Performance **2021**
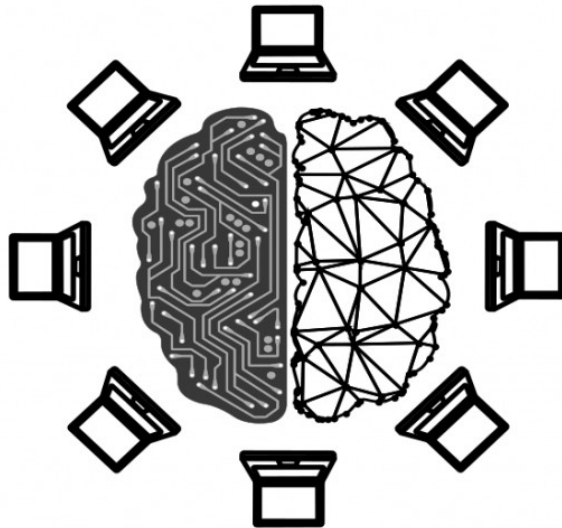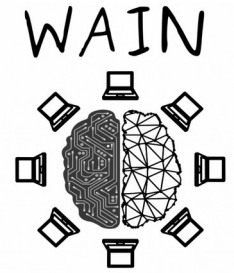
8-12th November 2021 – Politecnico Di Milano, Italy

WAIN

3ᴿᴰ INTERNATIONAL WORKSHOP ON AI IN NETWORKS AND DISTRIBUTED SYSTEMS

Organizers

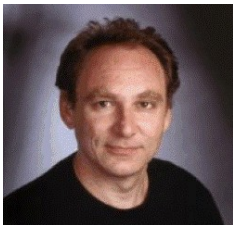**Luca Vassio**, Politecnico di Torino

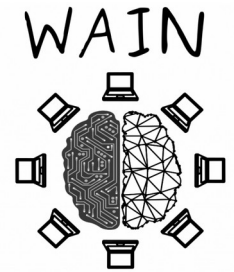**Danilo Giordano**, Politecnico di Torino

Jinoh Kim, Texas A&M University-Commerce

Jon Crowcroft, University of Cambridge

Publicity Chair: Martino Trevisan, Politecnico di Torino, Italy

Program committee

Abhishek Chandra, University of Minnesota, USA

Ana Paula Couto da Silva, Universidade Federal de Minas Gerais, Brazil

Andrea Morichetta, TU Wien, Austria

Baochun Li, University of Toronto, Canada

Carlos Henrique Gomes Ferreira, Universidade Federal de Ouro Preto, Brazil

Chunglae Cho, Electronics and Telecommunications Research Institute, South Korea

Edmundo de Souza e Silva, Federal University of Rio de Janeiro, Brazil

Eiko Yoneki, University of Cambridge, UK

Eric Chan-Tin, Loyola University Chicago, USA

Giuseppe Siracusano, NEC Heidelberg, Germany

Hamed Haddadi, Imperial College, UK

Jerry Chou, National Tsing Hua University, Taiwan

Laurent Bindschaedler, Massachusetts Institute of Technology, USA

Mário Almeida, Samsung AI in Cambridge, UK

Martino Trevisan, Politecnico di Torino, Italy

Sang-Yoon Chang, University of Colorado at Colorado Springs, USA

Tian Guo, Worcester Polytechnic Institute, USA

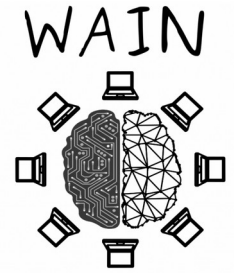**Zied Ben Houidi**, Huawei Technologies Co. Ltd, France

Goals of the workshop

- Focus on **networks** and **distributed systems**

- Meeting opportunity for the new generation of researchers **merging ML with networking**

- Smart and scalable approaches to manage the **scale and complexity** of networks and distributed systems

- How **AI and ML** can be effectively used, presenting new contributions to the community

- Papers from a wide range of fields, from network anomaly detection to load balancing

Session 1

15.00 – 16.25 Milan

- WAIN Chairs – Welcome message

- Keynote:

  Prof. Evangelia Kalyvianaki, University of Cambridge

  Federated Asynchronous Learning for Data Center Scheduling

- Shimin Tao, Weibin Meng, Yimeng Chen, Yichen Zhu, Ying Liu, Chunning Du, Tao Han, Yongpeng Zhao, Xiangguang Wang and Hao Yang. **LogStamp: Automatic Online Log Parsing Based on Sequence Labelling**

- Wenwen Hao, Ben Niu, Yin Luo, Kangkang Liu and Na Liu. **Improving accuracy and adaptability of SSD failure prediction in hyper-scale data centers**

Session 2

16.35 – 18.00 Milan

- Shiva Ketabi, Matthew Buckley, Parsa Pazhooheshy, Faraz Farahvashy and Yashar Ganjali. **Correlation-Aware Flow Consolidation for Load Balancing and Beyond**

- David Pujol-Perich, José Suárez-Varela, Albert Cabellos-Aparicio and Pere Barlet-Ros. **Unveiling the potential of Graph Neural Networks for robust Intrusion Detection**

- Gustavo de Carvalho Bertoli, Lourenço Alves Pereira Júnior and Osamu Saotome. **Improving detection of scanning attacks on heterogeneous networks with Federated Learning**

- Matheus F. C. Barros, Carlos H. G. Ferreira, Bruno Pereira dos Santos, Lourenço A. P. Júnior, Marco Mellia and Jussara M. Almeida. **Understanding mobility in networks: A node embedding approach**
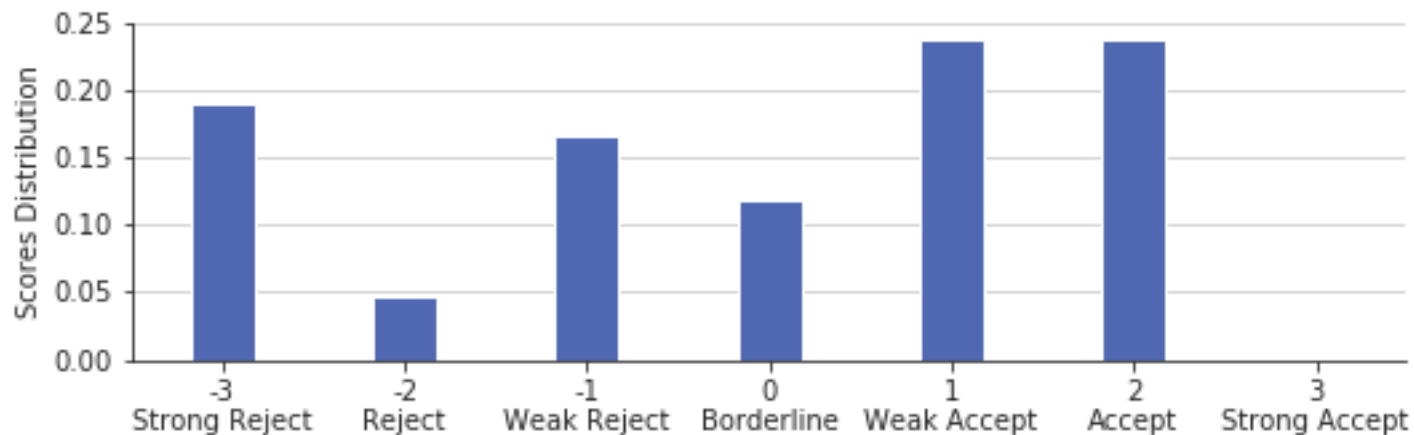
Info about the review process

- 18 TPC members

- 12 submissions

- Each submission received 4 reviews

- 6 accepted papers for the workshop

- Acceptance rate = 50%

- All accepted papers are published on Performance Evaluation Review (PER)

Ratings

- Ratings between -3 (strong reject) and +3 (strong accept)
- Distributions of ratings:

- Papers discussion among chairs/TPC members
- All accepted papers had an average score ≥ 0.5

Workshop participation form

- https://docs.google.com/forms/d/e/1FAIpQLScb4fkyrOeWNEo2MxE66Ty-nLCnLZdWaQbw4F-c5qUk4SeTjg/viewform?usp=sf_link

Keynote

Federated Asynchronous Learning for Data Center Scheduling

Evangelia Kalyvianaki is a Senior Lecturer in the Department of Computer Science and Technology at the University of Cambridge and a Fellow at The Alan Turing Institute.

Her research interests span the areas of Cloud Computing, Big Data Processing, Autonomic Computing, Distributed Systems and Systems Research. She is interested in the design and management of next generation, large-scale applications in the Cloud.
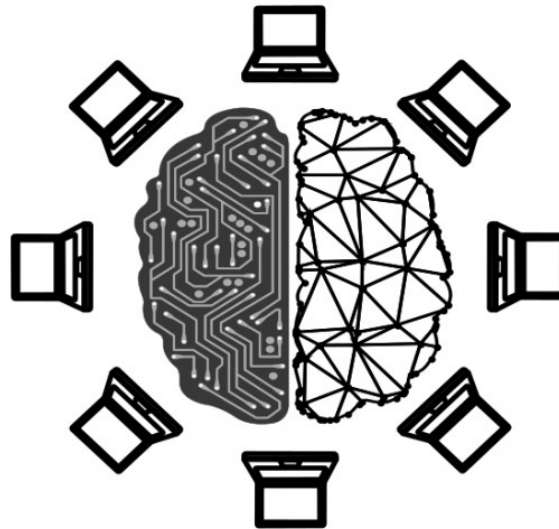
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Logo designed by Luca Vassio