

AICAI 2019 AMITY INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE - AICAI'19



IEEE CONFERENCE RECORD NUMBER 45948 FEBRUARY 4-6, 2019 AMITY UNIVERSITY, DUBAI

### **CONFERENCE SCHEDULE**

### Day 1: February 04, 2019 (Monday)

TIME	SESSION	VENUE
0900–1000 hrs.	REGISTRATION	
1000–1030 hrs. (Keynote / Invited Talk-1)	Topic: How reliable is AI?Chair: Prof. Dr. Ahmad T. Al-Taani, Yarmouk University, JordanSpeaker:Prof. Min Xie Chair Professor of Industrial Engineering, Associate Dean (Internationalization), College of Engineering, Department of Systems Engineering and Engineering Management, City University of Hong Kong, Hong Kong	G-06 (GF)
1000–1030 hrs. (Keynote / Invited Talk-2)	Topic: The Partial-Value Association Discovery Algorithm and ApplicationsChair: Dr. Dilip K Sharma, GLA University, IndiaSpeaker: Prof. Nong Ye Program Chair of Industrial Engineering, School of Computing, Informatics, and Decision Systems Engineering, Ira A. Fulton School of Engineering, Arizona State University, USA	G-07 (GF)
1000–1030 hrs. (Keynote / Invited Talk-3)	<ul> <li>Topic : Assistive Technologies for People with Disabilities</li> <li>Chair : Prof. Mohd Helmy Abd Wahab, Universiti Tun Hussein Onn Malaysia, Malaysia</li> <li>Speaker: Prof. Ishfaq Ahmad Professor of Computer Science and Engineering University of Texas, Arlington, USA</li> </ul>	108(FF)
1030–1100 hrs. (Keynote / Invited Talk-4)	<ul> <li>Topic : Intelligent System Applications in Solving Engineering Problems</li> <li>Chair : Prof. Kenji Ozawa, University of Yamanashi, Japan</li> <li>Speaker: Prof. S. N. Singh Vice-Chancellor, MMMUT, Gorakhpur, India</li> </ul>	G-06 (GF)
1030–1100 hrs. (Keynote / Invited Talk-5)	Topic: The Ultimate Self-Driving MachineChair: Prof. Vitaly Klyuev, University of Aizu, JapanSpeaker:Prof. Alok Choudhary Henry and Isabelle Dever Professor, EECS Department Professor, Kellogg School of Management Director, Center for Ultra-Scale Computing and Information Security (CUCIS), Northwestern University, Evanston, Illinois, USA	G-07(GF)
1030–1100 hrs. (Keynote / Invited Talk-6)	Topic: Deep Learning and Alternative RealityChair: Dr. Syed Akhter Hossain, Daffodil International University, BangladeshSpeaker: Dr. Alain TappFull Professor in DIRO Department, Université de Montréal, Quebeck, Canada	108 (FF)





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1100–1130 hrs. (Keynote / Invited Talk-7)	<ul> <li>Topic : Reliable and Fault Tolerant Systems on Chip Through Design for Testability</li> <li>Chair : Prof. R. C. Bansal, University of Sharjah, UAE</li> <li>Speaker: Prof. Afaq Ahmad Professor, Department of Electrical &amp; Computer Engineering, College of Engineering, Muscat, Oman</li> </ul>	G-07 (GF)
1100–1130 hrs. (Keynote / Invited Talk-8)	<ul> <li>Topic : Neural Computing Approach for AD Diagnosis: Hybrid and Ontogenetic Neural Networks based Solutions</li> <li>Chair : Prof. S. N. Singh, MMMUT, India</li> <li>Speaker: Prof. Dra. Carmen Paz Suárez Araujo Head of Computational Neuroscience Research Division Director of Intelligent Computing, Perception and Big Data Research Group, Institute of Cybernetics Science and Technology, Universidad de Las Palmas de Gran Canaria, Spain</li> </ul>	G-06 (GF)
1100–1130 hrs. (Keynote / Invited Talk-9)	<ul> <li>Topic : Optimal policies on software time-to-market and testing duration when change-point coincides with the release time: A unified approach</li> <li>Chair : Dr. S.R. Subramanya, National University, California</li> <li>Speaker: Prof. P K Kapur Director, ACFIR, Amity University UP, Noida, India</li> </ul>	108 (FF)
1130–1145 hrs.	TEA / COFFEE BREAK	
1145–1215 hrs. (Keynote / Invited Talk-10)	Topic: Extreme Data Management Analysis and Visualization for Exascale Supercomputers and Experimental FacilitiesChair: Dr. Alain Tapp, Université de Montréal, CanadaSpeaker:Prof. Valerio Pascucci, Director, Center for Extreme Data Management, Analysis and Visualization, Professor, Scientific Computing and Imaging Institute, and School of Computing, University of Utah, USA	G-07 (GF)
1145–1215 hrs. (Keynote / Invited Talk-11)	Topic: Biometrics Security SystemChair: Prof. Ajay Rana, AUUP, IndiaSpeaker : Dr. Syed Akhter Hossain Professor and Head, Department of CSE/CS/CIS Daffodil International University, Dhanmondi, Dhaka, Bangladesh	108 (FF)
1215–1245 hrs. (Keynote / Invited Talk-12)	Topic: Analysis of the publication activity of university researchersChair: Prof. Jie Shen, Purdue University, USASpeaker:Dr. Yury KlochkovDirector, Monitoring Centre for Science and Education, Prof., Dept. of Economics and Management. In Machine Building, St. Petersburg Polytechnic University, St. Petersburg, Russia	108 (FF)
1215–1245 hrs. (Keynote / Invited Talk-13)	Topic: Finding the Real News in News StreamsChair: Prof. Min Xie, City University of Hong Kong, Hong KongSpeaker:Prof. Vitaly KlyuevHead, Software Engineering Laboratory	G-07 (GF)



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1215–1245 hrs. (Keynote / Invited Talk-14) 1245–1315 hrs. (Keynote / Invited Talk-15)	<ul> <li>Topic : User Experience for Social Human-Robot Interactions</li> <li>Chair : Dr. Jia Di, University of Arkansas, USA</li> <li>Speaker: Prof Darelle van Greunen         <ul> <li>Professor, School of Information and Communication Technology</li> <li>Director, Center for Community Technologies</li> <li>Nelson Mandela University</li> <li>Port Elizabeth, South Africa</li> </ul> </li> <li>Topic : Cost-Sensitive Decision Tree Learning</li> <li>Chair : Dr. Deepshikha Bhargava, UPES, India</li> <li>Speaker: Prof. Sunil Vadera</li> <li>Dean, School of Computing</li> <li>Professor of Computer Science</li> <li>University of Salford, Manchester, UK</li> </ul>	G-06 (GF) G-06 (GF)
1245–1315 hrs. (Keynote / Invited Talk-16)	Topic: Evolutionary Optimisation for Reconstructing Gene Regularity NetworkChair: Dr. S.R. Subramanya, National University, CaliforniaSpeaker: Dr. Madhushudan Chetty Associate Professor, Information Technology School of Science, Engineering and Information Technology Federation University Australia, Australia	108 (FF)
1245–1315 hrs. (Keynote / Invited Talk-17)	<ul> <li>Topic : Towards IR4.0 – AI and IoT Application in Smart Waste Management System</li> <li>Chair : Prof. Ishfaq Ahmad, University of Texas, USA</li> <li>Speaker : Prof. Mohd Helmy Abd Wahab Senior Lecturer Universiti Tun Hussein Onn Malaysia Johor, Malaysia</li> </ul>	104 (FF)
1245–1315 hrs. (Keynote / Invited Talk-18)	Topic: Role of Al in Mobile HealthChair: Prof. Piyush Maheshwari, Amity University Dubai, UAESpeaker:Dr. Assim SagahyroonInterim Director, Smart Cities Research Institute (SCRI)Professor, Department of Computer Science and Engineering American University of Sharjah, UAE	G-07 (GF)
1315–1400 hrs.	NETWORKING LUNCH	
1400–1430 hrs. (Keynote / Invited Talk-19)	Topic: Simulating Human Vision and Vision CorrectingChair: Prof. (Dr.) Yuh-Jong Hu, National Chengchi University, TaiwanSpeaker:Prof. Brian A. BarskyProfessor of the Graduate School, Professor Emeritus of CS and Vision Science, University of California, Berkeley, USA	G-06 (GF)
1400–1430 hrs. (Keynote / Invited Talk-20)	Topic: Artificial Intelligence for Understanding the QuranChair: Prof. Sunil Vadera, University of Salford, UKSpeaker:Dr. Eric AtwellProfessor of AI4L Artificial Intelligence for Language, School of Computing, University of LEEDS, UK	108 (FF)



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	Topic: The Logic of Artificial EmotionsChair: Prof. Alok Choudhary, Northwestern University, USA	
1400–1430 hrs.	Speaker: Prof. John Jules Ch. Meyer(John-Jules)	
(Keynote / Invited	Department of Information and Computing Sciences Buys Ballot	G-07 (GF)
Talk-21)	Laboratory Universiteit Utrecht De Uithof,	
	Netherlands	
	Data Analytics, Machine Learning and Intelligent Systems - I	
	Chair : Dr. Prashant Johri, Galgotias University, Greater Noida, India	
	Co-Chair: Dr. K. Arutchelvan, Annamalai University, India	G-04 (GF)
	Cyber and Information Security – I	
	Chair : Prof. Rachna Jain, AIIT, Amity University UP, India	100 (55)
1500-1700 hrs.	Co-Chair : Dr. Vinod Kumar Shukla, Amity University, Dubai, UAE	109 (FF)
(Parallel Technical		
Sessions)	Application of Artificial Intelligence in Interdisciplinary Research - I	
	Chairs : Dr. Abhishek Srivastava, Amity University, India	110 (FF)
	Dr. Rana Mazumdar, Techno India, India	110 (FF)
	Applications of AI in Networking Technologies and Data Science - I	
	Chair : Dr. Ajay Vikram Singh, AIIT, Amity University, Noida, India	111 (FF)
	Co-Chair : Prof. Kanthi M, Manipal, India	111 (FF)

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### Day 2: February 05, 2019 (Tuesday)

TIME	SESSION	VENUE
1000–1100 hrs.	INAUGURAL SESSION	Auditorium
1130-1230 hrs. (Open House Discussion for School Students of Science Streams)	Topic: Al Prospects for School StudentsModerator:Dr. Kavita Shukla, Asst. VP, SR & CRC, AUDSpeakers: Prof. Min Xie, City University of Hong Kong, Hong Kong Dr. Alain Tapp, Université de Montréal, Canada Prof. Brian A. Barsky, University of California, USA Prof Darelle van Greunen, Nelson Mandela University, South Africa Dr. Masoud Mohammadian, University of Canberra, Australia Prof. Kenji Ozawa, University of Yamanashi, Japan Dr. Syed Akhter Hossain, Daffodil International University, Bangladesh Prof. Valerio Pascucci, University of Utah, USA	Auditorium
1130–1200 hrs. (Keynote / Invited Talk-22)	Topic: An Asynchronous CNN Chip for Low PowerChair: Prof. Nong Ye, Arizona State University, USASpeaker:Dr. Jia DiProfessor and 21 <sup>st</sup> Century Research Leadership Chair Computer Science and Computer Engineering Department University of Arkansas, USA	G-07 (GF)
1130–1200 hrs. (Keynote / Invited Talk-23)	<ul> <li>Topic : Conversational Chatbots: Review, Challenges, and Future Directions</li> <li>Chair : Prof. Dra. Carmen Paz Suárez Araujo, Universidad de Las Palmas de Gran Canaria, Spain</li> <li>Speaker: Prof. Hakim Hacid Associate Professor College of Technological Innovation Zayed University, Dubai, UAE</li> </ul>	108 (FF)
1200 – 1330 hrs. (Panel Discussion)	<ul> <li>Topic : Artificial Intelligence and Its Application: Industry Perspective</li> <li>Moderator : Prof. Ajay Rana, AUUP, Noida, India</li> <li>Panelists : Deepak Talwar, Director, Project &amp; Business Development, EY Mazen Al Arawi, Sap Leonardo Solution Architect, EMEA South at UAE Mathew Joseph, Wipro, Dubai</li> <li>Rajarshi Kataki, Head of Contracts, Electricity and Water Authority, Govt. of Kingdom of Bahrain</li> <li>Jaspreet Singh, Partner – Cyber Security at EY, Technology Evangelist</li> <li>Safdar Hussain, Lean Expert, ITIL V3 Expert</li> <li>Shazily Munawar, CEO and Founder of The Key Dxb</li> <li>Anjan Bhattacharya, Associate Partner – Cyber Security at EY</li> <li>Vivek Sapre, Head – Operations, Bahwan Group</li> <li>Ashish Kumar Singh, Head of Pre Sales, Avanza innovations</li> <li>Coordinators: Anjani Bhatnagar, ATPC, AUUP, India</li> <li>Anupam Singh, ATPC, AUUP, India</li> </ul>	G-06(GF)





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	Data Analytics, Machine Learning and Intelligent Systems - II	
	<b>Chair</b> : Dr. Mayank Sharma, AIIT, Amity University, Noida, India	
	<b>Co-Chair:</b> Prof. Ved P. Mishra, Amity University Dubai	G-04 (GF)
	Application of Artificial Intelligence in Interdisciplinary Research - II	
	<b>Chair</b> : Dr. Deepak Kumar, AIIT, Amity University, Noida, India	
1200–1330 hrs.	<b>Co-Chair :</b> Dr. Geetanjali Ramesh Chandra, Amity University Dubai, UAE	110 (FF)
(Parallel		
Technical	Applications of AI in Networking Technologies and Data Science - II	
Sessions)	Chair : Dr. Nitin Pandey, AIIT, Amity University, Noida, India	
	<b>Co-Chair :</b> Dr. Vikram Chopra, Thapar University, India	111 (FF)
	Converging of Big Data, Cognitive Computing and the Internet of Things - I	
	Chair : Prof. Deepshikha Bhargava, UPES, Dehradun, India	
	Co-Chair: Dr. Sanjeev Agarwal, Thapar University, India	109 (FF)
	Topic : CT-Derived Features for Accurate Detection of Lung Cancer	
	<b>Chair</b> : Prof. Dr. Ing. Mario José Diván, National University of La Pampa,	
1200 1220 have	Argentina	
1200–1230 hrs.	Speaker: Prof. Fatma Taher	
(Keynote /	Assistant Dean for Student Affairs, CTI and ZU's CEO,	G-07 (GF)
Invited Talk-24)	Happiness, Positivity and Tolerance, College of Technological	
	Innovation, Zayed University, Dubai, UAE	
	Topic : Modeling and Deployment of an Autonomous Cart Pickup and	
1200–1230 hrs.	Delivery System	
(Keynote /	Chair : Prof. Afaq Ahmad, College of Engineering, Oman	108 (FF)
Invited Talk-25)	Speaker: Prof. Boumediene Belkhouche	
	College of Information Technology	
	United Arab Emirates University (UAEU), UAE	
1330-1400 hrs.	NETWORKING LUNCH	
-	Topic : Brief History and Trends of AI and Its Near– Term Impacts on Jobs	
	Landscape	
1400–1430 hrs.	Chair : Prof. Fatma Taher, Zayed University, UAE	
(Keynote /	Speaker: Dr. S.R. Subramanya	G-06 (GF)
Invited Talk-26)	Professor, School of Engineering and Computing,	
	National University, San Diego, CA, USA	
	Topic : Modelling and Automatic Design and Control of Multi-Robot	
	Systems using Collaborative Intelligent Systems	
1400–1430 hrs.	Chair : Prof. Boumediene Belkhouche, United Arab Emirates University, UAE	
(Keynote /	Speaker: Dr. Masoud Mohammadian	G-07(GF)
Invited Talk-27)	Associate Professor in Computer Science	
	University of Canberra, Canberra, Australia	
	Topic         : Deep Reinforcement Learning for Optimizing Portfolio Management           Chain         Deef History and History an	
1400–1430 hrs.	Chair : Prof. Hakim Hacid, Zayed University, UAE	
(Keynote /	Speaker: Prof. (Dr.) Yuh-Jong Hu	108 (FF)
Invited Talk-28)	Full Professor at Department of Computer Science,	
	Director of Computer Center	
	National Chengchi University, Taiwan	





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1430–1500 hrs. (Keynote / Invited Talk-29)	Topic: Sound Source Separation Using Spatio-temporal Sound Pressure Distribution Images and Machine LearningChair: Prof. Valerio Pascucci, University of Utah, USASpeaker:Prof. Kenji Ozawa Department of Computer Science and Engineering, Faculty of Engineering, University of Yamanashi, Japan	G-06 (GF)
1430–1500 hrs. (Keynote / Invited Talk-30)	<ul> <li>Topic : A Real-Time Outlier Filtering based on the Measurement Metadata</li> <li>Chair : Prof. Brian A. Barsky, University of California, Berkeley, USA</li> <li>Speaker: Prof. Dr. Ing. Mario José Diván Director, Divsar Economics and Law School National University of La Pampa Santa Rosa (CP 6300), La Pampa, Argentina</li> </ul>	G-07 (GF)
1430–1500 hrs. (Keynote / Invited Talk-31)	Topic: Arabic Text Summarization using Firefly AlgorithmChair: Prof Darelle van Greunen, Nelson Mandela University, South AfricaSpeaker:Prof. Dr. Ahmad T. Al-TaaniFull Professor of Artificial IntelligenceDepartment of Computer Science,Faculty of Computer Science and Information Technology, Yarmouk University, Irbid - Jordan	108 (FF)
1500–1515 hrs.	TEA / COFFEE BREAK	
1515–1700 hrs. (Parallel Technical Sessions)	<u>Computer vision, Deep Learning &amp; Al Applications - I</u> Chair : Prof. Piyush Maheshwari, Amity University Dubai, UAE Co-Chair: Dr. Ruqaiya Khanam, Galgotias University, India	G-04 (GF)
	Optimization, Decision-making and Artificial Intelligence - IChair: Dr. Vijay Kumar, AIAS, Amity University, U.P, IndiaCo-Chair:Dr. Surekha Kamath, MIT, Manipal, India	109 (FF)
	Converging of Big Data, Cognitive Computing and the Internet of Things - IIChair: Dr. Subhranil Som, AIIT, Amity University, U.P, IndiaCo-Chair:Dr. Sonakshi Ruhela, Amity University Dubai, UAE	110 (FF)



### Day 3: February 06, 2019 (Wednesday)

TIME	SESSION	VENUE
0900–1045 hrs. (Parallel Technical	Computer Vision, Deep Learning & AI Applications - II Chair : Dr. Ajay Vikram Singh, AIIT, Amity University, Noida, India Co-Chair: Prof. Atul Sharma, UIET, India	G-04 (GF)
	Optimization, Decision-making and Artificial Intelligence - IIChair: Dr. Mandeep Mittal, AIAS, Amity University, U.P, IndiaCo-Chair: Dr. Adarsh Anand, University of Delhi, India	109 (FF)
	Soft Computing in Engineering Applications - I Chair : Dr. Minimol Anil Job, Arab Open University, Bahrain Co-Chair: Dr. Sadia Riaz, Amity University Dubai, UAE	110 (FF)
Sessions)	Converging of Big Data, Cognitive Computing and the Internet of Things - IIIChairs: Dr. Sonali Vyas, Amity University Rajasthan, India Dr. Subhranil Som, AIIT, Amity University, U.P, India	111 (FF)
	Quality Assurance & Risk Analysis Chair : Dr. Nanik L. Butani, JBIMS, Mumbai, India Co-Chair : Dr. Bhupinder Singh, Amity University Dubai, UAE	104 (FF)
1045–1100 hrs.	TEA / COFFEE BREAK	
1100–1130 hrs. (Keynote / Invited Talk-32)	Topic: Software Reliability Analysis of Multistage ProjectsChair: Prof. Deepshikha Bhargava, UPES, IndiaSpeaker:Prof. Néstor Ruben BarrazaFull Professor at Universidad Nacional de Tres de FebreroPart Time Professor at University of Buenos Aires,Argentina	108 (FF)
1100–1130 hrs. (Keynote / Invited Talk-33)	Topic: An Accurate and Robust Approach for Gradient FlowsChair: Prof. Sunil Kumar Khatri, AUUP, IndiaSpeaker:Prof. Jie Shen Professor and Director Center for Computational & Applied Mathematics Department of Mathematics, Purdue University, USA	G-07 (GF)
1100–1130 hrs. (Keynote / Invited Talk-34)	Topic: Mathematical Morphology: A new paradigm in Machine LearningChair: Dr. Masoud Mohammadian, University of Canberra, AustraliaSpeaker:Dr. Panos Liatsis Interim Chair and Professor, Department of Computer Science Professor, Department of Electrical and Computer Engineering The Petroleum Institute, A Part of Khalifa University of Science & Technology, Abu Dhabi, UAE	G-06 (GF)
1230–1315 hrs.	NETWORKING LUNCH	





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	Artificial Intelligence Based Innovation in Software EngineeringChairs: Dr. Varun Gupta, Amity University, U.P, IndiaCo-Chair: Dr. Singara Singh, TIET, Patiala, India	G-04 (GF)
1315-1445 hrs. (Parallel Technical Sessions)	Bio-Inspired Computation and Its ApplicationsChair: Prof. Laxmi Ahuja, Amity University UP, Noida, IndiaCo-Chair : Dr. Chander Diwakar, UIET, KUK, India	109 (FF)
	Cyber and Information Security – IIChair: Dr. Himanshu Gupta, AIIT, Amity University, U.P, IndiaCo-Chair : Dr. Rupali Bhardwaj, TIET, Patiala, India	110 (FF)
	Soft Computing in Engineering Applications - IIChairs: Prof. Rajeev Pandey, Amity University Lucknow, IndiaDr. Archana Singh, ASET, Amity University, Noida, India	111 (FF)
	Al Support System for Societal Cause Chair : Dr. Dilip K Sharma, GLA University, Mathura, India Co-Chair: Dr. Maysra Hachem, Amity University Dubai, UAE	104 (FF)
1515–1615 hrs.	VALEDICTORY FUNCTION	Auditorium