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NEWSLETTER

Faculty of Applied Sciences

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ACKNOWLEDGEMENTS

The Dean, Heads of Departments, all the academic staff and the FAS students are greatly appreciated for providing information for this newsletter.

DISCLAIMER

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The editors also wish to notify the readers that this is not an official report which makes any obligations or rights, binding the FAS or any person associated with the FAS.

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Faculty of Applied Sciences

SEUSL

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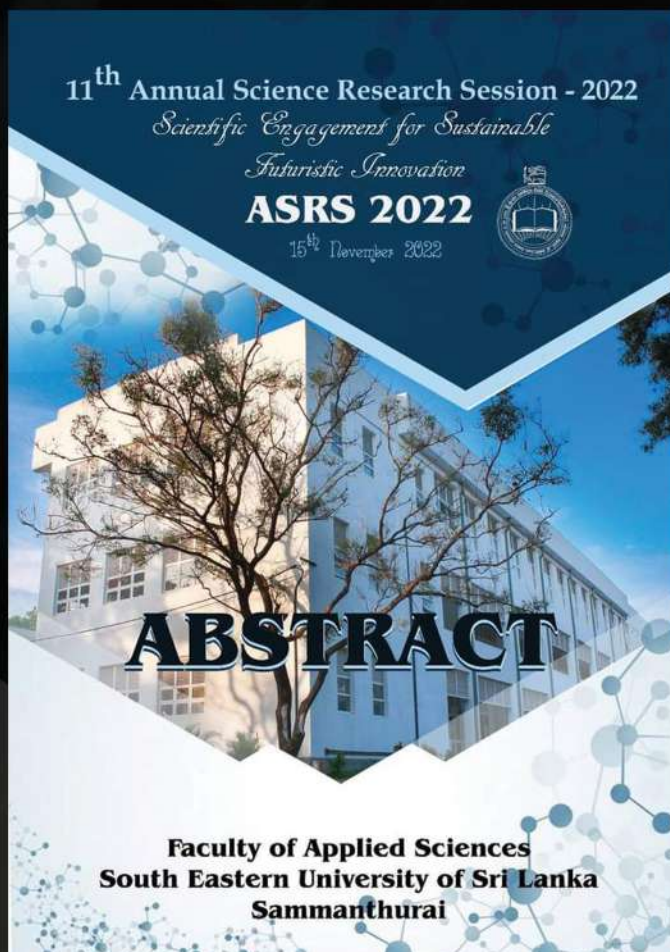
Computer Science Society

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Announcements & Appointments

The Annual Science Research Session (ASRS 2022)



The Annual Science Research Session 2022 (ASRS 2022), which was hosted at the Faculty of Applied Sciences, South Eastern University of Sri Lanka, was a one-day gathering of scientists, researchers, and business executives to discuss the most recent developments and research achievements in a variety of scientific subjects. The conference served as a

forum for useful interactions and the sharing of information, advancing science and its uses generally. The theme of the conference was scientific engagement for sustainable future innovations. Dr. M. H. Haroon, the Dean of FAS, served as the conference's chair. The coordinator, secretary, and treasurer were Dr. (Mrs.) V. Sujarajini, Dr. M. A. C. M. Haniffa, and Mr. A. L. Hanees, respectively. During the conference's opening ceremony, eminent scientists, Prof. K. R. R. Mahanama and Prof. Upali S. Amarasinghe, delivered keynote addresses. The respective presenters delivered 58 abstracts. At the conclusion of the day, Dr. Christopher J. Fearday gave the planetary speech"



Dean of the FAS

Dr. M.H. Haroon



Dr. M.H. Haroon has been appointed as the Dean of the Faculty of Applied Sciences with effect from 3rd August 2022.

Mr. A.M. Riyas Ahamed



Mr. A.M. Riyas Ahamed has been appointed as the Head of the Department of Biological Sciences with effect from August 2022

New Heads of the Departments

Dr. M.N.M. Farhath



Dr. M.N.M. Farhath has been appointed as the Head of the Chemical Sciences Department with effect from July 2022. Dr. Farhath earned his BSc (Hons) in Computational Chemistry from

University of Colombo before enrolled to PhD programme in Biochemistry and Molecular Biology at Kent State University, USA. Prior to joining FAS in 2019, he worked as postdoctoral research fellow at Harvard Medical School, Boston, USA. In addition to the Head of the department, he is bearing numerous responsibilities in various internal academic committees at FAS.

Dr. M.J.M. Jafeen



Dr. M.J.M. Jafeen has been appointed as the Head of the Department of Physical Sciences with effect from 31st August 2022.

Mr. M.A.A.M. Faham



Mr. M.A.A.M. Faham has been appointed as the Head of the Department of Mathematical Sciences with effect from 16th August 2022.

Director-Science Research Centre

Dr. U.L. Zainudeen



Dr. U.L. Zainudeen, Senior Lecturer in Physics attached to the Department of Physical Sciences has been appointed as Director of Science Research Centre at the Faculty of Applied Sciences with effect from 2022.

Senior Student Counselor

Dr. T.B.N.S Madugalla



Dr. T.B.N.S Madugalla, Senior Lecturer in Earth Science attached to the Department of Physical Sciences has been appointed as Senior Student Counselor at the Faculty of Applied Sciences

with effect from 2022.

Postgraduate Degree Holder

Mr. N.M. Fasmie



Mr. N.M. Fasmie, Lecturer in Mathematics attached to the Department of Mathematical Sciences, completed his Master by research degree with effect from 4th December 2022 at the Universiti Utara Malaysia, Malaysia. His research was

an investigation on "Direct multi-step hybrid block methods with systematic selection of off-step points for higher order ordinary differential equations in the presence of higher derivatives" which was supervised by Prof. Dr. Zurni bin Omar and Dr. Kamarun Hizam.

Director-Research and Innovation Committee

Dr. A.M.N.M. Adikaram



Dr. A.M.N.M. Adikaram, Senior Lecturer in Earth Science, attached to the Department of Physical Sciences has been appointed as Director-Research and Innovation Committee of South Eastern

University of Sri Lanka with effect from October 2022 for a period of one year.

Coordinator-PGU Unit

Dr. T.B.N.S Madugalla



Dr. T.B.N.S Madugalla, Senior Lecturer in Earth Science attached to the Department of Physical Sciences has been appointed as Coordinator-Postgraduate

Unit at the Faculty of Applied Sciences with effect from 2022.

Higher Studies

Ms. R. Thushanthani



Ms. T. Thushanthani, Lecturer (prob) in Mathematics at the Department of Mathematical Sciences, joined the Memorial University Newfoundland to pursue her two years Master degree programme

with effect from 06th September 2022.

New Staff Appointments

Department of Computer Science

Mrs. M.H.F. Fazliya



Mrs. M.H.F. Fazliya has been appointed as a Lecturer (Prob) in Computer Science effective from February 2022 attached to the Dept. of Computer Science. Mrs. Fazliya obtained her BSc Hons in Computer Science from the South Eastern University of Sri Lanka in 2018. Her research interests include Artificial Intelligence, Data Science and Deep Learning.

Mrs. M.N.F. Fajila



Mrs. M.N.F. Fajila has been appointed as a Lecturer (Prob) in Computer Science effective from May 2022 attached to the Department of Computer Science. Mrs.

Fajila obtained her BSc Hons in Computer Science from the University of Peradeniya, Sri Lanka in 2015, and currently she is reading her MSc (IT) at the Universiti Utara Malaysia (UUM). Her research interests include Swarm Intelligence, Data Mining, Machine Learning, and Bioinformatics.

Department of Physical Sciences

Mrs. A.R. Najitha



Mrs. A.R. Najitha has been appointed as a Lecturer (Prob) in Physics effective from February 2022 attached to the Dept. of Physical Sciences. Mrs. A. R. Najitha obtained her B.Sc. (Hons) in Physics with First Class from South Eastern University of Sri Lanka in 2017 and currently, she is reading her MPhil degree at South Eastern University of Sri Lanka. Her research interests include Dye-sensitized and Perovskite solar cells as well as High Energy Physics.

Mrs. M.A. Farhana



Mrs. M.A. Farhana has been appointed as a Lecturer (Prob) in Physics effective from February 2022 attached to Dept. of Physical Sciences. Mrs. Farhana obtained her BSc Hons in Physics from the South Eastern University of Sri Lanka in 2017 and currently she is reading her M.Phil degree under the board of study in Physics at university of Peradeniya, Sri Lanka. Her research interests include Dye-sensitized and thin-film solar cells.

Department of Mathematical Sciences

Mr. D.C. Gunawardhana



Mr D. C. Gunawardhana has been appointed as a Lecturer (Prob) in Mathematics, effective from February 2022 attached to the Department of Mathematical Science. Mr. Gunawardhana obtained his BSc Hons in Mathematics from the University of Peradeniya, Sri Lanka and successively completed his MSc in Applied Statistics from the Postgraduate Institute of Agriculture University of Peradeniya. His research interests include Algebraic Topology, Functional Analysis, Harmonic Analysis, Fluid Dynamics, and Multivariate Statistics.

Mr. N.M. Fasmie



Mr. N.M. Fasmie faculty member attached to the Department of Mathematical Sciences, has completed his Master by research degree on 4th December 2021 at the University Utara Malaysia, Malaysia. His research was an investigation on "Direct multi-step hybrid block methods with systematic selection of off-step points for higher order ordinary differential equations in the presence of higher derivatives" which was supervised by Prof. Dr. Zurni bin Omar and Dr. Kamarun Hizam.

Ms. R. Thushanthani



Ms. R. Thushanthani has been appointed as a Lecturer (Prob) in Mathematics, effective from February 2022 attached to the Department of Mathematical Science. Ms. Thushanthani obtained her BSc Hons in Mathematics from the University of Jaffna, Sri Lanka in 2017 and successfully completed her MSc in Industrial Mathematics from the Postgraduate Institute of Science, University of Peradeniya, Sri Lanka in 2020. Her major subjects are Fluid Mechanics, Algebra and Group Theory.

Staff Achievements & Promotions

Vice Chancellor Award 2022

Dr. A.M.N.M. Adikaram



Dr. A.M.N.M. Adikaram, Senior Lecturer in Earth Science, attached to the Department of Physical Sciences received the first place of the Vice Chancellor's Award – 2022 under the category of "The researcher with the highest number of indexed publications in the Faculty of Applied Sciences" at the Founder's Day celebration held on 25th October 2022.

Dr. T.Jaseetharan



Dr. T. Jaseetharan, Senior Lecturer in Physics, attached to the Department of Physical Sciences received the Vice Chancellor's Award – 2022 under the category of "The researcher with the highest number of indexed publications in the Faculty of Applied Sciences" at the Founder's Day celebration held on 25th October 2022.

Staff Achievements & Promotions

Senate Honours Award

1. Dr. M.A.C. Akmal Jahan

Senate Honours Award for Publications in Indexed Journal



Dr.M.A.C. Akmal Jahan, Senior Lecturer in Computer Science, attached to the Department of Computer Science, received the Senate Honours Award in 2022

for high impact publication. It was awarded by the Vice Chancellor at the 223rd meeting of the Senate for publishing a research article on "HOS-FingerCode: Bispectral invariants based contactless multi-finger recognition system using ridge orientation and feature fusion." in the journal of Expert Systems with Applications.

2. Dr. T. Jaseetharan

Senate Honours Award for Publications in Indexed Journal



Dr. T. Jaseetharan, Senior Lecturer in Physics, attached to the Department of Physical Sciences, received Senate Honours Award in 2022 for high impact publication.

It was awarded by the Vice Chancellor at the 223rd meeting of the Senate for publishing research article on "Solid-state solar cells co-sensitized with PbS/CdS quantum dots and N719 dye and based on solid polymer electrolyte with binary cations and nanofillers" in the Journal of Photochemistry and Photobiology A: Chemistry.

3. Dr.T.B.N.S.Madugalla

Senate Honours Award for Publications in Indexed Journal



Dr T.B.N.S. Madugalla, Senior Lecturer in Earth Science, attached to the Department of Physical Sciences, received Senate Honours Award for high-impact publications.

It was awarded by the Vice-Chancellor at the 223rd meeting of the Senate, South Eastern University of Sri Lanka for publishing a research paper on "Mineralogy and Geochemistry of beach sediments associated with the Precambrian crystalline rocks (Vijayan Complex) of Sri Lanka; perspective for heavy minerals" in the high-impact journal, Regional Studies in Marine Science, 2022.

Students Activities

Social Harmony Program

Social Harmony Program of Faculty of Applied Sciences, South Eastern University of Sri Lanka was held on 21st of October 2022 at Faculty Auditorium.



14th General Convocation

14th General Convocation of South Eastern University of Sri Lanka was held on 7th-10th February 2022 at Main Faculty Auditorium.



Poson Poya Function

Poson Poya Day Function organized by Buddhist Society was held on 14th of June 2022 in front of Faculty Premises.



Alohamora Social Night

Alohamora 2022 - Social Night organized by 17/18 Batch of Faculty of Applied Sciences, South Eastern University of Sri Lanka was held on 18th of September 2022 at Faculty Premises.



Gimhanayaka Mayima

"Gimhanayaka Mayima" Educational assistance programme for GCE O/L students was held on 30th September to 2nd October 2022 at Thelulla Kanishta Vidyalaya in Monaragala.



Sithruu Street Art Competition

සිත් රූ Street Art Competition 2022 organized by Art & Culture Society of Faculty of Applied Sciences, South Eastern University of Sri Lanka. It was held on 15th October 2022 in FAS Premises.



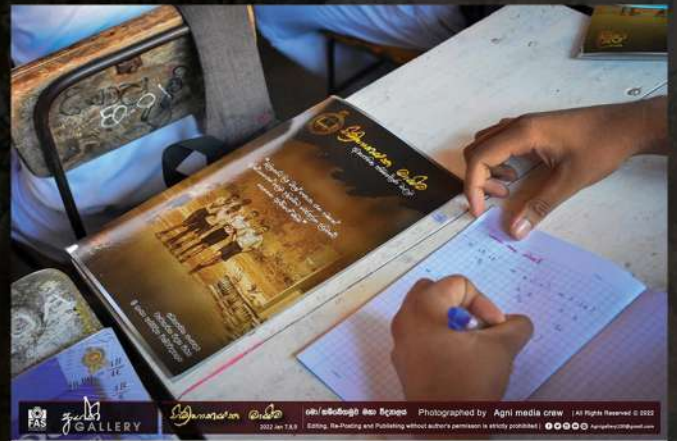
Religious Activities

Religious activities at Shri Ananda Bodhi Maha Viharaya it were held on 24th March 2022 in Ampara.



Gimhanayaka Mayima

“Gimhanayaka Mayima” Educational assistance programme for GCE O/L students. It was held on 7-9 January, 2022 at Hambegamuwa Maha Vidyalaya in Monaragala.



Attchayathira

அட்சயத்திரா

2022 - organized by 2017/2018 batch of Faculty of Applied Sciences, South Eastern University of Sri Lanka was held on 8th October 2022.



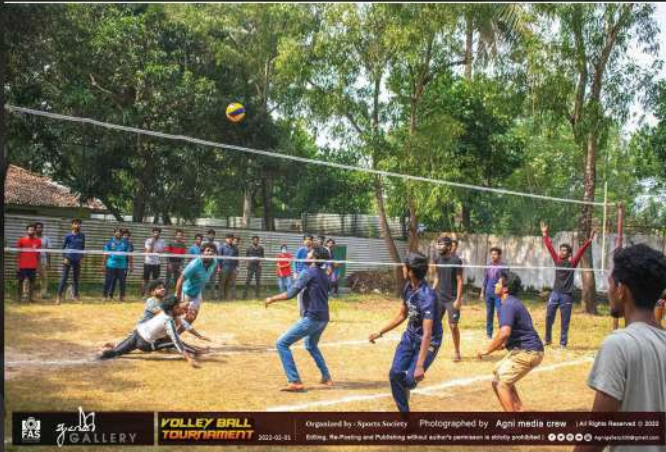
Yalimithra

"யாளி மித்ரா - 2022"

Going down function
Glimpse Video organized by 2018/2019 batch of Faculty of Applied Sciences, South Eastern University of Sri Lanka was held on 23rd October 2022.



Annual Volleyball Tournament-2022

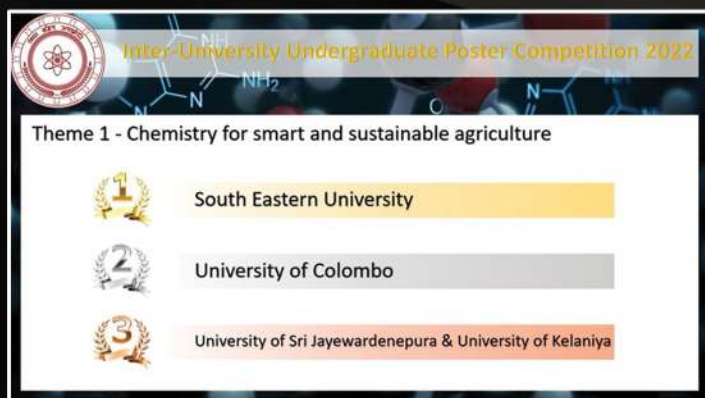


Annual Volleyball Tournament-2022 was organized by Sports Society of Faculty of Applied Sciences, South Eastern University of Sri Lanka. This was held on 1st March 2022 at Faculty volleyball court.



Student Achievements

Triumphant Victory for FAS/SEUSL Students: Securing the 1st Place in Inter-university Undergraduate Poster Competition



A remarkable achievement by a group of students from the Faculty of Applied Sciences at the South Eastern University of Sri Lanka (FAS/SEUSL). These talented individuals clinched the top spot in the highly competitive Inter-university Undergraduate Poster Competition in Chemical Sciences.

The competition, which revolved around the theme 'Chemistry for smart and sustainable agriculture,' was organized by the prestigious Sri Lanka Association for the Advancement of Science (SLAAS), specifically in its Section E2 dedicated to Chemical Sciences.

The outstanding team, comprising of the following bright minds:

- B.M.S.M. Basnayaka - SEU/IS/17/BS/003
- W.M.B. Sewwandi - SEU/IS/17/BS/087
- J.M.O.N. Thilakarathna - SEU/IS/17/BS/081
- N.C.V. Disanayaka - SEU/IS/17/BS/070
- K.A.D. Thilakshani - SEU/IS/17/BS/088

Join us in celebrating this extraordinary accomplishment and applauding the relentless efforts of our students and their commitment to pushing the boundaries of knowledge and application in the field of Chemical Sciences.

News Alert

GenAI & Future



It is a form of AI that generates realistic output such as text, images, audio

through the learning process from the existing pattern. It becomes an important tool in many industries. **GPT** and **Midjourney** are the recent innovations of GenAI. **ChatGPT** becomes a rapid adoption of this front-line technology, and following applications used different platforms to support research and solve complex problems.

➤ TEXT GENERATION

This mainly adopted Transformers and used in many applications such as NLP, chatbots and content generation. **ChatGPT** is the innovative platform introduced by **OpenAI** to generate human-like conversation during chat.

➤ IMAGE GENERATION

Deep learning algorithms such as VAEs, **GANs**, **Stable Diffusion** are used to generate images. **MidJourney** and **DALL-E** have become successful platforms for Image Generation.

➤ VIDEO AND SPEECH GENERATION

DeepBrain and **Synthesia** are the video and speech generation platforms, and the is similar to human speaking. Deep

learning algorithms such as **GANs** and **Video Diffusion** are used by predicting frames based on previous frames.

➤ DATA AUGUMENTATION

Synthesis AI is the platform for the process of data augmentation where new training data are generated through image transformation such as flipping and rotating to mitigate the overfitting problem during training.

GenAI powers many real-world applications. Content generation, summarization, language translation, image synthesis, video editing, music generation and game development are the GenAI use cases in practice in the year 2023.

There are several laboratories working on the research towards GenAI.



Open AI is an American AI research laboratory working on the theme of "safe and beneficial" artificial intelligence, and produces autonomous systems similar to human operations.



Google AI is a section of Google, focuses on research related to AI, and founded in 2017.



Meta AI is an academic AI research laboratory. The Meta Platform is focusing on enhancing augmented and artificial reality technologies. There are several latest infrastructures powered by the AI research laboratories.



ChatGPT

ChatGPT is a language model released by Open AI. It generates text similar to human based on context and past conversations.



In 2014, DeepMind was owned by Google. Google DeepMind group brings Google Brain research team and DeepMind group together. Demis Hassabis is the DeepMind's cofounder and CEO, who is now working with Google Gemini to break the record of ChatGPT.



Gemini AI is an alternative for OCR technology, which reads and understands a document including signature blocks, document types and stamps, and can synthetically generate the content. Gemini AI provides front-line artificial intelligence and machine



PaLM2

Google's Next-Generation Large Language Model

PaLM 2 is the multilingual Large Language Model (LLM) released by Google, which supports more than 100 languages.



CM3LEON is powered by Meta AI. It shows advancement in NLP by allowing machines to understand and express language. CM3leon is the first multimodal model that generates images from text, as illustrated below.

TEXT PROMPT

"A small cactus wearing a straw hat and neon sunglasses in the Sahara desert."



Meta AI



Llama 2, belongs to Meta platform. It is an open-source large language model that creates chats and write content.

Now, everyone knows about AI, and ChatGPT hits the top within a short time. We are still only at the beginning—but where would it be headed next? In a safe side or risk side?

Acknowledgement: Internet Sources.

Dr.M.A.C Akmal Jahan

Department of Computer Science

FAS-SEUSL



NEWSLETTER

Are you desire to publish significant news related to your Faculty & Departments of the FAS in the Newsletter 2023?

Kindly inform us before
31st December 2023

Please make sure to limit the news items upto 200 words of maximum and the number of photographs to three

When you are submitting photographs to be published in FAS newsletter, we strongly advised you to obtain authorization from those who have been photographed, in order to have their photograph taken and be published in FAS newsletter.

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