

## Preface

This volume contains revised versions of papers from the 24th International Conference on Inductive Logic Programming. All papers that appear in these proceedings were reviewed by at least three members of the ILP 2014 Program Committee. The ILP conference was held from September 14th to 16th, 2014, in Nancy, France and was co-located with ECML/PKDD 2014. Since its inception in 1991, the annual ILP conference has served as the premier international forum on learning from structured relational data. The conference covers topics such as the induction of logic programs, learning from data represented with logic, multi-relational machine learning, learning from graphs, and applications of these techniques to important problems in fields like bioinformatics, medicine, and text mining.

Prior to the conference, ILP 2014 solicited three types of paper submissions: long papers, short work-in-progress papers, and short papers detailing previously published research. The conference received 17 long-paper submissions of which nine were accepted to appear in these proceedings. The authors of one of these papers elected to submit their work to the Machine Learning Journal special issue on Inductive Logic Programming. Hence, this paper is not included in these proceedings. Five of the remaining long-paper submissions were presented as work-in-progress papers at the conference. We received 24 short paper submissions, which were initially selected by the Program Committee chairs based on relevance. Twenty-one of these papers were presented at the conference. Of these, five were papers that highlighted work relevant to ILP that were recently published in another conference proceedings volume or journal.

Following the conference, 13 of the work-in-progress papers were invited to submit an extended version of their paper submission, which would be reviewed by the ILP Program Committee with accepted papers appearing in this LNCS volume. Eight authors submitted extended papers of which six were accepted.

The conference also featured three invited talks. Helmut Simonis from the University of Cork gave a talk entitled “Learning Constraint Models from Example Solutions.” His talk presented ModelSeeker, which is a tool that is able to generate constraint programs based on only observing a small number of model solutions. Sumit Gulwani from Microsoft Research gave a talk entitled “Applications of Program Synthesis to End-User Programming and Intelligent Tutoring Systems.” His talk discussed his ongoing work on program synthesis, and highlighted the ability to induce programs from very few training examples. Finally, Lise Getoor from the University of California - Santa Cruz gave a talk entitled “Scalable Collective Reasoning Using Probabilistic Soft Logic.” She talked about the theory underlying probabilistic soft logic and highlighted how this framework could very quickly solve large collective reasoning problems. Lise’s talk was a joint invited talk with ECML/PKDD, which was generously sponsored by the Artificial Intelligence Journal.

At ILP 2014, the Machine Learning Journal generously continued its sponsorship of the ILP best student paper award. This year, the paper by Andrew Cropper and

Stephen Muggleton titled “Logical Minimisation of Metarules in Meta-Interpretive Learning” received the best paper award and the work by Ryosuke Kojima and Taisuke Sato titled “Goal Recognition from Incomplete Action Sequences by Probabilistic Grammars” was the runner-up for the best student paper.

We would like to thank the local organizers in Nancy, Amadeo Napoli, Chedy Raissi, and their team. They did an outstanding job with the local arrangements, and the conference would not have been possible without their hard work. We would like to thank Toon Calders, Floriana Esposito, Eyke Hllermeier, and Rosa Meo, who were the program co-chairs of ECML/PKDD 2014, for agreeing to co-locate the two conferences. The two conferences had not been co-located in over a decade, and the complementary nature of the conferences led to fruitful interactions among conference participants. We must thank the members of the Technical Program Committee for providing high-quality and timely reviews. Finally, we would like to thank Jan Van Haaren for handling the paper submission process and Constantin Comendant for maintaining the conference web site.

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