

# Proceedings of the 1<sup>st</sup> Conference on Information Technology and Data Science (CITDS 2020)

Debrecen, Hungary, November 6–8, 2020

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# Preface

The first Conference on Information Technology and Data Science, *CITDS 2020*, was held in Debrecen, Hungary, November 6–8, 2020. The conference was organized by the Faculty of Informatics, University of Debrecen, Hungary. Due to the COVID-19 pandemic, the conference was held as an online meeting.

By the aim of the organizers, the conference was an opening event of further conference series. The conference aimed to bring together researchers, developers, teachers from the academy, as well as industry working in all areas of data and information technologies. Specialists of the above fields and young researchers participated in the event. The conference provided a good platform, and excellent opportunity for the participants to exchange their ideas, results, and works on the various topics of their research.

The conference focused on a wide range of applications of theoretical and practical data and information technologies. The sections were:

- *Cryptography and Data Security* organized by Attila Pethő
- *Artificial Intelligence and its Applications* organized by András Hajdu
- *Automata, Logic, and Models of Computation* organized by György Vaszil
- *Smart Cities: Theory and its Applications* organized by Márton Ispány
- *Data Mining Techniques and Applications* organized by László Szathmáry
- *Queueing Theory and its Applications* organized by János Sztrik
- *Embedded System Design and Applications* organized by István Oniga
- *Computer Graphics and Data Visualization* organized by Roland Kunkli
- *Computational Statistics with Applications* organized by Sándor Baran
- *Network Theory* organized by István Fazekas
- *Virtual Reality and Related Topics* organized by Attila Gilányi

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The conference program contained 85 oral and 7 poster presentations. Besides Hungary, there were participants from several countries of the world such as Germany, Austria, The Netherlands, Russia, Ukraine, Chile and Japan.

After the conference, most of the authors submitted their manuscripts. The manuscripts were carefully peer-reviewed. The Program Committee selected 20 papers fitting to the scope of the journal *Annales Mathematicae et Informaticae* and suggested to submit to that journal. The Program Committee also selected 27 papers to be published in the conference proceedings at *CEUR-WS.org*. This volume contains those 27 papers. The final decision on the acceptance was made by the conference chairmen, and it was based on the opinion of the referees and the organizers of the sections of the conference.

The Editors