

News Letter

Kerala University of Digital Sciences,
Innovation and Technology

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IET India Awards 2022

let us be proud of



Heartiest Congratulations Dr. Asharaf S (Dean (Research & Development), Professor), (Director, Kerala Blockchain Academy) on winning the prestigious IET India Future Tech Award for your immense contributions towards blockchain. Proud Moment for Digital University Kerala.

Kerala Blockchain Academy



Awards

let us be proud of



Dr. AP. James has been listed among the top 2% of scientists based on citation impact, for the 3rd consecutive year for both career-long and year-long publications in AI and image processing, and Electrical and Electronics Engineering fields. The database of top-cited scientists has taken into consideration research publications up to 2021 end and included the top two per cent of the scientists of the world based on percentile score. Scientists are classified into 22 fields and 176 sub-fields. The database is compiled by researchers from Stanford University and Elsevier

AIFORAll - Capacity Building in AI and Data Analytics



The Second Batch of Capacity Building in AI and Data Analytics for the Directorate of Economics and Statistics commenced on 28 November 2022. A 45 days intensive training program was inaugurated by the Honorable Vice Chancellor of Digital University Kerala at IIITM-K building, Technopark. VC pointed out the need of upskilling the government employees to develop a pool of talents from the skilled employees within departments, who will be the driving force to apply state-of-art technologies which are more relevant to their services. Prof. Elizabeth Sherly, program coordinator welcomed the 20 participants with the presence of Director, Economics and statistics department Sri. Sajeevu P and joint Director Sri. Shibukumar. The #AIFORALL programme is funded by the IT department of Government of Kerala through Kerala IT Mission, aiming to upskill the workforces and to develop future talents in accordance with the changing need of government services and its delivery. The first batch of training was conducted to the Kerala Police division. Mrs. Sabitha Rani B.S Digital University Kerala, delivered the vote of thanks.



Applied Geoinformatics for Society and Environment (AGSE) Conference 2022



The conference will take place November 02 – 04 (plus excursion), 2022, at Digital University Kerala organized by the C V Raman Laboratory of Ecological Informatics, School of Informatics, Digital University Kerala and the Geospatial Department of Stuttgart University of Applied Sciences, Stuttgart, Germany, co-organized by the Laboratory for interoperable, and open-source Geospatial Software, Data and Standards (HFT ICA-OSGeo-Lab) and and the ICA Commission on SDI and Standards.





Talk on Global climate change by Professor Santanu Ray

A talk on 'Global climate change : the paradigm shift of phytoplankton community' was conducted on 17th November 2022 (2.30pm) at the Gallery Hall by Prof Santanu Ray, Distinguished Visiting Professor, School of Informatics, DUK (Retd. Professor of System Ecology and Ecological Modelling at Viswa Bharati University). The Professor shared his experience of being part of the research team on the Global Climate Change program in the Arctic region, its prospects and the dangerous situations associated. He stressed on the importance of ecological balance, especially in the context of Arctic ecosystem. The session was enriching highlighting the effects of the paradigm shift of phytoplankton community on global climate change.



Presentation and demonstration at CMC Vellore

Dr. Joseph Tharion, Senior Research Scientist, DUK, gave a presentation and demonstration of the working prototype of the first medical device being developed at the CAN Lab, SoDS, in front of the medical experts at CMC Vellore on 23-11-22.



Duk Readopedia Inauguration

The Reading club of Digital university of Kerala, Readopedia was inaugurated by the honorable Vice Chancellor Dr Saji Gopinath sir on 25th of November.



Winner - WriTech Utsav- A Technical Writing Article Competition

Dr. Sini V. Pillai, Won the prize for WriTech Utsav- A Technical Writing Article Competition organized by Kerala Blockchain Academy commemorating Azadi Ka Amrut Mahotsav 2022.



A Cyber Security Awareness Program



One-Week Short Course on Digital Safety (A Cyber Security Awareness Program) for Hearing Impaired Students of Govt Womens Polytechnic College Kaimanam, Trivandrum



Digital University Kerala along with KSAAC hosted a one-week short course on digital safety for the final year computer engineering students of Govt Womens Polytechnic College, Kaimanam. The event was coordinated by Prof Md Meraj Uddin and Ms Sruthi Krishan G. There were 11 hearing impaired students who actively participated in the sessions. The course was conducted at IIITMK campus, Technopark Phase 1, during November 7-11, 2022. The sessions were handled by the team KSAAC with the support of a translator. The certificate of participation was awarded to all students who actively participated in all sessions. The course was conducted under CSR activities of the DUK.



A Cyber Security Awareness Program

**One-Week Short Course on BE AWARE BE SECURE
(A Cyber Security Awareness Program) for Computer Engineering
Students of Govt Polytechnic College Neyyattinkara, Trivandrum**



Digital University Kerala along with KSAAC hosted a one-week short course on “be aware be secure” for the final year computer engineering students of Govt Polytechnic College, Neyyattinkara. The event was coordinated by Prof Md Meraj Uddin and Ms Sruthi Krishan G. There were 60 students who actively participated in the course. The sessions were conducted at Digital University campus, Technopark Phase 4 during November 14-18, 2022. The certificate of participation was awarded to all students who actively participated in all sessions. The course was conducted under CSR activities of the DUK.

BlockHash LIVE 2022

To make the State of Kerala a fertile destination for Blockchain development and adoption, Kerala Blockchain Academy have been into organizing BlockHash LIVE- an annual blockchain summit spotlighting the most influential leaders in the blockchain domain. A premier platform for Blockchain elites, exhibitors, investors, and thought leaders, BlockHash LIVE, showcases the most influential leaders, decision-makers, visionaries, influencers and disruptors from the world of enterprise and tech, sharing how to approach Blockchain in a changing digital landscape. Since 2018, the blockchain congregation has secured its place on the global tech calendar as India's most happening Blockchain summit.

BlockHash LIVE 2022 is the fifth edition of Kerala's Annual Blockchain Summit organized by Kerala Blockchain Academy. Now in its 5th year, the summit brings together an industry-leading event focusing on Innovation, Entrepreneurship & Society. BlockHash LIVE 2022 will feature enterprise use cases, government use cases, inspirational keynotes, panel discussions, tech talks, blockchain exhibition, startup pitch competitions, and network opportunities. The event will be an onlooker to the most inspiring projects running on Blockchain, Expert Keynote Addresses, Interactive Panel Discussions, and Workshops enthralling Blockchain potentials. The two-day event will take place at Kerala Arts and Crafts Village, Kovalam, Trivandrum, on the 16th and 17th of December, and we anticipate an audience of about 250 people.

Website: <https://blockhashlive.kba.ai/>





BlockHash LIVE 2022

KERALA'S NUMERO UNO BLOCKCHAIN SUMMIT

In Association With:

- DIGITAL UNIVERSITY KERALA
- INSTITUTION'S INNOVATION COUNCIL
- MoE's INNOVATION CELL (GOVERNMENT OF INDIA)

Media Partner:

- Mathrubhumi THE NATIONAL DAILY IN MALAYALAM

DEC 16-17

Kerala Arts & Crafts Village
Kovalam, Thiruvananthapuram



BLOCK CHEF

BLOCKCHAIN FOR GOOD-IDEATHON

Let Your Idea Speak At BlockHash LIVE 2022

Kerala's Numero Uno Blockchain Summit

16-17 December
Kerala Arts & Crafts Village, Kovalam, Trivandrum

Up to ₹ 1.23 Lac Worth Prizes

- 1st Prize:** BHL2022 Ticket worth ₹3000 + Blockchain Internship + Blockchain Course worth ₹8000.
- 2nd Prize:** BHL2022 Ticket worth ₹3000 + Blockchain Internship + Blockchain Course worth ₹5000.
- 3rd Prize:** BHL2022 Ticket worth ₹3000 + Blockchain Internship.

How to Participate

STEP 1
Choose your Team.
Participate as Individual/ Team of up to 3.

STEP 2
Build a POC / Business Model of the Idea.

STEP 3
Do Final Submission
Submit a 3 minute video and a pitch deck with <10 slides.

Send your ideas by the **10th of December**

In Association With:

- DIGITAL UNIVERSITY KERALA
- INSTITUTION'S INNOVATION COUNCIL
- MoE's INNOVATION CELL (GOVERNMENT OF INDIA)

Media Partner:

- Mathrubhumi THE NATIONAL DAILY IN MALAYALAM

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Campus Visit

A college campus visit is just like your movie selection process — you can research, interview others, hear reviews on a college of interest....but to make it personal and meaningful or to experience it yourself and make your own judgments and assessments, you must physically visit the campus. College websites and brochures can have idyllic scenes and can tell you almost everything you might want to know about a particular college, but only a campus visit can help you decide if a particular college is the appropriate place for you. Faculty members of Marthoma College of Science and Technology, Ayur & St. Teresa's College, Ernakulum visited our Digital University Campus on 23 rd November 2022 to see our facilities, the surrounding neighborhoods, and of course, the staff and students. Mr. Narasimha Rao, Assistant Registrar (Academic) gave a warm welcome to the guests from the two prestigious institutions followed by the key presentation about DUK by Dr. Elizabeth Sherly, Professor, and DUK. Dr. Satheesh Kumar, Professor, DUK gave the various dimensions of School of Digital Humanities and Liberal Arts.

Dr. Gopakumar V, Head, Knowledge Centre spoke on the unlimited possibilities of our knowledge center in this digital era. He explained in detail the various resources available in our digital university such as In-House Databases including Books (e-Versions & p-Versions), Periodicals/Journals/Magazines, Institutional Repository, and Externally Accessible Resources. Mr. Mahendra K S, Placement officer, DUK spoke about the activities of training & Placement Cell of DUK to maintain close liaison with industries /institutions/organizations to facilitate placements of our students. Mr. Niyas, Admission officer talked on the eligibility criteria and application process of our MSc, M.Tech, MBA and PG Diploma programs for the academic year 2023 – 2024. The program ended at 2 pm with vote of thanks by Sabitha Rani to all the faculty members who visited DUK and the coordinators of this event.





Faculty Publications

Paper Publications

- Preetam Mukherjee et. al, “Security Gap” as a Metric for Enterprise Business Processes, Security and Privacy, Vol. 5, Issue. 6, Page: e263, Nov. 2022.
- D.R.Sherin, K.Satheeshkumar, T.K.Manojkumar “Molecular simulations of CRANADs to disclose a specific cyanide sensor in aqueous media”, Computational and Theoretical Chemistry Volume 1217, November 2022.
DOI: <https://doi.org/10.1016/j.comptc.2022.113894>
- Suwendu Das, Prosenjit Saha, Sagar Adhurya, Alok Ray, Santanu Ray “ Present and future scenarios of changing land use patterns from the perspective of agroecosystem under the shadow of ever-expanding shrimp culture”, Environmental Development Volume 44, 3 November 2022.
DOI: <https://doi.org/10.1016/j.envdev.2022.100772>

Book Publications

- Blockchain for Industry 4.0: Emergence, Challenges, and Opportunities, edited by Anoop V. S., Asharaf S., Justin Goldston, and Samson Williams, has been published by CRC Press, Taylor and Francis
DOI: <https://doi.org/10.1201/9781003282914>
- Intelligent Mobile Malware Detection, Book by Tony Thomas, Roopak Surendran, Teenu John, Mamoun Alazab, CRC Press, Taylor and Francis Group, First Edition, December 2022,
DOI: <https://doi.org/10.1201/9781003121510>

<https://drive.google.com/open?id=1y7jrAxqPbXO2Hq4yMCYS3bupURm9m2wU>

Book Chapter: Anoop V. S., "Cognitive Computing and Big Data for Healthcare: Past, Present, and the Future", Era of Artificial Intelligence, Taylor and Francis (Accepted for publication)



Faculty Publications

Conference Presentation

1. Sumit Datta, Bhabesh Deka, Samarendra Dandapat, "Enhancement of Diagnostic Information in T1-weighted Contrast Enhanced MRI using Deep Back-Projection based Super-Resolution", In International Conference of IEEE India Council (INDICON) 2022, Kochi, India, Nov. 24-26, 2022

Paper presentation in International Conference Presented a research paper on "Digital Transformation through Servant Leadership Model" at the 40th IBIMA International Conference on 23-24 November 2022, Seville, Spain. Publications:

1. Sini V. Pillai, "A Novel Uni-directional Flow Circular Facility Layout for Effective Social Distancing," Vision, Vol 26(4), 2023 SAGE Publishing. <https://journals.sagepub.com/doi/abs/10.1177/0972262920984855>

2. Sini V. Pillai and Jayasankar Prasad "Investigating the key success metrics for WFH/remote work models" Industrial and Commercial Training Journal, Emerald Publishing <https://doi.org/10.1108/ICT-07-2021-0053>

3. Sini V. Pillai, Priyadarsini RS, Ranjith S. Kumar, "Student Small Satellite Design and Development in India- A Review," presented in the 2nd National Conference on Small Satellites NCSSTA 2020, has been published in the book titled: Advances in Small Satellite Technologies-Proceedings of National Conference on Small Satellite Technology and Applications by Springer Nature Singapore. Series ISSN 2195-4356, Series E-ISSN 2195-4364. <https://link.springer.com/book/9789811974755>

4. Sini V. Pillai and Sindhu Pillai, magazine article - "De to re-humanizing" on the technology page of Indian Management published by All India Management Association (AIMA). <https://www.aima.in/management-perspectives/de-to-re-humanising>

Knowledge Centre News

National Education Day Program

A session was engaged by Dr. Gopakumar V -Head, Knowledge Centre of our University on the topic "Scholarly Communication, Ethical Issues on 11th November 2022 for PhD Scholars and Third Semester students organized by IIC (Institution Innovation Council) as part of National Education Day.



Canva Workshop

The Knowledge Centre, Digital University Kerala along with IIC has organized a workshop on designing with Canva on 24th November 2022. Dr. Gopakumar V headed the session. The workshop was meant for the entire DUK community.



Knowledge Centre News

Website of the Month

Networked Digital Library of Theses and Dissertations (NDLTD)



<https://ndltd.org/>

The Networked Digital Library of Theses and Dissertations (NDLTD) is an international organization dedicated to promoting the adoption, creation, use, dissemination, and preservation of electronic theses and dissertations (ETDs). NDLTD supports electronic publishing and open access to scholarship to enhance knowledge sharing worldwide. NDLTD conducts Symposia and Conferences on various aspects of Open Access to theses and dissertations. The Journal of Electronic Theses and Dissertations (J-ETD) is an open-access, peer-reviewed journal advancing the theory and practice of producing, hosting, and indexing student scholarship that exists in digital format in the institutional repositories of universities, with metadata indexed in a variety of public sources. J-ETD is sponsored by the Networked Digital Library of Theses and Dissertations (NDLTD) and hosted at the Library Scholar works Repository of the University of the United Arab Emirates (UAEU).

Software of the Month

Format Factory

<https://format-factory.en.softonic.com/download>



Format Factory is a free, comprehensive multimedia file converter software for personal or commercial use. It allows users to change the format or file extension of a video, audio, image, or text file for it to run on a different application or operating system.

New Additions to the Collection



● Essential Topics of Managing Information Systems

This comprehensive compendium is about managing information systems and focuses on relationships between information, information systems, people and business. The impacts, roles, risks, challenges as well as emerging trends of information systems are an important element of the book. Essential and critical information systems management skills including using information systems for competitive advantages, planning and evaluating information systems, developing and implementing information systems, and managing information systems operation form a critical part of this unique reference text.



Source :Amazon

Xu J. (2020). *Essential topics of managing information systems*. World Scientific Publishing Co. Pte.

● Engineering Innovation: From Idea to Market Through Concepts and Case Studies

Engineering Innovation is an overview of the interconnected business and product development techniques needed to nurture the development of raw, emerging technologies into commercially viable products. This book relates Funding Strategies, Business Development, and Product Development to one another as an idea is refined to a validated concept, iteratively developed into a product, then produced for commercialization.

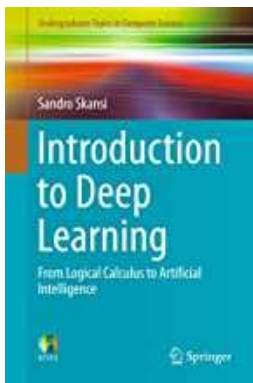


Engineering Innovation also provides an introduction to business strategies and manufacturing techniques on a technical level designed to encourage passionate clinicians, academics, engineers and savvy entrepreneurs. Offers a comprehensive overview of the process of bringing new technology to market. Identifies a variety of technology management skill sets and management tools. Explores concept generation in conjunction with intellectual property development for early-stage companies. Explores Quality and Transfer-to-Manufacturing.

Source :Amazon

Legum B. M. Stiles A. R. & Vondran J. L. (2019). *Engineering innovation : from idea to market through concepts and case studies*. De Gruyter.

● Introduction to Deep Learning: From Logical Calculus to Artificial Intelligence



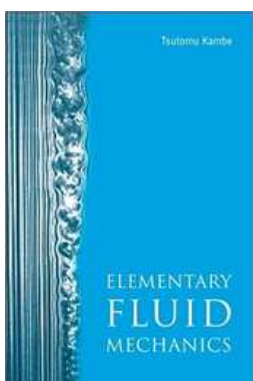
This textbook presents a concise, accessible and engaging first introduction to deep learning, offering a wide range of connectionist models which represent the current state-of-the-art. The text explores the most popular algorithms and architectures in a simple and intuitive style, explaining the mathematical derivations in a step-by-step manner. The content coverage includes convolutional networks, LSTMs, Word2vec, RBMs, DBNs, neural Turing machines, memory

networks and autoencoders. Numerous examples in working Python code are provided throughout the book, and the code is also supplied separately at an accompanying website. Topics and features: introduces the fundamentals of machine learning, and the mathematical and computational prerequisites for deep learning; discusses feed-forward neural networks, and explores the modifications to these which can be applied to any neural network; examines convolutional neural networks, and the recurrent connections to a feed-forward neural network; describes the notion of distributed representations, the concept of the autoencoder, and the ideas behind language processing with deep learning; presents a brief history of artificial intelligence and neural networks, and reviews interesting open research problems in deep learning and connectionism.

Source :Amazon

Skansi S. (2020). *Introduction to deep learning : from logical calculus to artificial intelligence*. Springer.

● Elementary Fluid Mechanics



This textbook describes the fundamental "physical" aspects of fluid flows for beginners of fluid mechanics in physics, mathematics and engineering, from the point of view of modern physics. It also emphasizes the dynamical aspects of fluid motions rather than the static aspects, illustrating vortex motions, waves, geophysical flows, chaos and turbulence. Beginning with the fundamental concepts of the nature of flows and the properties of

fluids, the book presents fundamental conservation equations of mass, momentum and energy, and the equations of motion for both inviscid and viscous fluids. In addition to the fundamentals, this book also covers water waves and sound waves, vortex motions, geophysical flows, nonlinear instability, chaos, and turbulence.

Source :Amazon

Kambe T. (2007). *Elementary fluid mechanics*. World Scientific.



● Medical Device Design: Innovation from Concept to Market

Medical Device Design: Innovation from Concept to Market, Second Edition provides the bridge between engineering design and medical device development. There is no single text that addresses the plethora of design issues a medical devices designer meets when developing new products or improving older ones; this book fills that need. It addresses medical devices' regulatory (FDA and EU) requirements, shows the essential methodologies medical designers must



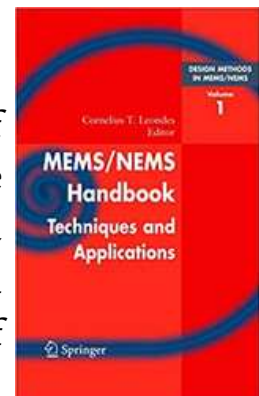
understand to ensure their products meet requirements, and brings together proven design protocols, thus enabling engineers and medical device manufacturers to rapidly bring new products to the marketplace.

Source :Amazon

Ogrodnik P. J. (2020). Medical device design : innovation from concept to market (Second). Academic Press.

● MEMS/NEMS: Handbook Techniques and Applications (5 Volume Set)

This significant and uniquely comprehensive five-volume reference is a valuable source for research workers, practitioners, computer scientists, students, and technologists. It covers all of the major topics within the subject and offers a comprehensive treatment of MEMS design, fabrication techniques, and manufacturing methods. It also includes current medical applications of MEMS technology and provides applications of MEMS to opto-electronic devices. It is clearly written, self-



contained, and accessible, with helpful standard features including an introduction, summary, extensive figures and design examples with comprehensive reference lists.

Source :Amazon

JMems/Nems: (1) Handbook Techniques and Applications Design Methods, (2) Fabrication Techniques, (3) Manufacturing Methods, (4) Sensors and Actuators, (5) Medical Applications and MOEMS. (2016). United States: Springer US.


 NEW
ARRIVAL

Find more new titles..

Check the OPAC of Knowledge Centre for new additions and their availability at <http://libcat.duk.ac.in:8081/>

- Linear algebra and optimization with applications to machine learning : Volume 1, Linear algebra for computer vision, robotics, and machine learning
- Linear algebra and optimization with applications to machine learning : Volume 2; Fundamentals of optimization theory with applications to machine learning
- Artificial intelligence/ Human Intelligence: An indissoluble nexus
- Machine learning: A journey to deep learning with excersises and answers
- Using science in cyber security
- Cybersecurity and legal regulatory aspects
- Fundamentals of quantum information
- The fate of Schrodinger's cat : Using math and computers to explore the counterintuitive
- Explorations in numerical analysis: Python Edition
- Quantum computing: Physics, blockchains, and deep learning smart networks
- Algorithms for big data
- How will you measure your life? by Clayton Christensen
- Inside the box: A proven system of creativity for breakthrough result by Drew Boyd
- The profession and practice of technical communication / Yvonne Cleary.
- Next-generation sequencing data analysis

