

IcfaiTech Newsletter

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From the Director's Desk

IcfaiTech, Hyderabad, continues its relentless efforts to craft professionals by imparting impactful education. This institution fosters a milieu apt for intellectual enhancement with contemporary pedagogy, a research-oriented approach, and relevance-based practices. Further, the transformative courses and programmes aligned with the market trends enable our students to be future-ready. A glimpse of this vibrant erudite experience encompasses the newsletters I am delighted to present to our avid readers every month.

This month, milestones have been achieved. I congratulate every member of the IcfaiTech family as IFHE, Hyderabad, is accredited A++ by NAAC, which has impacted our institute vastly and renewed our vigour to contribute further to the disciplines of science, scientific research, and technological development. Our faculty members have enhanced their expertise, participated in webinars, were invited as lecturers, presented papers, and received awards. Our effervescent campus witnessed several events rejoiced by the students as well as the faculty. These and much more embody the September edition of the newsletter, which I request you all to read on.

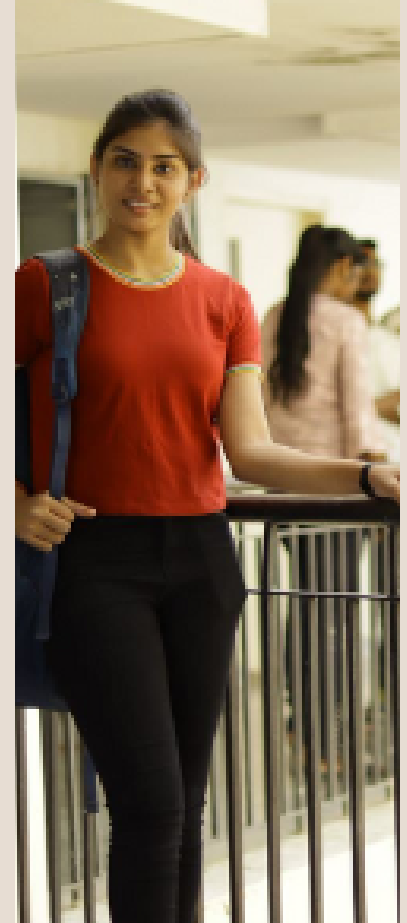


~ Dr. K.L. Narayana
Director, IcfaiTech, Hyderabad

FST's Achievement

IcfaiTech, Hyderabad, is pleased to announce that NAAC has awarded A++ accreditation to ICFAI Foundation for Higher Education (IFHE), Hyderabad. With renewed vigour and commitment, IcfaiTech, Hyderabad, will provide an improved erudite experience to the students, advancing towards excellence.

Dr. K.L. Narayana, Director, IcfaiTech, Hyderabad, extended his warmest gratitude to the faculty, staff, and students for their immense contribution and congratulated them on this colossal success, hoping for similar support and cooperation in the future.



Campus Placement

With the commencement of the new placement season, renowned companies conducted recruitment drive to hire the brilliant students of IcfaiTech, Hyderabad.

Companies that have visited the campus this month:

- **Leoforce** recruited 11 students and offered them a package of 6 LPA
- **ProTeamAdvisory(Bytes)** is offering 6 LPA and a prior 500 INR per day stipend for 8 months
- **Modak Analytics** recruited 4 students with a package of 6 LPA
- **Value Labs** selected 1 student and offered a package of 8 LPA
- **Outplay** will be hiring for the position of Software Engineer with a salary package of 7-8 LPA and a prior stipend of 25k per month



Campus Happenings

Teacher's Day was observed at IcfaiTech, Hyderabad to pay tribute to Dr. Sarvepalli Radhakrishnan, philosopher and politician who served as the 2nd President of India, and to appreciate the contribution of the teachers in shaping the career of the students as well as developing the personality of a learner, enabling them to become exemplary human beings.

On this occasion that commenced with lamp lightening session, **Prof. L.S. Ganesh, Vice Chancellor**, IFHE, Hyderabad shared valuable insights while addressing the audience.

Further, students of the music club - Astitva

performed for the teachers, the students presented a skit with the faculty members, and involved everyone to participate in fun games such as Tambola and move based quiz - Conflick

Date: 5th September 2022



Campus Happenings

IlcfaiTech, Hyderabad celebrated Engineer's Day on 15th September 2022 at FST auditorium to appreciate the contributions of the engineers in several disciplines of science and technology. Padma Shri Dr. Vasudevan Gnana Gandhi, Indian Rocket Scientist, Senior Vice President-Propulsion, Skyroot Aerospace, Hyderabad, and former Programme Director, ISRO was invited to address the audience where he will be shared inspirational insights. Further, Yantrikee - the tech club arranged several competitions, contests, games, and quizzes to ensure a fun-filled day for the young engineers and faculty members.



Campus Happenings

Asana Club, a student club of IcfaiTech, Hyderabad conducted fun events to celebrate its Foundation Day.

Event Title: Dare to Play

The event consisted of Action Replay, Fun Games, and Cake cutting ceremony celebrating the Club's Formation day

Coordinators: Ganadeep and Sri Pooja

Hosts: Yasasvi and Jayanth

Date: 13th September 2022

Details: Asana Club was founded in 2019 by Sachin Sankella and Dhanush, and the first committee included Monesh, Manikanta, Rohith, Mahindra reddy, Sathvik Reddy, Venkata Raju, Haritha, Mahika, Teja, Ganesh, and Meghana, who served as President, Secretary, and other positions, respectively. They've held various events so far, including art competitions, rapid fire with Faculty, and created short films.

The event began with fun games like building towers with paper cups but without using hands and guessing words from actions. Random people from the audience were called up on the stage to play the games along with their friends. After a short 45 minutes of playing games, actors from our club gave mind-blowing performances enacting famous movie scenes. The event concluded with Dr. K L Narayana, Director, IcfaiTech, Hyderabad, and Dr. Anjanna Matta, Faculty Mentor, Assistant Professor, Department of Mathematics, IcfaiTech, Hyderabad cutting the cake to mark the club's foundation day along with sharing illuminating insights.



Campus Happenings

Entrepreneurship Club, IcfaiTech, Hyderabad organized a webinar.

Speaker: Dr. Sainath M

Co-Host And Speaker: Yasasvi Bhupathi, Sai Pranaynath Chopperla

No. Of Participants: 69

No. of Faculty Participants: 8

Key Takeaways:

- Failures should be taken positively in order to succeed.
- Invention, Creativity and Innovation are three things an ideal entrepreneur should focus on.
- Points of pain in everyone's life should be identified and solutions should be provided.
- Humans = Knowledge + Discrimination
- Conditional thinking is dangerous and out-of-the-box thinking is essential to make this world a better place.

A promotional poster for a webinar session. The title is "Session On 'HOW TO CONVERT INNOVATION INTO A STARTUP'". It features a circular portrait of Dr. Sainath M, President of IIC and Executive Director of IIEC. The date is 22 September, 2022, and the time is 4:00 - 4:40 PM. Logos for ICFATECH Entrepreneurship Club and Institution's Innovation Council are also present.

Session On
"HOW TO CONVERT INNOVATION INTO A STARTUP"

22 September, 2022

4:00 - 4:40 PM

Dr. Sainath M
President Of IIC
Executive Director, IIEC

Venue: FST Auditorium

ICFAITECH
ENTREPRENEURSHIP CLUB
Making Ideas Happen

Institution's
Innovation
Council

Campus Happenings

Vidhyadhaan - Books Donation to underprivileged students.

Organized by: Paritantra, student-led club, IcfaiTech, Hyderabad

Date: 22 September 2022.

Details: Donating books are of great benefit to school students who are deprived but meritorious. Department of Physical Sciences, IcfaiTech wishes to serve the underprivileged by donating Physics and Chemistry lab record books which were used partially by our university students in the previous Semester.



Participants also interacted with the students, educating them on the various benefits of reading, explaining to them the motto of the club and how to instill a sense of responsibility towards the environment among young minds.

The club members visited four Government High Schools in Tanguru and Proddutoor. The volunteers were divided into teams as they visited each school respectively with Dr. Anjanna Matta, Assistant Professor, Department of Mathematics, IcfaiTech, Hyderabad & Club Mentor, Dr. Rakesh Reddy, Assistant Professor, Department of Mathematics, IcfaiTech, Hyderabad and Srinivas Reddy, Lab Assistant, Department of Mathematics, IcfaiTech, Hyderabad. Above all, the club members extend their warmest gratitude towards Dr. K.L. Narayana, Director, IcfaiTech, Hyderabad, and the Management for providing this opportunity that proved to be a very humbling and enlightening experience for everyone.



Campus Happenings

The students of IcfaiTech, Hyderabad welcomed the Freshers in style and with grandeur. Ataraxia enabled the students to unwind, and to know each other better. Cultural program, fun activities, and sumptuous lunch marked the cherished day.

Date: 23rd September 2022



Campus Happenings

Department of Computer Science and Engineering, IcfaiTech, Hyderabad organized departmental faculty seminars.

Title: Statistical Model Checking for Probabilistic Temporal Epistemic Logics

Speaker: Dr. Ramesh Yenda, Assistant Professor, Department of Computer Science & Engineering, IcfaiTech, Hyderabad

Date: 29 September 2022

Abstract: Interpreted Systems and epistemic temporal logics have been employed extensively to study the notion of knowledge in Multi-Agent Systems.

New model-checking algorithms, as well as adaptations of existing algorithms to this setting, have been reported. For the most part, these algorithms have focused on exhaustive state space exploration-based approaches. While these approaches yield accurate results to model-checking queries, they are often expensive for realistic scenarios. So much so that, many of the applications studied in academic literature deal with small state spaces. In order to scale to real-life multi-agent systems with large state spaces, an alternative to exhaustive exploration-based techniques is needed. Statistical Model Checking was proposed to alleviate this problem when model-checking stochastic systems against temporal logic queries.

In this talk, will discuss the extension of this technique to epistemic temporal logic. The first version of the approach, which we call the vanilla approach, would be to simply generate Monte Carlo samples of the runs of the system and evaluate the query on them. The advantage that SMC is expected to bring is greatly diminished due to the knowledge operator in such systems of logic. For large systems, this would entail an exhaustive exploration of epistemically accessible global states. Our major contribution is to introduce a sampling-based approach for the knowledge operator as well. We show that this results in significant performance gains at the expense of a marginal loss in accuracy (1-2% in experimental results) for most epistemic operators. Specifically, we show evidence of a dramatic improvement in time complexity for large Multi-Agent Systems. We substantiate the effectiveness of the approach through case studies that involve a large number of agents.



Campus Happenings

Title: Award—Reward Protocol Based on Clustering and Trust Level for Routing in Delay Tolerant Network

Speaker: Dr. Pradosh Kumar Gantayat, Assistant Professor, Department of Computer Science & Engineering, IcfaiTech, Hyderabad

Date: 22 September 2022



Abstract: Routing in Delay Tolerant Network (DTN) is a complex task, because the nodes in the DTN no longer exist, so security from denial of service (DoS) attack is a milestone. Clustering-based routing algorithms have been developed for DTN in recent years; however, the loss of packets as well as the energy consumption is still high, so that the security of the network system is compromised. In this presentation, a novel award-reward protocol is proposed for routing in DTN, which can enhance the security by reducing the loss of packets and require less energy for transmission. The proposed protocol has four phases; the first phase is for topology management, where the k-means algorithm is employed. In the second phase, the trust level of every node is calculated by sending and receiving sample packets. In the third phase, an award-reward value is defined for every node based on the trust level and in the last phase, the path for the transmission is selected based on the award-reward value.

Welcoming Faculty

IcfaiTech, Hyderabad family welcomes **Dr. Gautam Kumar** as an Assistant Professor in the Department of Mathematics.



Hailing from Uttar Pradesh, Dr. Gautam completed his bachelor's (University of Delhi) and master's (IIT Bombay) degrees in Mathematics. He was awarded a Ph.D. degree in Applied Mathematics from IIT Hyderabad in 2020. Post that, he worked as a postdoctoral fellow at IIT Hyderabad and IIT Gandhinagar. Later, he moved to Hong Kong to work as a Postdoctoral Fellow in the Department of Ocean Science at HKUST (The Hong Kong University of Science and Technology). He is broadly interested in fluid dynamics problems involving convection in porous media, electrohydrodynamics, carbon sequestration, and wave dynamics systems, and skilled at using numerical models.

Faculty Achievement

Dr. Soumit Samadder Chaudhury, Assistant Professor, Department of Electronics and Communication Engineering, IcfaiTech, Hyderabad participated in a workshop to enhance his expertise.

Workshop Title: Electromagnetic Interference and Compatibility (EMI/EMC) Techniques for Industrial and Medical Applications

Organized by: EMI/EMC & Electrical Safety Test Facility & Department of Electrical Engineering, IIT Kanpur

Date: 21.07.2022 – 23.07.2022



Dr. Movva Pavani, Assistant Professor, Department of Electronics and Communication Engineering, IcfaiTech, Hyderabad was conferred with Best Young Scientist Award for the Year 2022 under Female Category.

Awarded by: 4th International Academic and Research Excellence Awards, Goa

Date: 27th August 2022

No. of SCIE Journals : 04

No. of Scopus Journals: 24

No. of Patents : 03 (Two National and One International (Germany))

No. of Citations : 191



Faculty Achievement

Dr. A. Manmadha Chary, Assistant Professor, Department of Mechatronics, IcfaiTech, Hyderabad presented a paper in an international conference.

Conference Title: International Conference on Innovations in Engineering and Technology (ICIET-2022)

Organized by: Jawaharlal Nehru Technological University, Hyderabad

Paper Title: Design and Manufacturing of a Modern Dental Articulated Device

Date: 15-17th September 2022



Abstract: Articulator is a dental device, which is used to casts of the maxilla (upper) and mandibular (lower) teeth are fixed, reproducing positions of the mandibular in relative to the maxilla. An articulator supports in the fabrication of removable prosthodontics applications, fixed prosthodontics restorations and orthodontic purposes. The second-generation semi-adjustable articulators is used for the reproducing positions of the mandibular kinematic. These adjustments and repositioning shows to be a technical and time constraint for the dentist. This paper's objective is designing an Articulator in order to simulate the mandibular movements of the human jaw. Its main goal is to improve the design of dental prostheses, an articulator is designed in a way in which it has movement in all the directions. The Computer Aided Design (CAD) articulator models are developed further fabricated by using Additive Manufacturing (AM) Process. It can be concluded that the positioning of maxilla and mandibular movements adjust with little effort.



Faculty Achievement

Dr. Pradosh Kumar Gantayat, Assistant Professor Department of Computer Science & Engineering, IcfaiTech, Hyderabad has received "Best Paper Award".

Awarded by: IEEE International Conference on Data Science and Information System (ICDSIS-2022)

Organized by: Malnad College of Engineering, Hassan, Karnataka

Paper Title: An optimization based anonymous messaging system for data security in delay tolerant network

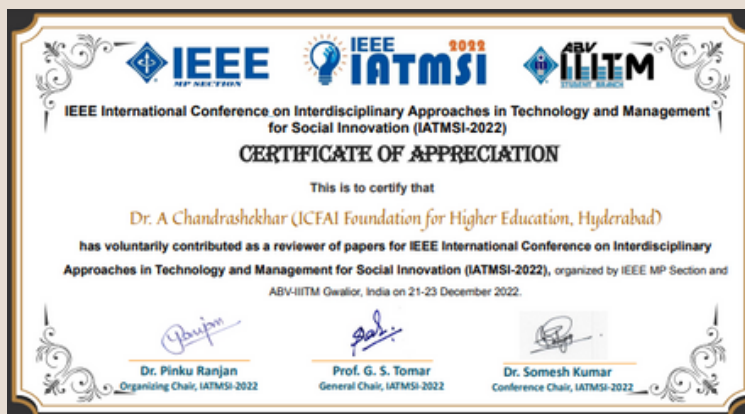
Date: 29th-30th July 2022



Dr. A Chandrashekhar, Assistant Professor, Department of Mechatronics, IcfaiTech, Hyderabad has voluntarily contributed as a reviewer of papers for IEEE International Conference.

Organized by: IEEE MP Section and ABV-IIITM Gwalior, India

Conference Title: Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2022)



Faculty Achievement

Dr. Sirisha Potluri, Assistant Professor, Department of Computer Science & Engineering, IcfaiTech, Hyderabad presented papers along with students as co-authors in an international conference.

Conference Title: International Conference on Innovations in Engineering and Technology (ICIET-2022)

Organized by: Jawaharlal Nehru Technological University, Hyderabad

Date: 15-17th September 2022

Paper Title: Sentimental Analysis of Customers

Abstract: Opinion information is very important for businesses and manufacturers. They often want to know in time what consumers and the public think of their products and services. The main task of companies is to enhance their customers and rectify

the services and complaints to increase the customer satisfaction. The sentiment analysis of customer reviews helps the vendor to understand user's perspectives. This can be further used to review comments and improve their products. We will be using Natural language processing to analyse the customer reviews and predict the sentiment of customers which algorithm give us more accuracy.

Paper Title: Voice Notepad by Using Native File System API and Web Speech API in Javascript for Smart Healthcare Services

Abstract: The gradual increase in the population of the world and simultaneously increase in the number of diseases has made many new pieces of research in the healthcare industry focus on efficiency and quality of treatment. Now people are demanding intelligent healthcare services, applications, and devices. Maintaining patient health data and medicines is a time-consuming activity that must be updated on a daily basis. Voice Notepad is a basic text editor. It is excellent for writing relatively short text documents. In today's digital age, everyone uses technology instead of traditional books and pens, and notepads have become well-liked for storing information. As it works on the principle of voice to text, so it will ease the process and save time. This software can also be used from either the doctor's or the patient's perspectives. Patients could use this application to note the doctor's prescription. JavaScript is used to develop this application as it allows us to add dynamic behavior and event handling.



Faculty Achievement

Dr. Anjanna Matta, Assistant Professor & Coordinator, Department of Mathematics, IcfaiTech, Hyderabad published a paper.

Title: Non-linear magnetoconvection in a bidispersive porous layer: a brinkman model

Journal Name: Earth Science Informatics

Impact Factor: 2.98 (Q2)

Indexed: Web of Science, SCIE journal, Scopus

Publisher: Springer



Abstract: This study examines the magnetic effect on Darcy Brinkman convection in a Bidispersive horizontal porous layer, considering the importance of convective motions of electrically conducting porous media accompanying a magnetic field in real-life applications such as geophysics, metallurgical field and solidification structures. In order to conduct a thorough study, the boundaries are classified as free-free, rigid-free, and rigid-rigid. The fluid motion is described using the Brinkman-Darcy equation with a single temperature in the macropores and micropores. The eigenvalue problem is solved analytically for the free-free case by employing linear stability theory. A non-linear analysis using the energy method is undertaken to prove that linear instability and global non-linear stability thresholds are the same. The eigenvalue problem for rigid-free and rigid-rigid boundaries is numerically solved with the `bvp4c` routine in MATLAB R2020 with the Rayleigh number as the eigenvalue. It is found that the Hartmann number M_2 , Darcy number Da , permeability ratio k_{kr} , and momentum transfer coefficient γ stabilize the system. Rigid-rigid boundaries are found to be the most stable ones, followed by rigid-free and free-free, which are the least stable boundaries.

Faculty Achievement

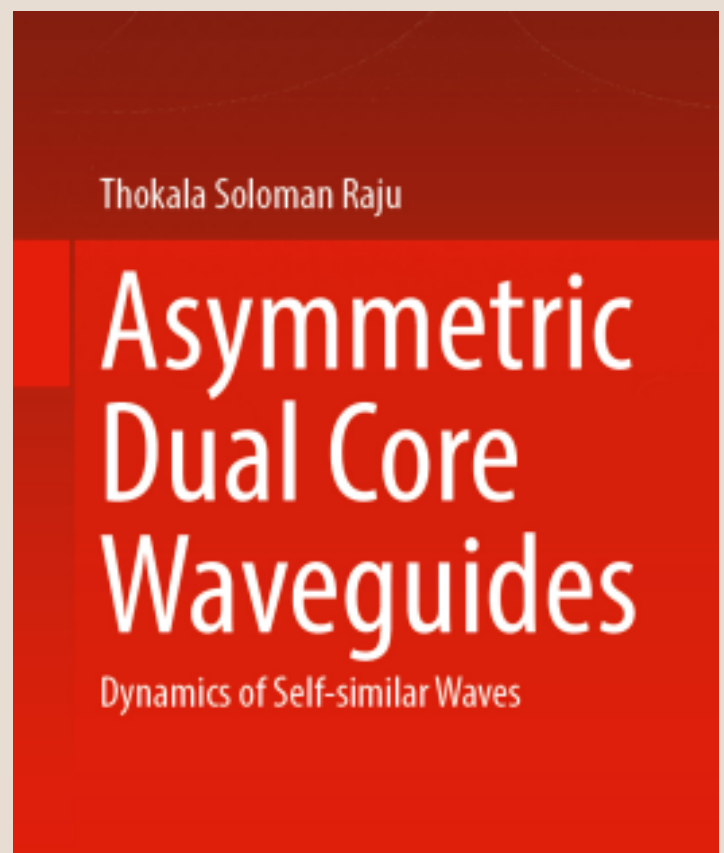
Dr. Thokala Soloman Raju, Assistant Professor, Physical Sciences, IcfaiTech, Hyderabad published a book.

Title: Asymmetric Dual-core waveguides

Publisher: Springer verlag, Singapore

Date: September 2022

Brief Description: This book highlights the dynamical behavior of self-similar waves in asymmetric dual-core waveguides. The proposed dual-core waveguide consists of two closely spaced adjoining fibers in which one fiber is active and the other is passive. Due to the linear coupling between them, the dynamics of the wave propagating through the passive core can be controlled by manipulating the dynamics of the wave propagating in the active core. The optimal pulse compression or amplification of these waves as the length of the fiber tends to infinity is presented. The exact Mobius transform self-similar solutions that propagate through these waveguides self-similarly are subject to simple scaling rules. The book includes experiments conducted to corroborate the analytical predictions.



Faculty Achievement

Dr. S. Kaushik, Associate Professor, Department of Computer Science & Engineering, IcfaiTech, Hyderabad published a book chapter.

Book Title: Blockchain-Based Systems for the Modern Energy Grid

Chapter Title: 13 - Blockchain-based systems for modern energy grid: a detailed view on significant applications of blockchain for the smart grid

Publisher: Elsevier

Abstract: Data/information has become the most important asset in modern society. The need for secure data transfer is leading to finding advanced technologies for a sustainable solution for system reliability.

One such technology is the blockchain. It is a decentralized database and record-keeping system which gives more security to its applications. It has some excellent features, which makes it a promising application for the smart grid paradigm. A smart grid is a developing technology for electricity and data transmission through lines and controls for on-demand power supplies. By combining the internet of things and advanced sensors, the smart grid could be a feasible solution for uninterrupted power/electricity supplies in the near future. However, many adoption issues in the smart grid, such as data security and privacy concerns, are the biggest challenges in the power supply's data utilization and operations for energy consumption. In order to eliminate these challenges, newer and novel technology is needed. For that, blockchain technology is one of the possible solutions for enabling the smart grid. In this chapter, we are focusing on and giving detailed treatment to more intriguing ideas and some significant application areas of blockchain in the smart grid.





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