

These are the proceedings of the 9th European Starting AI Researchers' Symposium (STAIRS), an international meeting that intends to support starting researchers (those who have not been awarded a doctoral degree but also researchers with not more than three years of experience after getting their PhD). STAIRS was held as a satellite event of the 24th European Conference on Artificial Intelligence (ECAI) on 29th and 30th of August 2020.

STAIRS is meant to provide starting researchers with the chance to discuss and explore their research interests as well as European career objectives and options. Thereby it offers a unique and valuable opportunity for young researchers to gain experience in presenting their work in a supportive scientific environment while obtaining constructive feedback on the technical content of their work, presentational aspects, and other related issues.

The call for papers welcomed papers on all aspects of contemporary AI. We received a total of 27 submissions, from Europe and beyond. All of them were carefully reviewed by the STAIRS Programme Committee, consisting of leading European researchers who together cover the depth and breadth of the AI field. In the end, 20 papers were accepted for oral presentation at the symposium. From these 20 papers, the following three were selected for the Best STAIRS-ECAI 2020 Paper award (in alphabetic order):

- *Applying LSTM Networks to Predict Multi-drug Resistance Using Binary Multivariate Clinical Sequences*
by Sergio Martínez-Agüero, Inmaculada Mora-Jiménez, Joaquín Álvarez-Rodríguez, Antonio García-Marqués and Cristina Soguero-Ruiz
- *Defining Argumentation Semantics under a Claim-centric View*
by Anna Rapberger
- *The art painting style Classifier based on Logic Aggregators and qualitative colour Descriptors (C-LAD)*
by Vicent Costa

The body of submitted papers covers the field of AI well, with machine learning, autonomous agents and multi-agent systems, argumentation, and computer vision being the areas attracting the largest numbers of submissions.

The STAIRS programme was enriched by a keynote talk given by Aldo Gangemi, Director of the Institute for Cognitive Sciences and Technologies at National Research Council of Italy (CNR).

We are very grateful to the STAIRS Programme Committee and – of course – to the young researchers for submitting their work to STAIRS. We are indebted to the ECAI 2020 chairs and their team for supporting us during all the event organization. We also thank underline.io for the technical support. They all made STAIRS 2020 a success despite the extraordinary circumstances imposed on us through the COVID-19 pandemic.

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