



Proceedings of the

**11<sup>th</sup> International Conference on  
Applied Informatics  
(ICAI 2020)**

January 29–31, 2020  
Eger, Hungary

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Organized by



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# Preface

This volume represents the proceedings of the [11<sup>th</sup> International Conference on Applied Informatics \(ICAI 2020\)](#), held on January 29–31, 2020, in Eger, Hungary. The ICAI conferences are oriented toward professional exchange of ideas in the field of Applied Informatics. The goal of the conferences is to provide a forum for the discussion of academic research. The location of the conferences offers the unique atmosphere of an old medieval city in conjunction with Hungarian hospitality.

The [ICAI 2020 program](#) included 88 talks in the following sections:

- Artificial Intelligence including Machine Learning
- Security and Cryptography
- Computer Aided Geometric Modeling and Computer Graphics
- Theoretical Computer Science
- Data Science including Database Systems
- Computer Networks and Cloud Services
- Software Design and Object Oriented Programming
- Testing and Verification including Formal Methods
- Smart Solutions including Embedded Systems
- Image Processing
- Applications of Informatics
- Education and other fields of Applied Informatics

Also, the conference program included two sessions for 23 posters that presented ongoing work or achievements in the area of Applied Informatics to be displayed and discussed with other participants in an informal manner.

After the conference 75 manuscripts were submitted and carefully peer-reviewed. The Program Committee selected 10 papers to be published in a special issue of the journal [Annales Mathematicae et Informaticae](#) and 45 papers to be published in the conference proceedings at [CEUR-WS.org](#). This volume consists of those 45 papers.

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In memoriam  
DR. LAJOS CSŐKE  
co-founder of ICAI  
(1941–2019)