Computer networks, communication systems, and other IT infrastructures have a growing environmental footprint due to the significant amounts of energy consumption and greenhouse gas emission. To address such problems and create a sustainable environment, new energy models, algorithms, methodologies, platforms, tools and systems are required to support next-generation computing and communication infrastructures. Thus, green computing and communications solutions should be designed to better integrate renewable energy sources, to improve energy efficiency, and to reduce greenhouse gas emissions and harmful materials.

The 2020 IEEE International Conference on Green Computing and Communications (GreenCom-2020) will be an exciting international forum for scientists, engineers, and researchers to exchange their novel research regarding advancements in the state-of-art of green computing and communications, as well as to identify the emerging research topics and open issues for further researches.

# **Organizing Committee**

## **General Chairs**

- Daniel Grosu, Wayne State University, USA
- · Ioana Banicescu, Mississippi State University, USA
- Maryline Chetto, University of Nantes, France

## **Program Chairs**

- GaganGeet Singh Aujla, Newcastle University, United Kingdom
- Marco Brocanelli, Wayne State University, USA
- Minghua Wang, University of South China, China

# **Workshop Chair**

• Hu Liu, Shanghai Insititute of Technology, China

#### **Publicity Chair**

• Dongxiu Ou, Tongji University, China

## Web and System Chair

· Zihao Jiang, St Francis Xavier University, Canada

# **Steering Committee**

- Laurence T. Yang (Chair), St Francis Xavier University, Canada
- Jinsong Wu, University de Chile, Chile
- Jianhua Ma (Chair), Hosei University, Japan
- Jinjun Chen, Swinburne University of Technology, Australia
- Honggang Zhang, Zhejiang University, China

# **IEEE GreenCom 2020 Topics**

Topics of interest include, but are not limited to:

Track I: Green Computing and Communication Technologies

- Green infrastructure sustainable design and technologies
- Energy- and power-constrained devices and gateways
- Ultra-low power systems architectures
- Low-power, distributed data processing on sensors
- Energy-efficient M2M wired and wireless communications and networking
- Optimization and/or analysis in green computing and communications (including core network optimization)
- Green big data, cloud, and data center architecture
- Green technologies for 5G (SDN, IoT, and crowdsourcing, etc.)
- · Energy harvesting communications and networks

#### Track II: Smart Energy and Smart Grid

- Smart metering infrastructure and technologies
- Large-scale monitoring, control and demand response
- Advanced data fusion, mining and modeling in smart grid
- Management and control of distributed energy generation, storage and consumption
- Advanced smart grid applications: grid-to-vehicle and vehicle-to-grid, Micro-grid

# Track III: Green Society Applications

- Smart sensing systems
- Smart city
- Green vehicle, green home, green buildings and green anything
- Green industrial automation and control
- Intelligent Transport Systems and control
- · Energy efficiency in aerial/UAV communication networks
- Green social networks
- Applications of blockchain in energy management and trading

# **Important Dates**

# **Workshop Proposal Due:**

• May 15, 2020

#### Paper Submission Deadline:

• June 15, 2020-> Aug. 8, 2020

#### **Authors Notification:**

• July 31, 2020->Sept. 5, 2020

#### **Final Manuscript Due:**

• Sept. 27, 2020

# **Paper Submission Guideline**

All papers need to be submitted electronically through the conference submission website (EDAS) in word or PDF format at: <a href="https://edas.info/N27356">https://edas.info/N27356</a>. The materials presented in the papers should not be published or under submission elsewhere. Each paper is limited to 8 pages (or 10 pages with overlength charge) including figures and references using the IEEE Computer Society Proceedings manuscripts style (two columns, single-spaced, font size 10).

Manuscript Templates for Conference Proceedings can be found at

https://www.ieee.org/conferences\_events/conferences/publishing/templates.html

Accepted papers will be included in the conference proceedings published by the IEEE Computer Society Press (indexed by EI) and IEEE Xplore. At least one of the authors of any accepted paper must register and present the paper. Best Paper Awards will be presented at the conference. High quality papers will be nominated to publish at various journal special issues.

For further information, please visit our website: http://cse.stfx.ca/~cybermatics/2020/greencom/

## **Special Isssues**

- 1. Journal of Cloud Computing SI on Security and Privacy Issues for AI in edge-Cloud Computing
- 2. MDPI Electronics SI on Blockchain-based Technology for Mobile Application
- 3. Software: Practice and Experience SI on Software and Hardware Co-Design for Sustainable Cyber-Physical Systems
- 4. IEEE/CAA Journal of Automatics Sinica SI on Blockchain for Internet-of-Things and Cyber-Physical Systems: Emerging Trends, Issues and Challenges
- 5. Future Generation Computer Systems SI on Artificial Intelligence for Cyber Defence and Smart Policing
- 6. Information Fusion SI on Data Fusion for Trust Evaluation
- 7. IEEE Transactions on Industrial Informatics SI on Digital Twinning: Integration AI-ML and Big Data Analytics for Virtual Representation
- 8. Information Fusion SI on Fusion from Big Data to Smart Data
- 9. IEEE Transactions on Network Science and Engineering SI on Computing and Networking for Cyber-Physical-Social Systems









