

Lecture Notes in Artificial Intelligence 5076

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Deontic Logic in Computer Science

9th International Conference, DEON 2008
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Proceedings

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Preface

This volume presents the papers contributed to Δ EON 2008, the 9th International Conference on Deontic Logic in Computer Science, held in Luxembourg, July 16–18, 2008. This biennial conference series is designed to promote international cooperation amongst scholars who are interested in deontic logic and its use in computer science. The scope of the conference is interdisciplinary, and includes research that links the formal-logical study of normative concepts and normative systems with computer science, artificial intelligence, philosophy, organization theory, and law. The Δ EON website, <http://www.deonticlogic.org>, contains links to previous conferences and their papers. This history reveals a vibrant interdisciplinary research program.

Papers for these conferences might address such general themes as the development of formal systems of deontic logic and related areas of logic, such as logics of action and agency, or the formal analysis of all sorts of normative concepts, such as the notions of rule, role, regulation, authority, power, rights, responsibility, etc., or the formal representation of legal knowledge. They might also be concerned with applications, such as the formal specification of normative multiagent systems, the specification of systems for the management of bureaucratic processes in public or private administration, or the specification of database integrity constraints or computer security protocols, and more. Of particular interest is the interaction between computer systems and their users.

In addition to these general themes, the 2008 meeting focused also on the special topic of logical approaches to deontic notions in computer science in the area of security and trust, encompassing applications in e-commerce as well as traditional areas of computer security. Topics of interest in this special theme encompass digital rights management, electronic contracts, including service level agreements and digital media licenses, authorization, access control, security policies, privacy policies, business processes and regulatory compliance. The special theme embraced both theoretical work (formal models, representations, specifications, logics, verification) and implementation-oriented work (architectures, programming languages, design models, simulations, prototype systems) on these specific topics.

The 16 papers printed here were selected for presentation at the conference after a thorough process of review and revision of 28 submitted papers. All are original and presented here for the first time. The titles themselves demonstrate commitment to the themes of the conference. In addition to these peer-reviewed papers, we present abstracts or papers of the talks of our four invited speakers, Martin Abadi (UC Santa Cruz and Microsoft Research, USA), Ross Anderson (University of Cambridge, UK), Nuel Belnap (University of Pittsburgh, USA), and Dov Gabbay (King's College London, UK).

We are grateful to all who contributed to the success of the conference, to our invited speakers, to all the authors of the presented papers, and to all who participated in discussion. Special thanks go to the members of the Program Committee for their service in reviewing papers and advising us on the program and to the members of the Organization Committee for taking care of all the countless details that a conference like this requires, especially Gabriella Pigozzi and Martin Caminada for all local arrangements of the conference, Mathijs de Boer for setting up and maintaining the DEON 2006 website and Davide Grossi for setting up *deonticlogic.org*. Thanks too to Richard van de Stadt, whose CyberChairPRO system was a very great help to us in organizing the papers from their initial submission to their final publication in this volume.

The previous edition of the Δ EON conference in Utrecht had as its special topic artificial normative systems, their theory, specification and implementation, such as electronic institutions, norm-regulated multiagent systems and artificial agent societies generally. Here too the concern is both with theoretical work, such as the design of formal models and representations, and also work more oriented toward implementation, such as architectures, programming languages, design models, simulations, etc. For the first time, the Δ EON conference in Luxembourg was co-located with a workshop on normative multiagent systems. Thanks to Guido Boella (Università di Torino), Gabriella Pigozzi (University of Luxembourg), Munindar P. Singh (North Carolina State University) and Harko Verhagen (Royal Institute of Technology and Stockholm University) for organizing the NORMAS 2008 workshop in Luxembourg.

We are also very grateful to the Fonds National de Recherche du Luxembourg (FNR) and strategic priority P1 on security and reliability of the University of Luxembourg for their essential financial support. Finally, we wish to express our appreciation to Springer for publishing these proceedings in their LNCS/LNAI series. This is the third such volume in this series. We hope these volumes may continue into the future to provide a record of research in this rich and growing field.

April 2008

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