



SAKSHIN

MONTHLY NEWSLETTER OF DEPARTMENT OF
CSE/CSE(AI)

VISION

- *Nurturing globally competent Computer Science and Engineering graduates capable of taking challenges in the Industry and Research & Development activities*

MISSION

- *Imparting quality education to meet the needs of industry, and to achieve excellence in teaching and learning*
- *Inculcating value-based, socially committed professionalism for development of society*
- *Providing support to promote quality research*



Expert team visit for NBA re-accreditation



CONGRATULATIONS

Prof. Ajay Basil Varghese got invited at Anna University, Chennai to deliver a one-day workshop on research to Startups (R2S) organized by Centre for Entrepreneurship Development, Anna University, Chennai in Collaboration with Entrepreneurship Development Institute of India.

EDITORIAL BOARD

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CONTACT US:

newsletter_cse@adishankara.ac.in



MOU signed with Malaysia University of Science and Technology



ASIET and Malaysia University of Science and Technology signed MoU for various academic and industry collaborations. The MoU was signed by Shri K Anand, Managing Trustee and Dr. Prem Kumar Rajagopal, President of Malaysia University of science and Technology on 01/07/2022

STUDENT'S CORNER

- Congratulations Chris Joseph Thomas (S6 CS A) for winning Idea Pitching.
- Congratulations Amrutha Das S4 CS(AI) on being selected to serve as an Ambassador for IEEEExtreme 16.0
- 8 Students from S6 CS participated in Techathlon 2022 Build Phase organized by ICT Academy of Kerala & Tata Consultancy Services together.
- 7 S4 CS B students attended 7 days Bootcamp and Internship on Machine learning .

FACULTY CORNER

FDP/WORKSHOP

- Asst.Prof.Anila S, Asst.Prof.Rosemary Asst.Prof.Shyama R participated in the 10 days National FDP on "Unleashing Emerging Research Trends and Advancements in Computer Science", organized by School of Computer science and Engineering , VIT-AP University, Amaravati from 04/07/2022 to 14/07/2022 .

BON VOYAGE 2018-22 BATCH

Farewell program of 2018-22 CSE batch



The Tech-News

Researchers mitigate potential side-channel attack vulnerability in multicore processors

A component of computer processors that connects different parts of the chip can be exploited by malicious agents who seek to steal secret information from programs running on the computer, MIT researchers have found.

Modern computer processors contain many computing units, called cores, which share the same hardware resources. The on-chip interconnect is the component that enables these cores to communicate with each other. But when programs on multiple cores run simultaneously, there is a chance they can delay one another when they use the interconnect to send data across the chip at the same time.

By monitoring and measuring these delays, a malicious agent could conduct what is known as a "side-channel attack" and reconstruct secret information that is stored in a program, such as a cryptographic key or password.

MIT researchers reverse-engineered the on-chip interconnect to study how this kind of attack would be possible. Drawing on their discoveries, they built an analytical model of how traffic flows between the cores on a processor, which they used to design and launch surprisingly effective side-channel attacks. Then they developed two mitigation strategies that enable a user to improve security without making any physical changes to the computer chip. "A lot of current side-channel defenses are ad hoc—we see a little bit of leakage here and we patch it. We hope our approach with this analytical model pushes more systematic and robust defenses that eliminate whole classes of attacks at the same time," says co-lead author Miles Dai, MEng '21.

Dai wrote the paper with co-lead author Riccardo Paccagnella, a graduate student at the University of Illinois at Urbana-Champaign; Miguel Gomez-Garcia '22; John McCalpin, a research scientist at Texas Advanced Computing Center; and senior author Mengjia Yan, the Homer A. Burnell Career Development Assistant Professor of Electrical Engineering and Computer Science (EECS) and a member of the Computer Science and Artificial Intelligence Laboratory (CSAIL). The research is being presented at the USENIX Security Conference.

Read more: <https://techxplore.com/news/2022-08-mitigate-potential-side-channel-vulnerability-multicore.html>

Welcome Aboard



Prof. Manesh T

Head of the Department

Department of Computer Science and Engineering,
ASIET

Profile: Prof. Manesh T is a senior member of IEEE. He received a full-bright research fellowship from the Spanish Government and the European Commission to complete his PhD in Cybersecurity at the University of Catalunya in Barcelona, Spain. He has been associating with the Barcelona Smart City Project and the ~~Ganter~~ Center for Cybersecurity Research of Catalunya (CYBERCAT) to contemporary cyber security issues in the field of the Internet of Things and wireless networks. He received his M.Tech. in Computer Science and Engineering with a specialization in Information Security from the National Institute of Technology, Karnataka, Surathkal. He received his B. Tech. in Computer Science and Engineering from MG University. He is a Certified Information Security Manager (CISM). He is also a Certified Network Security Specialist from the International Cybersecurity Institute, United Kingdom. Prior to his full-time doctoral research, he worked as an Assistant Professor (tenured track) in the Department of Computer Science at the Prince Sattam bin Abdulaziz University (PSAU), Riyadh, Saudi Arabia from 2012 to 2018. Before that, he was with the Faculty of Computer Science and Engineering at the Adi Shankara Institute of Engineering and Technology (ASIET) from 2006 to 2012. His research interests include cybersecurity and digital forensics, with a special focus on the security of wireless networks in smart homes and smart cities, the Internet of Things(IoT), and cyber-physical systems(CPS). He has taken part in several funded projects from the European Commission and other government enterprises. In terms of scientific production, he has authored several publications in Q1 journals and has also published numerous articles in international conferences. He also participates as a reviewer for several scientific journals (Elsevier Journal of Expert Systems with Applications, IEEE Journal of the Internet of Things) and has also served on the program committee of several conferences. He has served as a resource person for the last five editions of the COCON-Security and Hacking Conference organized by the Kerala Police Cyberdome.

Congratulations and warm welcome!

We are delighted to welcome you as the Head of the Department. We strongly believe that your experience and knowledge will be a great value addition to the department.

Welcome Aboard



Dr. Srikrishnan Sundararajan
Department of Computer Science and Engineering,
ASIET

Dr. Srikrishnan Sundararajan holds the degree of Ph.D. from the CUSAT, MTech. from IIT, Kharagpur; and BSc.Engg. from CET, Thiruvananthapuram. He has over 11 years of experience as Professor and 25 years as an IT Consultant and has expertise in the field of Artificial Intelligence and Machine Learning. He has previously held various tenured and visiting professorships in computer science and business analytics institutions such as Kerala University of Digital Sciences, Innovation, and Technology, Loyola Institute of business administration, Chennai; LM Thapar School of Management; Agni College of Technology; and SCMS-Cochin. As an IT consultant, he has led multicultural teams engaged in software application development and the center of excellence for technology. He has worked with Tata Consultancy Services, Covansys Inc. USA, UST Global, HCL Technologies Ltd., etc. He has published seven articles in international journals.

Congratulations and warm welcome!