Call for Papers

5ᵗʰ International Workshop on "Towards Intelligent Communications Networks"- In Conjunction with IEEE ANTS

18ᵗʰ December 2019, Goa, India.

Scope: The telecommunications industry is riding high on the waves of the tech revolution and digital transformation. The surge in internet usage, smartphones, social media and online video streaming has heralded an explosive growth in the amount of data being created, which makes it increasingly challenging to store, transmit and process this data. As providers of the gigantic infrastructure for the new world of interconnected things, telecoms will get their hands on vast datasets. It's simply impossible for humans to process all of this data — and even more so with traditional methods — even if you cut down the sample size. While the unprecedented volume of wireless data traffic may suggest tougher communications system designs, machine learning (ML) embraces unique opportunities that can be a game changer for breaking the wireless communications bottlenecks in next generation 5G and beyond wireless networks. ML is a type of AI that allows digital devices to learn, without being explicitly programmed. AI and ML is more of a solution to the problems than a challenge. Telecoms need machine learning to be able to process and analyze the data in many areas: customer experience, network automation, business process automation, new digital services, and infrastructure maintenance. As a key technique for enabling artificial intelligence (AI), ML has been shown to be capable of solving complex problems without explicit programming. Motivated by its successful applications to many practical tasks like image recognition and recommendation systems, both industry and the research community have advocated the applications of ML in wireless communication.

The telecoms industry is uniquely prepared for ML, since network operators already have masses of data; they already collect and store customer data, network performance data, network traffic data, and social media data to name just a few sources. Put together, the stats hint at a major transformation of telecom sector with AI and ML in the next decade. There is an increasing realization that enhancing the telecom industry with AI could lead to various new revenue streams. AI has vast applications in this sector; the most significant potential are the classification of traffic, anomaly detection and network optimization and utilization.

The **5ᵗʰ Workshop on Towards Intelligent Communications Networks** will take place during IEEE ANTS 2019 in Goa, on 18ᵗʰ December, 2019. The workshop aims to bring researchers/experts around the world together to explore and discuss the state-of-the-art research in the areas mentioned above. Topics of interest include, but not limited to:

- Machine learning applications in caching and data offloading

- Deep learning
- Caching at the edge
- Distributed storage and Edge computing
- Security and privacy issues
- Prototyping, test-beds and field trials
- Stochastic Optimization

Submission Guideline: see http://ants2019.ieee-comsoc-ants.org/about/workshops/

Submission Link: Papers should be submitted via EDAS at:
https://edas.info/newPaper.php?c=26919

Important Dates:

Full Paper Submission:	**November 09th, 2019**
Acceptance Notification:	November 16th, 2019
Final Paper Submission:	November 20th, 2019
Workshop Date:	December 18th, 2019

Workshop Organizers & TPC Chairs:

Prof. Vimal Bhatia (Indian Institute of Technology Indore, India)
Prof. B. N. Bharath (Indian Institute of Technology Dharwad, India)
Prof. T. Ratnarajah (University of Edinburgh, UK)
Prof. M. Sellathurai (Heriot Watt University, UK)

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LIST OF SPEAKERS

1. Prof. Ganapati Panda, FNAE, "Outstanding Teacher Award 2017" NAE, FIETE, Former Deputy Director IIT Bhubaneswar.

2. Dr. Ashok Chandra, IES, Former Wireless Advisor, Ministry of Communication, Government of India and Adjunct Professor, IIT Bombay.

3. Dr. V. V. Mani, Associate Professor, ECE Department, NIT Warangal, Fellow of Institute of Electronics and Telecommunication Engineers (IETE), India and senior member of IEEE.

4. Dr. K. J. Prabhuchandran, Assistant Professor, Electrical Department, IIT Dharwad, Former Research Scientist at IBM.

5. Prof. Tharmalingam Ratnarajah, University of Edinburgh, UK, Professor in Digital Communications and Signal Processing, Head of Institute for Digital Communications, Fellow of Higher Education Academy (FHEA).

6. Prof. Mathini Sellathurai, Heriot Watt University, UK, Head of Digital Signal Processing Research group, Honorary Adjunct/Associate Professorship at McMaster University, Ontario, Canada.

7. Dr. Nikhil Karamchandani, Assistant Professor, Electrical Department, IIT Bombay, Former Researcher at UCLA.