

## ARPTA 2017

### Special Session on Automated Reasoning and Proving Techniques with Applications in Intelligent Systems

at the 9<sup>th</sup> Asian Conference on Intelligent Information and Database Systems (ACIIDS 2017)

Kanazawa, Japan, April 3-5, 2017

Conference website: <http://www.aciids.pwr.edu.pl/>

#### Special Session Organizers

**Prof. Jingde Cheng**

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#### Objectives and topics

Reasoning is the process of drawing new conclusions from given premises, which are already known facts or previously assumed hypotheses to provide some evidence for the conclusions. Therefore, reasoning is intrinsically ampliative, i.e., it has the function of enlarging or extending some things, or adding some things to what is already known or assumed. In general, a reasoning consists of a number of arguments in some order. A logically valid reasoning is a reasoning such that its arguments are justified based on some logical validity criterion provided by a logic system in order to obtain correct conclusions.

Proving is the process of finding a justification for an explicitly specified statement from given premises, which are already known facts or previously assumed hypotheses to provide some evidence for the specified statement. A proof is a description of a found justification. A logically valid proving is a proving such that it is justified based on some logical validity criterion provided by a logic system in order to obtain a correct proof. Automated reasoning and proving techniques have many applications in research and development of various intelligent systems. This special session seeks research papers on all aspects of automated reasoning and proving including foundations, implementations, and applications, in particular, those papers describing real applications in intelligent systems are welcome. Relevant topics of this special session cover, but are not limited to:

- Modal reasoning
- Deontic reasoning
- Temporal and spatio-temporal reasoning
- Relevant reasoning
- Automated theorem finding
- Automated theorem proving
- Automated verification
- Automated reasoning and proving based on high-order logics
- Complexity of automated reasoning and proving
- Logic basis for automated reasoning and proving

#### Important dates

Submission of papers: **31 October 2016 (Hard deadline!!!)**

Notification of acceptance: **1 December 2016**

Camera-ready papers: **15 December 2016**

Registration & payment: **15 December 2016**

Conference date: **3-5 April 2017**

## Program Committee

Professor Shoichi Morimoto, Senshu University, Japan  
Professor Yuichi Goto, Saitama University, Japan  
Professor Hongbiao Gao, Saitama University, Japan  
Dr. Shinsuke Nara, Muraoka Design Laboratory, Japan  
Dr. Kai Shi, Northeastern University, China  
Dr. Kazunori Wagatsuma, CIJ solutions, Japan

## Submission

All contributions should be original and not published elsewhere or intended to be published during the review period. Authors are invited to submit their papers electronically in pdf format, through EasyChair. All the special sessions are centralized as tracks in the same conference management system as the regular papers. Therefore, to submit a paper please activate the following link and select the track: **ARPTA 2017: Special Session on Automated Reasoning and Proving Techniques with Applications in Intelligent Systems.**

<https://easychair.org/conferences/?conf=aciids2017>

Authors are invited to submit original previously unpublished research papers written in English, of up to 10 pages, strictly following the LNCS/LNAI format guidelines. Authors can download the Latex (recommended) or Word templates available at [Springer's web site](#). Submissions not following the format guidelines will be rejected without review. To ensure high quality, all papers will be thoroughly reviewed by the ARPTA 2017 Program Committee. All accepted papers must be presented by one of the authors who must register for the conference and pay the fee. The conference proceedings will be published by Springer in the prestigious series LNCS/LNAI (indexed by ISI CPCI-S, included in ISI Web of Science, EI, ACM Digital Library, DBLP, Google Scholar, Scopus, etc.).