Organized by AUA-CSE, co-organized with IEEE Computer Society Armenia Chapter

In previous versions, best papers have been invited to special issues of ISI indexed Journals. For this time, we are working on securing special issues from ISI journals too.

The society, technologies, and sciences undergo a rapid and revolutionary transformation towards incorporating Artificial Intelligence in every system humans use in everyday life for creating Smart Environments (SmE) through Ambient Intelligence (AmI) in highly interconnected and collaborative scenarios. The main source and asset for making smart systems is data, produced today in extraordinary large quantities thanks to the recent advances in sensors and sensor networks, pervasive and embedded computing enhancing the capability of everyday objects and easing collaboration among people.

Data from all areas of daily life that are increasingly accessible to a broad public enable the conception, creation, validation and calibration of process and system. However, this requires international standards for the quality of and access to the data to be developed and applied.

Mobile systems could enhance the possibilities available for designers and practitioners. Effective analysis, quality assessment and utilization of big data is a key factor for success in many business and service domains, including the domain of smart systems. Major industrial domains are on the way to perform this tectonic shift based on big data, artificial intelligence, collaborative technologies, smart environments supporting virtual and mixed reality applications, multimodal interaction and reliable visual and cognitive analytics.

However, a number of requirements must be fulfilled and complexities resolved before we can effectively and efficiently turn the huge amount of generated data into information and knowledge. The first one is to ensure data quality, which includes accuracy and integrity of the obtained data,

timely delivery, suitable quantity, etc. Privacy and security requirements and thorough end-to-end rights management complement realization and deployment of modern design, implementation and evaluation tools. The second one is to develop models, which can turn the data into valuable information and then into knowledge. Two important characteristics are desirable for regression and classification models: accuracy and interpretability. While accuracy deals with the ability of the model to predict a certain outcome, interpretability deals with the ability of the model to explain the reasons for producing a certain outcome.

The aim of this workshop it to bring together researchers and practitioners working on theoretical as well as practical aspects of data generation, data processing and knowledge creation, including social issues which arise when using AI-powered systems in collaborative scenarios and smart cities applications.

After two successful versions of the Workshop on Collaborative Technologies and Data Science in Smart City Applications (CODASSCA 2018 and 2020) we are glad to announce that the third version will be held at the American University of Armenia (AUA), August 23-26, 2022 in Yerevan, Armenia. This time we would like to expand the coverage of the workshop program and encourage content submissions from various theoretical and application domains that share their research under an umbrella motto "from data to information and knowledge", welcoming also active participation from industry on innovative solutions and student/PhD works for wider exposure.

IMPORTANT DATES

Paper Submission Deadline:
March 1, 2022

Notification of Acceptance*:*
May 15, 2022

Camera Ready Papers:
May 25, 2022

Workshop dates:
23-25 August 2022

Special issues call 2023:

October 2022

3ʳᵈ WORKSHOP ON
COLLABORATIVE TECHNOLOGIES AND DATA SCIENCE
IN SMART CITY APPLICATIONS

Topics

This workshop expects to attract paper submissions, which deal with the challenges mentioned above. The studies may be in specialized areas and show novel solutions. Especially interesting are approaches based on existing theories suitably applied.

Potential topics include but are not limited to the following:

Data Science and Information Theoretic Approaches for Smart Systems

- Formalizing Security and Privacy Related to Problems from Information Theoretic Perspectives
- Formalizing Security and Privacy Related Problems from Data Science Perspectives
- Smart System Optimization from both Points of View

Collaborative Technologies with Applications in Smart Cities

- Collaborative Mobile Information Systems
- Collaborative Museums and Laboratories-Digital Twins for Lifecycle Management
- Collaborative Mobile Virtual Environments for Learning or Knowledge Management
- Collaborative Visual Analytics

Technical Challenges for Smart Environments

- Internet of Things in Smart Environments
- Design of Recommender Systems for AmI and SmE Systems
- SmE Middleware: Security and Privacy Issues
- Quality Assessment in AmI and SmE Aystems

Artifical Neural Networks and Deep Learning

- Neural Networks – Various Types and Architectures
  Language Models, Information Theory and Deep Learning
- Embedded Deep Learning -
- Applications in Language and Image Processing

Smart Human Centered Computing

- AI and Machine Learning
- Social Computing
- Recommender Systems
- Ambient Assisted Living
- E-Health
- GIS Applications

3rd WORKSHOP ON COLLABORATIVE TECHNOLOGIES AND DATA SCIENCE IN SMART CITY APPLICATIONS

REGISTRATION

Regular registration   120 €
(65 000 AMD)

Registration - reduced fee   50 €
(25 000 AMD): International Students, staff of AUA and other Armenian educational organizations

Armenian student registration   5 €

Registration includes:

1 copy of the proceedings (only regular registration)
Welcome reception at the AUA (August 23, evening)
Coffee breaks, lunches, entrance to sessions

Participation in further events

Full day tour (August 26, including lunch) 30 €

Pick-up from airport to your chosen hotel   12 €

Commitees

Organizing Committee Chairs: Aram Hajian (Armenia), Nelson Baloian (Armenia, Chile), Gregor Schiele (Germany)

Program Committee Chairs: Tomoo Inoue (Japan), José A. Pino (Chile), Wolfram Luther (Germany)

To be completed

PROCEEDINGS

Contributions could be submitted as extended abstract (2-3 pages) up to a 12 pages article. LNCS Word proceedings templates can be found at https://www.springer.com/gp/computer-science/lncs/conference-proceedings-guidelines Publisher: Logos (Berlin, Germany)
Authors who use other editors (Tex etc.) would like to contact editors of the Logos proceedings.
Papers should be submitted via Easychair
Best papers will be invited to special issues of Journal of Universal Computer (IF: 0.910) and Science an Journal of Soft Computing if (3.643) (in process)