one of the most creative depictions of the modern states in contemporary world drama. Pinter's state in "The Press Conference" can be analysed in accordance with these Foucauldian power forms viz. sovereign, disciplinary and biopower.

Keywords: Harold Pinter, state, totalitarian, Foucalt, Foucauldian, power, sovereign power, biopower, disciplinary power.



20.Social and Humanity Sciences

ISCA-ISC-2022-20SH-01-Guest Speaker

Islamic Women Rights: Tradition and Reform

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Abstract: Islamic tradition was dates it orgin early seventh century CE (610CE/632CE) in the Arbian town of Mecca by Mohammed ibn Abdullah (prophet) a merchant and messenger of god. They received a series of revelutions from God collectively named Quran. It is a guide to those in awe and fear (of god) (sura2.2) complementing the Quarn the voluminous record of mohammads life known as the Hadith which conveys the sunna. Or tradition from there affords emerged a complex code of regulation called sharia which form the basis of Islamic law. Islam gave right to women which the world denied erlier and she were silently suffering long because of the deprivation. Due to changing pattern of life under circumstances of modernization the muslim community felt relished and brings reformation views and action for their changing quality of life. The present lecture is an efforts to put an outline summary of changes such as right to live , right to education , right to property right to honour , right to trade and earning , right to marriage (nikaha), right to cultural ceremony, right to Dower , right to criticism and correct right to culture, to explore the ideas for future situation and reforms. **Keywords:** Islamic, Women, Rights, Tradition, Reform.

ISCA-ISC-2022-20SH-01-Oral

Supporting of decolonisation struggles after World War II by Frantz Fanon

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Abstract: The study provided an in-depth analysis of Frantz Fanon's commentary and perspectives in terms of his support for decolonisation struggles after World War II. This paper had put an emphasis on Algerians' anti-colonial struggle against French rule considering Fanonian discourses toward decolonisation of this territory. In this paper, various observations are acquired to comprehend Fanon's understanding of natives' decolonisation struggles resulting in physical and psychological violence, and his justification for making violence a key player in anti-colonial struggle. Fanonian perspectives from his writings were also discerned to gain an explicit grasp of his support of decolonisation struggles after World War II. **Keywords:** Frantz Fanon, decolonisation, anti-colonial struggle, indigenous, Algeria, oppression and exploitation.

ISCA-ISC-2022-20SH-02-Oral

Rajashri Shahu Maharaj's Contribution to Women Empowerment

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Abstract: Rajashri Shahu Maharaj is the most popular Maratha King of Kolhapurwhich had a revolutionary vision for inclusive development. In fact, he was a social reformer to work for excluded rural and low-caste indigent people from basic necessities, education, health, employment and various arts. Shahu Maharajalso paid attention towards the education of women as he considered education is equally important for women so as to bring up the children properly and encouraged the girls for education in many ways. He also declared the scholarships of Rs. 40 each, in the names of, 'Shri RadhabaiAkkasaheb Maharaj Scholarship' and 'Shri Nandkunwar Maharani Bhavnagar Scholarship' for first two girls in the ranking of standard IV of Marathi medium schools in Kolhapur and Bawda. He exempted the fees of the girls in Rajaram College and also declared scholarships for them. He had contributed greatly to increase the percentage of literate women due to his various efforts. He started a free school, 'Ahilyabai Girls' High School', for girls towards the eastern side of his Royal Palace and he also opened another school for girls in Kolhapur. 'Ma. loxmiboiGirls" High School In 1911, Shahu Maharaj made the provision of free Education Dalit girls and boys and devotedly worked for the emancipation of the Dalit and women and he already started a hostel for them in 1908. here were only 05 schools for the dalits, due to his attempts the number increased up to 27 in 1911 12 and Iron 1917 onwards he ran / hostels for them through his personal and oyal expenditure. Shahu Maharaj Was deliberately provided his attention to educate his masses taking into consideration that the education was the only key for their material progress. to provide education of all his subjects, he enacted the Act of Compulsory and Free Education in 1917 and implemented it rigidly by fining the parents for absence of their children at the rate of One Rupee per month." He



thus opened the reed education to ail his subjects without any kind of discrimination and given the tremendous impetus to the process of social change in Maharashtra. Even in today's era, his foresight can be seen everywhere while considering development of not only Kolhapur but also Maharashtra and India as well. This research paper is a small initiative to spread the greatness of the visionary king. Shahu Maharaja everlastingly endeavoured to build new society based on equality by violating traditional caste system in Hindu society. He was motivated by the thoughts of annihilation of caste, abolition of untouchability, destroying the artificial walls between superior and inferior, upper and lower classes (Kharat 14).Shahu Maharaja issued an order stating no one will desecrate untouchables.

ISCA-ISC-2022-20SH-03-Oral

Humanitities and Social Sciences

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Abstract:Humanities are academic disciplines that study aspects of humansociety and culture. In the Renaissance, the term contrasted with divinity and referred to what is now called classics, the main area of secular study in universities at the time. Today, the humanities are more frequently defined as any fields of study outside of professional training, mathematics, and the natural and social sciences. They use methods that are primarily critical, or speculative, and have a significant historical elementas distinguished from the mainly empirical approaches of the natural sciences; yet, unlike the sciences, the humanities have no general history. The humanities include the studies of foreign languages, history, performing artsand visual arts ,culinary art or cookery is interdisciplinary and may be considered both a humanity and a science. Some definitions of the humanities include law and religion, but these are not universally accepted. Although anthropology, archaeology, geography, linguistics, logic, and sociology share some similarities with the humanities. Scholars in the humanities are called humanities scholars or sometimes humanists. secondary schools offer humanities classes usually consisting of literature, global studies, and art. Human disciplines like history and language mainly use the comparative method and comparative research. Other methods used in the humanities include hermeneutics, source criticism, esthetic interpretation, and speculative reason.

ISCA-ISC-2022-20SH-04-Oral

Humanities - Philosophical history

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Abstract: In the West, the history of the humanities can be traced to ancient Greece, as the basis of a broad education for citizens. During Roman times, the concept of the seven liberal arts evolved, involving grammar, rhetoric and logic, along with arithmetic, geometry, astronomy and music. These subjects formed the bulk of medieval education, with the emphasis being on the humanities as skills or "ways of doing". A major shift occurred with the Renaissance humanism of the fifteenth century, when the humanities began to be regarded as subjects to study rather than practice, with a corresponding shift away from traditional fields into areas such as literature and history. In the 20th century, this view was in turn challenged by the postmodernist movement, which sought to redefine the humanities in more egalitarian terms suitable for a democratic society since the Greek and Roman societies in which the humanities originated were not at all democratic.

ISCA-ISC-2022-20SH-05-Oral A study of geographical relationship of spatial distribution of rainfall with concentration in Satara District, Maharashtra, India

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Abstract: Rainfall is key source of fresh water has supplied water for domestic, industrial and agricultural sector. It is provided potable water to daily activities of human. In fact, rainfall has distributed regional development in region and its concentration creates possibility as well as potentiality of development in region. Also, rainfall provides water to



agricultural practices, especially in India, agriculture is completely depend on rainfall pattern, But, India comes in monsoon climate, where, uncertainty and unequal distribution of rainfall has occurred. The Report Central Ground Water Board (2019), the average annual rainfall is 119 cm in India, where, over 75% of the annual rainfall is received in the four rainy months for June to September only. In 2019 year, the country received actual annual rainfall of 1288.8 mm. But, there is observed problems and drought prone region in reached in India. The Sataradistrict has taken for research study which is located in western part of Maharashtra. As report of Indian Meteorological Department, 2021, average rainfall about 1404.28mm. are recorded in Satara district. There is widely variation in rainfall distribution, mainly, maximum rainfall is distributed in western part of Satara District and minimum rainfall is noted in eastern part of SataraDistrict. The present paper is an attempt to assess the spatial distribution of rainfall in Satara District. The analysis reveals that the region has random to regular distributional pattern of Satara District.

Keywords: Agriculture, Rainfall, Distribution, Rural, Satara.

ISCA-ISC-2022-20SH-06-Oral

The study of watershed development programme and cash crops land use in Khatav Tahsil, India

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Abstract: Flora and Fauna is sustained on earth cause of existence to the water. Though, water is occupied 71 percent area of earth surface, water is the global problem. According to UNICEF Report, 2020, nearly 2/3 world's population i.e. four billion people experience severe water scarcity for at least one month each year and above two billion people live in different countries, there is supplied inadequate water to people. World's half population could be living in areas where, facing water scarcity by as initial as 2025 year. There is need to conserve as well as preserve the water for best future and Watershed Development Programme (WDP) is the best solution for that manner. Our India is agricultural country which comes in monsoon climate, where, rainfall has uncertainty pattern and unequal distribution. Therefore, Watershed Development Programme (WDP) is highly necessary for commercial agriculture especially for cash crops production. The Khatav tahsil is severe drought prone region of Satara district has taken for study located in the western part of the Maharashtra. The rainfall decreases from west to east in Khatav tahsil, where, observes drought-prone condition after every 3-4 years. Under the Watershed Development Programme (WDP) scheme, several work Kolhapur Type Bunds, Underground Bunds, Corner Bunds, Storage Irrigation Scheme, Percolation Tank, Village Tank, Lift Irrigation, Bridge Mixed Bunds etc. are constructed in the those villages who have participated in the this scheme of Khatav tahsil which have the positive impacts on agriculture especially on Cash crop farming. This paper is an attempt to analyze the correlation between of watershed development programme and Cash crop landuse in Khatav tahsil. Spearman's Rank order method is used for analyzes the correlation of between watershed development programme and Cash crop landuse. The correlation between watershed development programme and Cash crop landuse in Khatav tahsil is r = 0.3714. It is moderate positive or direct correlation. Keywords: Watershed, Agriculture, Cash Crops, Correlation,

ISCA-ISC-2022-20SH-07-Oral

Alternate Fuel

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Abstract: In recent years, fossil fuels have come under increasing scrutiny, as it has become clear that there is both a limited supply and rapidly growing demand in the emerging global market. With large countries, such as China and India industrializing, the demand for petroleum-based fuels will soon exceed the supply. This growth in demand comes at the same time global warming appears to be a serious threat. Non-fossil fuel renewable energy sources may be an important alternative for both consumers and logistics managers. In this paper, the authors examine the following questions related to these alternative energy sources in the India. Today, the energy crisis becomes one of the global issues confronting us. Fuels are of great importance because they can be burned to produce significant amounts of energy. Many aspects of everyday life rely on fuels, in particular the transport of goods and people. Main energy resources come from fossil fuels such as petrol oil, coal and natural gas. Fossil fuel contributes 80% of the world's energy needs. Most industries use diesel machines for the production process. In the transportation sector, private vehicles, buses, trucks, and ships also consume significant amounts of diesel and gasoline. This situation leads to a strong dependence of everyday life on fossil fuels. However, the growth of the population is not covered by domestic crude oil production. Fossil oils are fuels which come from ancient animals and microorganisms. Fossil fuel formation requires millions of years. Thus, fossil oils belong to non-renewable energy sources. An increase of the oil price often leads to economic recessions, as well as global and international conflicts. Especially in



some developing countries, the great development in the economy in fossil fuel resources will be consumed in only 65 more years. In addition the emission produced by the combustion of fossil fuels also contributes to the air pollution and global warming. Most countries also experience more and more international pressure on global warming issues. Hence, renewable and clean alternative fuels have received increasing attention for current and future utilization. Biodiesel as one promising alternative to fossil fuel for diesel engines has become increasingly important due to environmental consequences of petroleum-fuelled diesel engines and the decreasing petroleum resources.

ISCA-ISC-2022-20SH-08-Oral

A case study of Horribleclimate challenges in Bangalore, India

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Abstract: Bangalore officially Bengaluru the capital and largest city of the Indian state of Karnataka. It has a population of more than 8 million and a metropolitan population of around 11 million, making it the third most populous city and fifth most populous urban agglomeration in India, as well as the largest city in South India, and the 27th largest city in the world. Located on the Deccan Plateau, at a height of over 900 m (3,000 ft) above sea level, Bangalore has a pleasant climate throughout the year. Its elevation is the highest among the major cities of India. Bangalore is widely regarded as the "Garden city of India" because of its cool climate, multiple botanical gardens and parks. It has been an aerospace & defence electronics hub from 1960's onwards housing multiple public sector companies such as Antrix Corporation, BEML, Bharat Electronics, DARE, Electronics and Radar Development Establishment, ISRO, HAL, ITI Ltd., KIOCL, National Aerospace Laboratories, New Space IndiaLimitedandNGEF.In the Ease of Living Index 2020 it was ranked the most liveable Indian city with a population of over a million. It also ranks among the highest Indian cities in terms of global liability rankings as well. so we all know Bangalore is one of the fastest grow city, growing technology, upgrade health care facility makes raise population rate but in my intuition day by calming fruitful Bangalore weather has Detreated as per as frequently climate change like increase temperature, air pollution. Now deforestation is the biggest issues for changing weather and atmosphere. one of the biggest prove is horrible outer blast rain in Bangalore 4thSeptember2022.As a researcher my point is why temperature air pollution constantly raising. Whole process has done with primary data with compare Google source. **Keywords:** Gardencity, outerblastrain, deforestation.

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Supplementary abstract of all sections

ISCA-ISC-2022-2AVFM-03-Poster Assessment of histological alterations induced by Metal and its Nanoparticles in fresh water carp

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Abstract: In the recent times, nanomaterials (particle size of 1-100nm) are used in many sectors of science, medicine and industry, with revealing its toxic effects. Though, they have gained increasing attention because of their novel properties (including a large specific surface area and high reaction activity). Mechanism of toxicity of metal nanoparticles can occur by different methods like histopathology, oxidative stress, co-ordination effects, non-homeostasis effects, and genotoxicity. Factors that effect on the toxicity were size, dissolution and exposure routes. In thepresent in vivo study, we providecomparative toxicological consequences induced by Nickelions (Ni) and Nickel nanoparticles (Ni-NPs). Which are abundantly utilized on a large scale indifferent applications due to positive attributes and also cause environmental pollution that mayaffect not only aquatic organisms but also the human beings. During this study, the acute toxicity of Ni was determined by using fish, Labeorohita. The histological changes were determined in fish vital organs after chronic exposure for certain days. The overall results indicated that induced toxicity of Ni and Ni-NPs in aquatic organisms may be due to release of Ni ions from Ni-NPs and NPs induce toxicity in tissue under long term exposure. **Keywords:** Nanoparticles, Toxicity, Comparative Histopathology, Fish model.

ISCA-ISC-2022-2AVFM-04-Poster Diversity of Millipedes from Satara region, Satara district, MS, India

Shubham Mane* and Vishwas Deshpande

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Abstract: Class diplopoda is the world's third largest group of species behind Insecta and arachnida. It includes class diplopoda, chilopoda, Pauropoda and symphyla.Class diplopoda also called as millipede are detritivorous and are found in damp and shady places. They are slow moving and multi-legged arthropods. Behind the annelids they are second forest decomposers. Class diplopoda is one of the most neglected group of species because of its habitat and nocturnal nature of most of species. A comprehensive study of this subject is essential, and millipede conservation measures need to be taken. **Keywords:** Millipede, Decomposers, Diversity, Conservation, Satara Region.

ISCA-ISC-2022-17CLM-04-Oral A review of the impact of ICT on business firm

Madhuri Balkrishna Chavan

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Abstract: The importance of using Information communication Technology (ICT) Such as Enterprise Resource planning (ERP) by business firms cannot be over stated ICT application have been the major Interest of Researchers and practitioners due to the benefits that can be generated from these Application. The purpose of the study is to find the impact of ICT Technologies and application on business firms. An intensive literature review has been conducted to Identify the end patterns of academic researchers based on the review have been made. There are gaps in the literature pertaining to the role of Ecommerce and ERP. More studies needed to the gaps. The finding shows that most of the studies have focused on adoption factories benefits and barriers of e-commerce rather than using e-commerce in are such as productive and cost. The relationship between ERP and productivity was found to be significant.

Keywords: ICT, ERP, E- Commerce, Firm performance



ISCA-ISC-2022-19LLC-01-Guest Speaker

Digital Learning in English Language Classroom: Challenges and opportunities

Manisha Anand Patil

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Abstract: The global pandemic Covid 19 has shifted the teaching learning focus from face to face learning to online learning. Technology and new inventions have affected all the fields and education is no exception to it. As a result "Digital learning" has become a buzz word in education. Present study is an attempt to review the studies on digital learning and how it can be used to enhance the English language learning of students. It is a fact that learning in the future is digital and it will affect the learning process, learners as well as the teachers. Social networking sites such as Youtube, WhatsApp, Instagram, Facebook, Podcast etc., can be used to make English language learning more interesting resulting into the mastery over English language communication. The "Digital learning" does create lot of opportunities for the students such as availability of various resources, courses as well as networking opportunities. It is also very challenging to create the physical classroom feel in the digital learning space. The present study will throw light on the challenges and opportunities too. **Keywords:** digital learning, English classroom, challenges, opportunities, social media
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