SCHOOL OF COMPUTING SCIENCE & ENGINEERING RESEARCH GROUPS

Introduction

Computer Science, technology and research go hand in hand. Research has become an increasingly important part of higher education. The School of Computing Science & Engineering, Galgotias University focuses on emerging trends and upcoming technologies with the vibrant 6 research groups which enhances the environment of the university with inclined technologies. The groups are formed to cover the various areas under the umbrella of Computing Science & Engineering. The objective of the research group is to develop an efficient and highly productive research environment at the school of computing science and engineering.

Vision

The vision of the research groups to have a keen eye on the trends and technologies and use them for the betterment of the society. To accomplish this vision, the School of Computing Science & Engineering established and formalized research groups as the research strategy of Galgotias University. The school also explores the levels of participation and stresses the importance of such group-related activities with regard to the level of participation, perceived impact on research quality and researcher training. The School of Computing Science & Engineering is adapting and evolving in relation to current strategic goals. The Research groups can be seen in relation to the typical objectives of Galgotias University aiming to create a more research-intensive and competitive academic environment.

Research group in charge - Dr. Saumya Chaturvedi.

The Research Groups:

1. **Computer Networks Research Group**
2. **Data Science and AI Group**
3. **Cyber Security & Privacy Research Group**
4. **Computer Graphics and Digital Image Processing Research Group**
5. **Cloud Computing and Distributed Systems Research Group**
6. **Core and Emerging Technologies Research Group**

COMPUTER NETWORK RESEARCH GROUP

About the Research Group:

Computer Networks Research Group focuses on a wide range of experimental and theoretical projects, including Distributed Systems, Sensor Networks, Internet Measurements, Multimedia Systems, Multimedia Transport, Network Protocols, and high-performance computing. It includes Network Models, Wireless Networks, ad hoc Networks, Body Area Networks etc. This research group is focused towards Network and Computer Systems Administration, Information Systems Management, Network Architecture and Systems Analysis. To pep up its digital infrastructure, School of Computing Science and Engineering has signed a Memorandum of Understanding (MoU) with Cisco. Under this agreement, Cisco will provide networking, voice, video and wireless communications solutions to SCSE for setting up a connected campus.

We have regular group meetings as an active research group to discuss our current work and findings. We also host talks, research seminars, webinars, skill development training and reading groups to promote cross-disciplinary dialogue on common interests.

Coordinator: Dr. A. Suresh Kumar
Coordinator: Dr. T. Ganeshkumar
MoU's

1. CISCO

Events conducted

Sr. No.	Event Title	Resource Person and Designation	Date of event
1	Webinar on Multimedia System for Agriculture	Dr. J. Praveen Kumar, Researcher - South Koria	21st Jan 2021
2	One month Cisco Training	Dev Net solutions pvt Ltd	March 2021

<h1 style="text-align:center">DATA SCIENCE AND AI RESEARCH GROUP</h1>

About the Research Group:

It includes Artificial Intelligence and its applications, Intelligent Systems as well as the design, construction, Operation and use of Robots, automated Commerce and Natural Language Processing etc. This research group is focused towards training students and faculty in the field of data science and Artificial intelligence including Predictive Analytics, machine learning, Sentiment Analysis for the fulfillment of vision and mission of the Galgotias University towards high quality industry ready education.

Coordinator: Dr. Prashant Johri
Co-Coordinator: Mr. Pratyush Kumar Deka

MoU's

1. Lagozon EduTech Private Limited
2. Intel

Events conducted

Sr. No.	Event Title	Resource Person and Designation	Date of event
1	Faculty Development Program on R	Spoken Tutorial, IIT Bombay	5th Feb 2021 to 11th Feb 2021
2	Data Science foundation Using R Programming	Dr. Kayal Padmanandam, Associate Professor, BVRITH	13th Feb 2021
3	Workshop on GIT	Spoken Tutorial, IIT Bombay	12th Apr 2021 to 18th Apr 2021

CYBER SECURITY AND PRIVACY RESEARCH GROUP

About the Research Group:

It includes Cyber Security, Information Security, Biometrics, E-commerce and E-Banking etc. The vision of this research group is to create an outstanding portfolio of support for security researchers, broadly enabling stellar research advances in the field of cyber security. The school has MoU with PaloAlto networks cybersecurity academy.

The primary goal of this group is to support and make first class educational research in the fields of security and privacy and to educate graduate students to become the next generation leaders. Additionally, the group promotes collaboration with both academic and industry to smooth the progress of the modern trends. Securing information technology for individuals and society through research, education, and outreach. The group members conduct research in areas leading edges in the field of Cyber Security, Information Security, Biometrics, E-commerce and E-Banking. Key areas are as follows

- Private and secure e-voting schemes
- Security and privacy in cloud computing with a focus on trusted computing and secure storage
- Security and privacy in participatory sensing applications
- Privacy-preserving schemes for e-Health applications
- Security and privacy in internet of things and smart environments
- Wired and wireless network security
- Cloud platform security
- Security of mobile devices and apps

Coordinator: Dr. Srinivasan

Co- Coordinator: Mr. C. Vairval

MoU's

1. Palo Alto
2. Unity Inc
3. NVIDIA

Events conducted

Sr. No.	Event Title	Resource Person and Designation	Date of event
1	Hacking for Good (Ethical Hacking as a career)	Mr Sairam Reddy K, Product Security Engineer, Temenos, Bangaluru	18th June 2021

COMPUTER GRAPHICS AND DIGITAL IMAGE RESEARCH GROUP

About the Research Group

It includes Multimedia, Animation and Game Science, Virtual & Automated Reality etc. The objective of this research group is to Create professionals and researchers with the necessary expertise to handle the various real-world problems where Image Processing Techniques, Computer Graphics and Game Science might provide robust solutions. Computer Graphics and Digital Image Processing Research Group was established in 2021. Group was established with the vision of creating professionals and researchers with the necessary expertise to handle the various real-world problems where Image Processing Techniques, Computer Graphics and Game Science might provide robust solutions. This CG & DIP research group focuses on the development of novel and efficient algorithms for various applications in the following areas 2D and 3D Animation, Animation & Simulation, Modelling, Rendering, Computational Photography, Virtual Environments, Gaming Science AR/VR, Digital and Medical Imaging, Multimedia, Animation and Game Science, Virtual & Automated Reality might provide robust solutions.

Coordinator: Mr. Gokul Rajan V

MoU's

1. Adobe Spark
2. Unity
3. Ingenuity

Events conducted

Sr. No.	Event Title	Resource Person and Designation	Date of event
1	Digital Business Eco System for Young Minds	Dr. Shiva Shankar Ramasamy, International College of Digital Innovation Chiang Mai University, Thialand	11th Feb 2021
2	AI and IoT Enabled Image Processing	Dr. S P Gayathri, Professor, The Gandhigram Rural Institute, Tamil Nadu	19th Feb 2021
3	Seminar on Business Analytics technologies and its industrial Use Cases	Vipul Vashisht, CEO Legozon Technology Pvt ltd.	15th Apr 2021

CLOUD COMPUTING AND DISTRIBUTED SYSTEM RESEARCH GROUP

About the Research Group:

It includes cloud computing, Distributed Systems & their organization, architecture as well as applications etc. This research group is focused on training of students and faculty, develop quality project to attract industry for consultancy and generate funds to strengthen the group with a range of cloud environments, including AWS, Google Cloud and Microsoft Azure and be autonomous group to fulfill the vision and mission of the Galgotias University towards the quality education and social services. The syllabi of SCSE is approved and verified by Amazon Web Services. Over the past several years, no other area of IT has generated as much hype, interest and investment as cloud computing. Though the term may have differing meanings for different users, there's no doubt that the cloud is now a permanent fixture for end users and service providers, as well as global companies and organizations of all sizes. As a result, cloud computing attracts considerable coverage and attention from certification providers and companies that offer cloud-related products, such as Amazon Web Services, Google, Microsoft and VMware.

Coordinator: Dr. Ajay Shankar Singh
Co-Coordinator: Dr. A. Daniel

MoU's

1. VMware
2. IBM

Events conducted

Sr. No.	Event Title	Resource Person and Designation	Date of event
1	Machine Learning and how it affects the people's opinion	Akash Sharma, Co-founder & CTO, Monophases, Germany	3rd Feb 2021
2	Exploring Cloud Infrastructure with Microsoft Azure	Mr. N. Kuppurasu, Senior Software Engineer, Kavi Co., Coimbatore, Tamil Nadu	5th Feb 2021
3	Steps to be a Software Developer in Top MNCs	Ajey Raghav, S/w Developer Manager, Citi Bank, Pune	11th Feb 2021
4	Microsoft Azure Cognitive Services	Ms. Alagunila Meganathan, Fouder and CEO, Innovo Tree Technologies India Pvt. Ltd., Namakkal, Tamil Nadu	12th Feb 2021
5	Webinar on "Job opportunity in a Core / Product Company and Higher Education Options for Engineers"	Mr. Saikiran, Head of Operations and Training, CareerLabs	20th Feb 2021

| 6 | Azure-The Real Ninja's of the .Net Core | Ms. Menaka Basker, Senior programmer, Microsoft Certified Trainer, Bengaluru | 11th March 2021 |

CORE AND EMERGING TECHNOLOGIES RESEARCH GROUP

About the Research Group:

Technology has the power to disrupt, shifting a market almost overnight. Technology is growing at a rapid pace and is already defining what's next. PwC's New Services & Emerging Tech team analysed the business impact and commercial viability of more than 250 emerging technologies to zero in on the "Essential Eight" that matter most for business, across every industry, over the next three to five years - 76% of CEOs in our annual survey are worried about the speed of tech change. And 64% acknowledge that changes in the technology used to run their businesses will be disruptive over the next five years. Emerging technology should be a key part of every company's corporate strategy.

The Essential Eight are the technology building blocks that we believe every organization must consider. While each company's strategy for how to best exploit — and combine — them will vary, these technologies will have a profound global impact on business, employees, and customers. The PwC Emerging Technologies team provides specialist advice, leadership, and insight. We make technology innovation real for our clients, partnering to ensure excellent delivery.

Coordinator- Dr. M. Thirunavukkarasan

Co-Coordinator- Dr. J. N. Singh

MoU's

1. UiPath
2. Blueprism
3. Oracle Academy
4. Red Hat

Events conducted

Sr. No.	Event Title	Resource Person and Designation	Date of event
1	An Insight to Dragonchain Technology – A Hybrid Blockchain	Mr. Rajiv Bordoloi	14th June 2021