The KR conference series is a leading forum for timely in-depth presentation of progress in the theory and principles underlying the representation and computational management of knowledge.

The first Knowledge Representation & Reasoning (KR) conference was held 25 years ago in 1989. On this 25th year of the first KR conference, we have embarked on the 14th KR conference. While thoughts and discussions on KR go back to the early philosophers, the importance of KR in building intelligent systems was realized from the very beginning of the field of artificial intelligence (AI). This recognition and subsequent research on KR as an important aspect of AI was apt, as the two key aspects of “intelligence,” modeling the available knowledge on the world and reasoning on the world by means of this model center around KR. Since then there has been significant progress in KR and now we have many well developed KR formalisms with supporting theories, building-block results, reasoning systems, and applications. There are many books that present these developments. We have reached a stage where various disciplines in AI and computer science are now using KR. Among them is the use of KR in agents, semantic web applications, video understanding, natural language understanding, and many others.

The 2014 edition of KR is held as part of the Vienna Summer of Logic together with the Federated Conference on Logic, Logic Colloquium, and other related events, making it a very special edition.

We received 220 submissions to the conference of which 58 (26.4 percent) were accepted as regular papers. In addition to regular papers, the conference hosts 25 short technical papers, following a tradition introduced at KR 2010. Accepted papers can be broadly divided into the following areas: description logics (11), reasoning about actions and processes (7), belief revision and nonmonotonicity (6), general knowledge representation and reasoning (6), planning, strategies, and diagnosis (5), answer set programming and logic programming (4), argumentation (4), automated reasoning and computation (4), causality and rationality (4), uncertainty (4), and reports from the field (3).

The conference program has been enriched with several tutorials and invited talks on traditional KR topics as well as on emerging application areas.

With respect to applications, Tony Cohn contributes an invited talk, Knowledge Representation Meets Computer Vision: From Pixels to Symbolic Activity Descriptions, which discusses the role of KR in video understanding; and Ekaterina Ovchinnikova holds a tutorial on Natural Language Understanding with World Knowledge and Inference, which discusses the role of KR in natural language understanding (NLU), as well as various available knowledge bases that can be and are being used in developing NLU systems.

Research in dynamic systems and multi-agent systems has been strongly influenced by advances in KR; this is underlined by Franz Baader in his invited VSL/KR Keynote talk, supported by ECCAI, Ontology-Based Monitoring of Dynamic Systems. In addition, Alessio Lomuscio presents the tutorial Verification of Multi-Agent Systems against Epistemic Specifications, and Lawrence S. Moss presents another tutorial Dynamic Epistemic Logic and its Interaction with Knowledge Representation.

The close connection between databases, ontologies and KR is emphasized by Georg Gottlob, who gives an invited talk Datalog+/–: Questions and An-
swers and by Riccardo Rosati in his tutorial Query Answering and Rewriting in Ontology-Based Data Access.

The invited talks are rounded out by the traditional Great Moments in KR talk, which Sheila McIlraith delivers on Situation Calculus: The Last 15 Years. This talk will honor Ray Reiter and address the impact of his ground-breaking work on situation calculus.

We would like to thank several people who helped in the many aspects that are needed to make KR 2014 a successful event. The Senior Program Committee and Program Committee members were extremely helpful and supportive in their thorough and timely review of the submissions. Birte Glimm and Adrian Pearce took over the important charge of organizing the doctoral consortium and Marco Maratea was chasing sponsorships and liaisoning with organizations full of verve. We gratefully acknowledge the support of our sponsors. A special thanks goes to Michael Fink and Stefan Woltran and their team for the local organization, including Eva Nedoma, Markus Pichlmair, Johannes Wallner, Thomas Linsbichler, Sylwia Polberg, Friedrich Slivovsky, and all volunteers. We are also very grateful to the VSL Organization Chair Vesna Sabljakovic-Fritz. And if you have been attracted by the amazing KR 2014 poster or webpage design: contact Paolo Felli!

In closing, we thank our KR colleagues for their contributions which appear in the following pages and welcome our readers to this record of KR 2014.

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