

Analogies: from Theory to Applications

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Analogical proportions, i.e., statements of the form “A is to B as C is to D”, are the basis of analogical inference and they are closely related to case-based reasoning and transfer learning. They have been used on NLP tasks such as automatic machine translation, semantic and morphological tasks, as well as visual question answering with competitive results. Moreover, analogical reasoning can support several machine learning tasks such as classification, decision making, or dataset augmentation. However, other less explored applications could be envisioned such as knowledge discovery and management (e.g., knowledge graphs refinement, data set completion, and alignment), recommender systems, and other AI-related tasks such as explainable AI.

The purpose of this workshop is thus to explore both foundational and applicative aspects of analogical reasoning in various fields, e.g., machine learning, knowledge representation, discovery, and reasoning, as well as in industry practice with real-world data, applications, and associated challenges, for instance, scalability issues.