Centre for Performance Modelling of Computing Systems

This centre provides a platform to researchers to share their experiences, insights, and challenges regarding modelling, simulation and performance evaluation in all areas of computer science engineering and information technology. Specifically, the academic activities of this centre are focused on modelling and simulation of computer networks (wired & wireless), wireless sensor networks, distributed systems, multimedia systems and techniques, databases & data mining techniques, computer architectures and processors, algorithms, social networks, software & information systems, etc. Recognizing the pervasiveness and research importance of this area, we have also included a core course on *Performance Evaluation of Computing Systems*, in our new curriculum of MTech (CSE).

In the last few years, a rich body of area specific research work has been generated at JIIT. 28 faculty members and their research scholars at departments of CSE&IT have produced 147 research papers.

Centre for Performance Modelling for Computing Systems

List of Faculty Members Involved:
1. Dr Krishna Asawa
2. Dr Vikas Saxena
3. Dr Divakar Yadav
4. Dr Satish Chandra
5. Dr Sandeep Kr Singh
6. Dr Chetna Dabas
7. Dr Charu
8. Dr Shelly Sachdeva
9. Dr Shikha Mehta
10. Dr Buddha Singh
11. Dr Anuja Arora
12. Dr Devpriya Soni
13. Mr Prakash Kumar
14. Ms K. Rajlakshmi
15. Mr Manish Kr Thakur
16. Ms Sangeeta Mittal
17. Mr Adarsh Kumar
18. Ms Suma Dawn
19. Ms Kavita Pandey
20. Ms Parmeet Kaur
21. Ms Gagandeep Kaur
22. Ms Indua Chawla
23. Mr Tribhuwan Kr Tewari
24. Ms Archana Purwar
25. Ms Niyati Aggrawal
26. Mr Santosh Kr Verma
27. Mr Raju Pal
28. Ms Adwitiya Sinha

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Centre for Performance Modelling for Computing Systems

Awarded/Submitted/Ongoing PhD Dissertations
1. An event-based framework for object-oriented analysis, computation of metrics and identification of test scenarios (Awarded, 2011)
2. Design of Accelerating Techniques for Performance Issues in RFID Systems (Awarded, 2011)
3. Tampered Video-Detection and Quality assessment (Submitted, 2014)
4. Towards Cost Effective Survivable Cellular Access Network. (Registered in 2009-10)
5. Knowledge extraction from Wireless Sensor data stream (Registered in 2009-10)
6. Simulation and Comparative Analysis of routing Protocols in a secure mobile Ad Hoc Network to Improve QoS for Multimedia Communication. (Registered in 2010-11)
7. Multi objective Routing Protocol for VANETs (Registered in 2011-12)
8. Forecasting using Data Mining and Machine learning techniques (Registered in 2011-12)
9. Analysis and Design a Protocol for mobile ad-hoc Networks using Clustering approach (Registered in 2012-13)
10. Efficient Web service using Web Service Negotiator and stability analyser based on QOS(Registered in 2012-2013)

Centre for Performance Modelling for Computing Systems

Completed/Ongoing M. Tech Dissertations
Ongoing
1. Scheduling Optimization
2. A hybrid Recommendation system for Cold Start Problem using Online Commercial Data Set
3. Cognitive modeling of the natural language ability in humans

Completed
1. Enhancement of broadcasting in VANET by dynamic adaption of contention window size
2. Analysis of receiver initiated MAC protocol in wireless sensor networks
3. Study and performance analysis of multiple access schemes for B3G/4G networks
4. Channel aware opportunistic scheduling in downlink of LTE(long term evolution) wireless networks
5. An Efficient Sleep Scheduling Strategy For WSN
6. Efficient Geographic forwarding with link life time Analysis in MANET
7. Independent component analysis approach to mobile communication systems
8. Information retrieval from web using vector space model
9. Performance analysis of multipoint IP voice calling using session initiation protocol powered on android devices
10. Performance analysis of integrated Wi-Fi environment with Wi-Max network
11. Automatic generation of test cases from UML diagrams
12. Extending UML for Web Applications using design patterns
13. Knowledge base visualization tool for object oriented
14. Audiowarship: a game for blind people
15. Performance analysis and composition of signatures for misuse intrusion detection system using artificial intelligence

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Some Ongoing/ Completed B. Tech Projects

Ongoing

1. Detection of network attacks
2. Network security
3. Anomaly detection
4. Interactive soft body simulation
5. Fun with augment
6. Military simulator
7. Cloth simulation
8. Link prediction in social networking
9. Net voting
10. Tag recommendation on stock overflow
11. Sentiment analysis on facebook
12. Product recommendation and customer feedback analysis
13. Real-time stock market trading
14. Android application for stock market analysis

Completed

Academic Year 2006-2007
1. Simulation of Wireless Networks
2. Bluetooth Remote Control
3. Wireless LAN Messenger
4. Securities Policies in a Distributed Computing Environment
5. High Speed Downlink Packet Access
6. Routing Simulator
7. Simulation of An Improved Occipital Nerve Stimulator
8. High Performance IP Simulator
9. JIIT WIKI
10. Share market analysis and online share trading
11. Business Intelligence Tool for Marketing and Management
12. Automation of Order Management System for Continental Hygiene Concepts
13. Customer Relationship Management System
14. Web Publishing Tool and E- Marketing Tool for Content Management System
15. E- Commerce and Management Tool for Content Management System
16. Customer Relationship Management System

Academic Year 2007-2008

17. Visualization Tool for Network Traffic Intrusion & Detection
18. Mobile Agents & 4G Networks
19. Motor Driven Computer Controlled Marionettes
20. Online share trading
21. E - tender decision making system
22. Ensuring Privacy in Health Information System

Academic Year 2008-2009

23. Design and Implementation of Sensor Networks using Mesh
24. Design and Implementation of Vehicular Networks
25. Wireless Networking
26. Railway Signal control system using embedded audiometer sensors
27. Robotics & Entertainment
28. 3D MODEL RETRIEVAL USING 2D SKETCHES
29. Car Driving School Simulator
30. E market for societies
31. Flight Simulator
32. Social Networking
33. Web based stock forecasting
34. Web Graph Analysis tool based on different models

Academic Year 2009-2010

35. Simulation based analysis of tcp variants
36. Architectural scheme of blocking mechanism for networks
37. Smart sensor network: a zigbee based energy efficient sensor network for tracking mobile targets
38. Network topology simulator
39. Specially designed network diagnosis through os
40. Mobile internetwork routing and networking in mobile wireless ad hoc networks
41. Employee information and payroll management system
42. Online dash board for maintenance of performance analysis

Academic Year 2010-2011

43. Knowledge store for business
44. Multi-objective routing protocol in wireless networks
45. Network monitoring: available bandwidth and link capacity estimation
46. Network traffic analysis
47. Network usb monitoring
48. Packet capture and analyzer using self created library

49. Pc control on wireless networks
50. Proximity based tracking and positioning of devices in zigbee networks
51. Erp and decision making tool for retail outlets
52. Twitter through mobile

Academic Year 2011-2012

53. Clustering based routing in dynamic networks
54. Detection of Irregularities in Network traffic Using Shewhart Control Charts and Scene change analysis techniques
55. Network security - firewall
56. Yantra Mantra: An astronomical observatory simulator.
57. Adhoc network - Bluetooth chat between android phones
58. Design and development of ERP solution for e-governance at the urban local bodies of India
59. Distributed Confirmation System for Mobile devices on android platform
60. Virtual shopping experience
61. Web page analysis for marketing using eye -gaze detection

Academic Year 2012-2013

62. Traffic Management Through Vehicular Net
63. Water simulations and effects
64. Cloud virtualization
65. Virtual Reality - Bowling game using hand gesture
66. Augmented Video Tutorial