IEEE INFOCOM

IEEE INFOCOM 2022 Workshop on Pervasive Network Intelligence for 6G Networks (PerAI-6G)

Call for Papers

The sixth generation (6G) networks are expected to support increasingly heterogeneous networking paradigms, adapt to dynamic network environments, and provide diversified intelligent services with stringent quality of service (QoS) requirements. To this end, artificial intelligence (AI) will penetrate and be integrated into every facet of the network, including end users, network edge, and cloud, resulting in pervasive network intelligence. The pervasive network intelligence can be enabled from two perspectives: AI for networking and networking for AI. The former is to leverage and customize AI-based methods for complex 6G network management, while the latter is to design and optimize 6G networks to facilitate service-oriented AI applications (i.e., AI services). However, realizing pervasive network intelligence confronts different challenges. It should support various AI services with distinct QoS requirements in terms of latency, reliability, accuracy, etc. In addition, the service demands exhibit spatial and temporal dynamics due to traffic burstiness and user mobility. It is of paramount importance to improve the utilization of heterogeneous sensing, communication, computing, storage, and control resources for determining fine-grained user-centric networking solutions.

The objective of this workshop is to promote the harvest of the benefits of pervasive network intelligence for 6G networks by considering the aforementioned challenges. This workshop can serve as a forum for researchers from academia, government, and industries, to exchange ideas, present new results, and provide future visions on these topics. Topics of interest include but are not limited to:

- Performance analysis of pervasive network intelligence
- Architecture and protocol design for 6G networks
- SDN and resource virtualization for 6G networks
- Intelligent network slicing for 6G networks
- AI service provisioning in 6G networks
- Intelligent coordination among end, edge and cloud
- Green network intelligence in 6G networks
- Security and privacy in pervasive network intelligence
- Distributed learning in 6G networks
- Federated learning and split learning for 6G networks
- Data analytics and learning enabled 6G networks
- Task offloading for intelligent applications
- Cooperative AI model training and inference
- Data collection for pervasive network intelligence
- Mobile edge computing/caching for 6G networks
- AI-based network management for 6G networks
- Digital twin assisted 6G networks
- Intelligent drone/UAV assisted networking
- Intelligent space-air-ground integrated networking
- Intelligent user-centric network management

Paper Submission: Papers must be formatted in the standard IEEE two-column format that is used by the INFOCOM 2022 main conference, and must not exceed six pages in length (including references). All submitted papers will go through a peer review process, and all accepted papers which are presented by one of the authors at the workshop will be published in the IEEE INFOCOM 2022 proceedings and IEEE Xplore. Please follow the submission link on https://www.edas.info/N29205 to submit your paper.

Committee

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Important Dates:

- Submission Deadline: **December 20, 2021**
- Notification of Acceptance: **February 6, 2022**
- Camera Ready: **February 28, 2022**