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MSWiM '21

Proceedings of the 24th International ACM Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems

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Mónica Aguilar Igartua, Universitat Politècnica de Catalunya, Spain

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24th ACM MSWiM 2021 General Chair Welcome

Welcome to the 24th ACM International Conference on Modelling, Analysis, and Simulation of Wireless and Mobile Systems (MSWiM). This year, MSWiM will exceptionally be held online due to the COVID- 19 situation. Over the years, MSWiM has established itself as a leading venue where some of the best research works, trends and directions in the area of modeling and performance evaluation of wireless and mobile systems are presented and discussed.

The 24th MSWiM has a high-quality scientific program and two distinguished keynotes addressed by these outstanding experts: Prof. Lajos Anzo from the University of Southampton, UK; and Prof. Luis Muñoz from the Universidad de Cantabria, Spain.

The winner of this year's *Reginald G. Fessenden Award* will be announced at the ACM MSWiM 2021 closing session. This Award has been established seven years ago and it is granted to a distinguished researcher to recognize excellence and remarkable contributions in research work in the field of Wireless Communications and Mobile Networking.

Along with the main conference program, four symposia will be held: DIVANet, MobiWac, PE-WASUN and Q2SWinet. These symposia have become successful and competitive in their own right, covering new research trends and visionary work within mobile and wireless systems.

Putting together a high-quality conference like MSWiM requires a great team effort. We would like to acknowledge those who have handled the many details related to the event. We appreciate the excellent work done by the TPC Co-Chairs, Carlo Giannelli and Jun Zheng, who have brilliantly managed the entire technical program process. We also thank the reviewing work done by the TPC members and external reviewers. Special thanks go to the whole team who hardly worked for the technical excellence and success of the event, including Mirela Notare and Rodolfo W. L. Coutinho (Poster/Demo Co-Chairs), Albert Zomaya (Workshop Chair), Peng Sun (Tutorials Chair), Mirela Notare and Eirini Eleni Tsiropoulou (Publicity Co-Chairs). In addition, we take the opportunity to highlight our appreciation to the MSWiM Steering Committee for their guidance and support. We also wish to thank our main sponsor, ACM SIGSIM. Additionally, many thanks to all of you for your active participation to the MSWiM community; without your continuous support and activities, this event would not have been possible. Finally, we want to recognize and remember Professor Mirela Notare for her great professional career and her collaboration with the MSWIM congress.

We are pleased to welcome you to MSWiM 2021, exceptionally held online this year. The event will be filled with challenging ideas and thought-provoking debates, and we sincerely hope it will provide a fresh overview of the most promising and state-of-the-art directions that the research community is investigating in the field. Welcome to MSWIM 2021!

Mónica Aguilar Igartua
MSWIM'21 General Chair
Universitat Politècnica de Catalunya, Spain

24th ACM MSWiM 2021 Program Chairs' Welcome

The technical program of the 24th ACM International Conference on Modeling, Analysis, and Simulation of Wireless and Mobile Systems (MSWiM), successfully held virtually in November 2021, highlights the high standard of past editions of the conference. In 2021, the call for papers attracted 113 submissions for review in all areas of mobile and wireless systems. The submitted papers came from all over the world, for a total of 29 countries, reflecting the worldwide visibility and the international profile of MSWiM.

Most addressed topics of MSWiM 2021 are Wireless Communication and Networks, Channel Access in Wireless Networks, and Network Simulation Experiments and Testbeds. These topics confirm that the focus of the conference is on modeling and analyzing wireless networks, based on simulated environments. Other addressed topics such as Vehicular and Aerial Networks, Edge/Fog Computing, and IoT demonstrate the relevance of modeling and simulating wireless environments in research fields emerging and affirmed more recently. Such considerations confirm the prominent importance of MSWiM as an international reference point for the research community actively investigating paramount topics ranging from modeling of mobile and wireless systems to their simulation and measurements, also when applied in specific environments such as vehicular networking and Internet of Things.

The submissions included a large number of papers of very high quality, making the selection process difficult and competitive. The members of the Technical Program Committee worked efficiently and responsibly under tight time constraints to produce the reviews (at least 3 independent reviews for any paper) for the final paper selection. In the end, after this rigorous review process, we were able to select 22 regular papers, which correspond to an acceptance rate of 19.5%. An additional small set of 7 short papers were recommended to be included in the technical program owing to their quality and contribution.

Among the full regular papers, the following three were shortlisted as candidates for the best paper award:

- *No Reservations Required: Achieving Fairness between Wi-Fi and NR-U with Self-Deferral Only* by Ilenia Tinnirello and Alice Lo Valvo (University of Palermo, Italy); Szymon Szott and Katarzyna Kosek-Szott (AGH University of Science and Technology, Poland)
- *A Novel Harvesting-Aware RL-based Opportunistic Routing Protocol for Underwater Sensor Networks* by Sevda Deldouzi and Rodolfo W. L. Coutinho (Concordia University, Canada)
- *Global Energy Optimization Strategy Based on Delay Constraints in Edge Computing Environment* by Xian-zhong Tian (Zhejiang University of Technology, China); Lu Zhou and Ting Xu (Zhejiang University of Technology, China)

Based also on presentation quality and on the evaluation of a committee working during the MSWiM 2021 conference, the winner among these three papers will be announced at the conference closing event and will be reported in the proceedings of the next edition of the conference (MSWiM 2022).

At this point, we take the opportunity of this welcome message to congratulate the winners of the best Regular paper award for MSWiM 2020:

A Mixture Density Channel Model for Deep Learning-Based Wireless Physical Layer Design by Dolores García Martí (IMDEA Networks Institute, Spain, University Carlos III, Spain); Joan Palacios Beltrán (IMDEA Networks Institute, Spain, University Carlos III, Spain); Jesús Omar Lacruz (IMDEA Networks Institute, Spain); Joerg Widmer (IMDEA Networks Institute, Spain).

Moreover, MSWiM 2021 will host two very interesting keynotes:

- *Space-Air-Ground Integrated Networking: from Single- to Multi-Component Pareto Optimization*, by Lajos Hanzo, University of Southampton, UK;
- *Enabling the sustainable digital transformation of urban ecosystems* by Luis Muñoz. Universidad de Cantabria, Spain.

Finally, let us note that the excellent and very interesting technical program would not have been possible without the dedication of many colleagues. We would like to thank all the members of the Technical Program Committee; special thanks go to all the members of the Organizing Committee and, last but certainly not least, to the General Chair Monica Aguilar Igartua and the Steering Committee Chair Azzedine Boukerche. Thanks to their dedicated work, we are now able and happy to welcome you to this promising edition of the ACM MSWiM 2021, with a vibrant technical program that will certainly attract your interest and stimulate fruitful discussions. Enjoy!

With warm regards,

Carlo Giannelli
MSWiM 2021 Program Co-Chair
University of Ferrara, Italy

Jun Zheng
MSWiM 2021 Program Co-Chair
Southeast University, China

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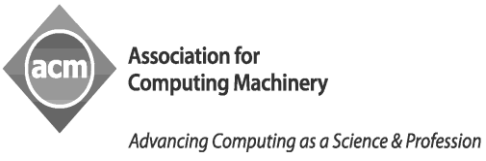

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