

We cordially welcome you to the Joint Conference of the 31th International Workshop on Software Measurement (IWSM) and the 16th International Conference on Software Process and Product Measurement (MENSURA) - September 28-30, 2022 in Cesme, Izmir, Turkey.

IWSM-MENSURA is the premier international conference on software measurement. Over the past three decades, the conference has built its reputation by attracting leading-edge researchers together with talks, tutorials and discussions by the leaders and innovators in the field. The main goal is to share experiences, challenges and solution approaches to facilitate technology transfers from best measurement and estimation-related practices developed by researchers and world industry experts.

IWSM-MENSURA is one of the pioneer conferences in attracting industry participation with each year 50-60% of its participants from industry, either as speakers or as attendees. Therefore, IWSM-MENSURA is quite unique in its richness of discussions on the applicability of theoretical measurement research in the field.

This edition continues this tradition by particularly encouraging proposals from experienced industry practitioners and researchers on the state-of-the-art and the future of Information Technology (IT) cost estimation and control. The topics of concern are listed in (but not limited to) the following:

- Measuring and quantifying value
- Measurement automation
- Measuring technical debt
- Measurement processes and resources, e.g. agile or model-driven
- Usage of big data analytics for improving products and processes
- Empirical case studies
- Software measurement data mining
- Decision support systems based on software measurement
- Data driven decision making
- Visualizations and dashboards
- Measurement-as-a-Service
- Service-and product-oriented measures
- Measuring the software for the industry 4.0 projects
- Benchmarking
- Resources (cost, effort, time) Estimation
- Sizing Functional and Non-Functional Requirements
- Measurement and estimation practices in Agile Software Development
- Formal estimation in agile environments
- Portfolio estimation
- Trends in estimation
- Software size approximation techniques
- Effort estimation based on early size approximation
- Software measurement and cost estimation in Artificial Intelligence
- Software measurement and cost estimation in Blockchain, Game Development, Metaverse Building and other emerging technologies
- Effort estimation for machine learning software
- Effort estimation for Industry 4.0 software
- Sizing software ecosystems
- Data science and data analytics
- Measurement theory for data science and AI
- Measurement and Data Analytics in the era of Artificial Intelligence
- Monitoring and Evaluation in the era of Big Data and Artificial Intelligence

We believe that the accepted contributions constitute a stimulating program and will provide many new ideas and insights.

In addition to the research papers, there are two keynote speeches. One is given by Tugkan TUGLULAR, who is currently serving as Associate Professor in the Department of Computer Engineering at Izmir Institute of Technology. Another speech is given by Alain Abran who is Professor and the Director of the Software Engineering Research Laboratory at Université du Québec, Canada. He is also Co-Chair of the Common Software Measurement International Consortium.

We are grateful to Onur Demirors, Murat Erten, Tolga Ayav, Alain Abran, Reiner R. Dumke and the members of the Programme and Organization Committee. Our special thanks go to Samet Tenekeci and Cagkan Uludagli for all their hard work with the preparation of the conference proceedings.

**Program chairs**

Selami Bagriyanik

Carmine Gravino