

AICOL (AI Approaches to the Complexity of Legal Systems)

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Human Rights, Democracy, Rule of Law and Contemporary Challenges in Complex
Societies

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Room 15
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JUSTIFICATION

After a first experience in Beijing (IVR XXIV – September 15-20, 2009 Beijing, China), the follow up in Rotterdam (JURIX-09 – Rotterdam – November 16-18, The Netherlands), and the successful second edition in Frankfurt a. M. (IVR XXV – August 15-20, 2011 Frankfurt, Germany), we submit the fourth edition of AICOL (AI Approaches to the Complexity of Legal Systems) as a thematic workshop of the IVR XXVI Belo Horizonte, 21-27 July 2013.

The previous AICOL editions, as the forthcoming ones, are conceived as a meeting point for diverse researchers (legal theorists, political scientists, linguists, logicians, and computational and cognitive scientists) eager to discuss and share their findings and proposals. In this sense, complexity and complex systems sum up the perspective chosen to describe recent developments in AI and law, legal theory, argumentation, the semantic web, and multi-agent systems.

This work has produced significant outcomes collected in the following publications, edited by Springer – LNAI:

<http://www.springer.com/computer/ai/book/978-3-642-16523-8>
 The new selected papers of AICOL III at IVR XXV (2011) are forthcoming.

The inspiring idea of AICOL is to further develop models of legal knowledge, concerning its organization, structure and content, in order to promote mutual understanding and communication between different legal systems and cultures. By achieving more precise models of legal concepts – from multilingual dictionaries to taxonomies and legal ontologies, namely formal models of legal conceptualization – we enhance our comprehension of legal cultures, of their commonalities and differences. Moreover, by increasingly profiting from computer support in managing legal knowledge, it is feasible both drawing on convergences and bridging differences for deeper understanding of today’s legal challenges.

The comparison of multiple formal approaches to the law – such as logical models, cognitive theories, argumentation frameworks, graph theory, complexity theory, cybernetics, game theory as well as opposite perspectives like the internal and the external viewpoints – should stress possible convergences in the realm of, say, conceptual structures, argumentation schemes, emergent behaviors, learning evolution, adaptation, simulation, etc. Whilst special attention is paid to the most recent research in the field, e.g., the use of sentimental analysis in crowd-sourcing for preventing geopolitical crises, e-discovery in legal firms and tribunals, gamification in legal environment, and so forth, the overall aim is to promote a fruitful interaction between some of the most relevant contributions to AI research on contemporary legal systems.

SELECTED PAPERS

TIME, TRUST AND NORMATIVE CHANGE. ON CERTAIN SOURCES OF COMPLEXITY IN JUDICIAL DECISION-MAKING	Michał Araszkiwicz
THE OBJECT-ORIENTED PROGRAMMING PARADIGM AND THE OBJECT-ORIENTED LAW PARADIGM	Marcella Furtado de Magalhães Gomes
VAGUENESS IN LEGAL SYSTEM, A SEMIOTICS ONTOLOGY DEVELOPMENT TO APPROACH COMPLEXITY IN ARTIFICIAL INTELLIGENCE AND LEGAL KNOWLEDGE REPRESENTATION	Ugo Pagallo
CONCEPTUAL MODELING OF JUDICIAL PROCEDURES IN THE E-CODEX PROJECT FRAMEWORK	Proff. Francesconi & Tiscornia
THE POLITICS OF ICTS-DRIVEN SOCIETIES: ON GOVERNANCE, COMPLEXITY, AND DESIGN	Ugo Pagallo
INTERPRETATION FUZZY OF DEONTIC LOGIC	Proff. Ferreira & Lucena
THE ROLE OF ROLES IN LEGAL REASONING	Proff. Antonini, Boella & van der Torre
COMPLEXITY AS A METATHEORY ON RELATIONS	André Parmo Folloni

BETWEEN LAW AND SUSTAINABLE DEVELOPMENT	
SOME LEGAL KNOWLEDGE REPRESENTATION ASPECTS FOR THE DEVELOPMENT OF SMART CITIES.	Fernando Galindo
BOUNDARIES TO SECURITY BY DESIGN: THE CAPER REGULATORY MODEL.	Pompeu Casanovas
MEDIAKIDS: CROWDSOURCED REPORTING OF POTENTIALLY HARMFUL MULTIMEDIA CONTENTS FOR MINORS	Profs. M. Poblet, M. Roca, J. González y E. Teodoro
CROWDSOURCING AND ODR IN THE CONSUMEDIA PROJECT	Pompeu Casanovas, M. Poblet, J. Suquet and Jorge González-Conejero
DEVELOPING A MODEL FOR AN OPEN ACCESS JOURNAL ON FREE ACCESS TO LAW	Pompeu Casanovas, G. Peruginelli, E. Francesconi, T. Bruce, E. Plaza
MEASURING THE COMPLEXITY OF THE LEGAL CORPORA USING XML ANNOTATION	Prof. M. Palmirani, L. Cervone
ONLINE DISPUTE RESOLUTION AND MODELS OF RELATIONAL LAW AND JUSTICE	Pompeu Casanovas, John Zeleznikow