

Research visit to Europe funded by IERTNiL: a report

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Visit to Linz, Austria: February 17 - 23, 2014: The research visit to Linz was meant for attending the 35th Fuzzy set theory seminar on *graded logical approaches and their applications*, and presenting a contributed talk there.

My presentation on *Theory of graded consequence and a connection with decision support system* was scheduled on 19th February 2014. The aim of the talk was to (i) present the algebraic semantics behind the proof theoretic rules in the context of graded consequence, (ii) show general scheme for obtaining logical systems based on the algebraic semantics of rules, (iii) present specific cases showing availability of rules in different logical systems obtained by the scheme, and (iv) relate the key notions of graded consequence with that of a decision support system.

There was a round table on February 20, choosing some broad topics among different presentations. Fuzzy logic vis-à-vis Graded consequence was one of the topics in the round table. This visit helped me to make some further research connections with Lluís Godó, Francesc Esteva, from Spanish National Research Council, and Anna Zamansky from Haifa University, Israel.

Visit to Warsaw, Poland: February 23 - March 4, 2014: This was a research visit to the Department of Mathematics, Informatics, and Mechanics, University of Warsaw. The research visit was scheduled with different meetings with people working in logic in different institutes of Warsaw, and two talks of mine, which were scheduled on February 28, 2014.

One of the talks was almost on the same topic as the talk presented in Linz. The other was on *consequence-inconsistency interrelation in the context of paraconsistent logics*. This study introduces a relativized notion of inconsistency, and presents a sets of axiomatization for a non-explosive consequence and its corresponding notion of inconsistency in a propositional fragment of a language. A few existing paraconsistent systems are investigated, and it is found that some of them satisfy the characterization made in this study.

There were a few meetings with Andrzej Skowron, Piotr Wasilewski, Andrzej Szalas and Barbara Dunin-Kępicz from Warsaw University. These, in turn, helped me to submit a postdoctoral proposal to WCMCS on issues of our joint research interest. Besides, I also had an opportunity to meet Ewa Orłowska, National Institute of Telecommunications, Szachowa, Warsaw and Beata Konikowska, Polish Academy of Sciences, Warsaw. I expect to have further research cooperation from them too.