

LINZ 2022

39th Linz Seminar on Fuzzy Set Theory

Many-Valued Logics: Theory and Applications

Bildungszentrum St. Magdalena, Linz, Austria

June 7-10, 2022

Program Chairs

Tommaso Flaminio
Barcelona, Spain

Lluís Godó
Barcelona, Spain

Carles Noguera
Siena, Italy

Program Committee

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Prague, Czech Republic

Bernard De Baets
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Mainz, Germany

CALL FOR PAPERS

Since their inception in 1979 the Linz Seminars on Fuzzy Sets have emphasized the development of mathematical aspects of fuzzy sets by bringing together researchers in fuzzy sets and established mathematicians whose work outside the fuzzy setting can provide direction for further research. The philosophy of the seminar has always been to keep it deliberately small and intimate so that informal critical discussions remain central.

LINZ 2022 will be the 39th seminar carrying on this tradition and is devoted to the theme "**Many-Valued Logics: Theory and Applications**". The goal of the seminar is to present and to discuss recent advances of many-valued and mathematical fuzzy logics and their applications in pure and applied fields.

Accordingly, the topics of the Seminar will include but not be limited to:

- Many-valued logic
 - Mathematical fuzzy logic
 - Many-valued modal logics
 - Algebraic and relational semantics
 - First and higher order formalisms and their model theory
 - Proof theory and proof search
 - Fuzzy quantifiers
- Uncertainty and similarity-based logics
 - Probabilistic, possibilistic and other uncertainty logics
 - Uncertainty measures on algebras of fuzzy logic
- Graded logical approaches in Artificial Intelligence
 - Doxastic logics and counterfactuals
 - Integration of fuzzy logics and machine learning
 - Judgment aggregation and computational social choice
 - Argumentation theory

The "Linz" tradition has these key features: the number of participants of the Linz Seminars is usually bounded above by 40 with broad international representation and a mix of pure and applied interests; there are no parallel sessions so that all participants focus on each presentation and fully engage in each topic; and there is ample time for discussion of each presentation, with follow up round tables for discussion of open problems and issues raised in the talks. In particular, young researchers (PhD students, junior post-docs) are encouraged to submit their latest results.

The overall COVID-19 pandemic situation has so far not allowed to carry on with the Linz Seminars along with keeping its philosophy of providing a friendly and open atmosphere for discussions and mutual exchange of research ideas in person. We hope and stay optimistic that this will be possible again in June 2022. However, we will be bound to follow all the COVID-19 regulations by that time effective by both the Austrian and Upper Austrian federal state as well as Johannes Kepler University Linz and have to request this also of all participants to the seminar. Relevant information will be provided on the webpage of the seminar.

Please submit your extended abstract by **March 15th, 2022** following the guidelines provided at the webpage of the seminar.

Further Information: <http://www.flll.jku.at/linzseminars>