

## Guest Editorial Preface

# Special Issue of Revised and Extended Papers From the 21st Advances in Knowledge Discovery and Management Conference

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The French-speaking conference EGC (in French stands for “Extraction et Gestion des Connaissances” and means “Knowledge Discovery and Management”, or KDM) is an annual event that brings together researchers and practitioners from disciplines within the data and knowledge sciences. These disciplines include machine learning, knowledge engineering and representation, reasoning about data and knowledge, data mining and analysis, information systems, databases, semantic web, and open data, etc.

For the 21st edition, the conference focused on data science which is an interdisciplinary mix whose goal is to solve knowledge discovery problems but also to solve complex analytical problems. Data can then generate some “value” whose definition varies depending on the actor(s) involved. Data science relies on several major domains: mathematical expertise, machine learning, expertise on the concerned data, statistics, visualization, ..., which need data acquisition phases representative of the concerned problems. The EGC 2021 edition wishes to highlight all the connections, associations and applications that exist in these major fields and that lead to new methods or new applications in a wide variety of application fields such as biometrics, health, climate, security, etc., while respecting the creation of trust (privacy) via, for example, the interpretability of decisions “made” by the algorithms.

The EGC conference is an opportunity to bring together academics and industrialists in order to confront theoretical work and practical applications on real data and to communicate quality work, to exchange and promote cross-fertilization of ideas, through the presentation of recent research work, industrial developments and original applications.

This special issue contains five revised and extended papers selected among the best accepted papers of the conference. Concerning the conference, the long papers selection was also the result of a double-blind peer-review process among the hundreds of papers initially submitted to each edition of the conference (acceptance rate for long papers is about 25%). Each paper went through a double blind review with a minimum of 3 reviewers.

The five papers are:

- “Concept of Temporal Pretopology for the Analysis for Structural Changes: Application to Econometrics – Concept of Temporal Pretopology” by Nazha Selmaoui-Folcher, Jannai Tokotoko, Samuel Gorohouna, Laisa Roi, Claire Leschi, and Catherine Ris
- “Efficient Open Domain Question Answering With Delayed Attention in Transformer-Based Models” by Wissam Sibli, Mohamed Challal, and Charlotte Pasqual
- “Boat Detection in Marina Using Time-Delay Analysis and Deep Learning” by Romane Scherrer, Erwan Aulnette, Thomas Quiniou, Joël Kasarherou, Pierre Kolb, and Nazha Selmaoui-Folcher
- “Iterative and Semi-Supervised Design of Chatbots Using Interactive Clustering” by Erwan Schild, Gautier Durantin, Jean-Charles Lamirel, and Florian Miconi
- “A Method for Generating Comparison Tables From the Semantic Web” by Arnaud Giacometti, Béatrice Markhoff, and Arnaud Soulet

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