

LPNMR 2013 Conference Report

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Corunna, Spain
December 10th, 2013

1 Dates and venue

The 12th edition of the International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR) was celebrated in Corunna, Spain, at the hotel Meliá María Pita, on September 15th to 19th, 2013.

<http://lpnmr2013.udc.es>

The conference was co-located with the 14th International Workshop on Computational Logic and Multi-Agent Systems (CLIMA) and the 7th International Workshop on Modular Ontologies (WoMO). The three events attracted 120 researchers from 24 countries altogether. From these, LPNMR and its four associated workshops had a total number of 89 participants. LPNMR workshops and WoMO were held on Sunday, September 15th, whereas CLIMA run in parallel with LPNMR from Monday 16th to Wednesday 18th.

2 Scientific content

Submissions were open under three different categories (technical papers, application descriptions and system descriptions) and two different formats (short and long papers). From 88 submissions, 53 papers were accepted (that is, an overall acceptance ratio of 60 %) from which 33 were technical papers, 12 application descriptions and 8 system descriptions (with acceptance ratios of 55, 71 and 73 % in each category, respectively).

The conference program scheduled these presentations into regular sessions of long papers with the following topics: Answer Set Programming,

Temporal and Dynamic Reasoning, Theory, Generalizations of Logic Programming, Belief Revision, Application Descriptions, Systems and Tools and, finally, the ASP Competition report. There also were two additional special sessions collecting short presentations, one on Monday 16th for technical short papers (followed by a poster session) and one on Wednesday 17th for short application and system descriptions (followed by a demo session). The program was completed with three invited talks by renowned researchers in the field:

1. *Logic Programming in the 1970s*, by Robert A. Kowalski
2. *Towards Reactive Multi-Context Systems*, by Gerhard Brewka (in a joint session with CLIMA XIV)
3. *Managing Change in Answer Set Programs: A Logical Approach*, by James P. Delgrande.

Regarding the conference content, one first remarkable fact is the undeniable presence of Answer Set Programming (ASP) which has somehow become a *lingua franca* in the area. Apart from invited talks and the ASP Competition report, a 70% of the papers were directly or indirectly related to ASP and a 25% included the keywords “Answer Set” in their title. This predominance is even higher in applications and system descriptions, where 18 of the 20 papers of this kind directly used ASP.

As usual, the program contained several presentations exploring LPNMR foundations. For instance, the first invited talk by Bob Kowalski provided an enlightening perspective on the evolution of the area from its first steps. The best technical paper distinction was awarded to the contribution:

Amelia Harrison, Vladimir Lifschitz and Mirek Truszczyński: *On Equivalent Transformations of Infinitary Formulas under the Stable Model Semantics*.

which also constituted the best student paper award received by Amelia Harrison.

Apart from foundations, it is also perhaps interesting to emphasize two research trends that have attracted considerable attention: (1) dynamic reasoning and (2) generalizations of logic programming. The first trend includes a

series of papers related to temporal extensions of logic programming and, perhaps more remarkably, to the study of Belief Change for non-monotonic formalisms, something that also constituted the main topic of Jim Delgrande’s invited talk. In the second trend, we could attend to a group of presentations considering the generalization of logic program rules in different ways, mostly to accommodate other types of inference or computational methods. This is the case, for instance, of the so-called HEX-programs that incorporate atoms representing external computational sources. Another example is the definition of Reactive ASP for Multi-Context Systems explained by Gerd Brewka’s in his invited talk.

But the conference contents were not limited to theoretical work. In fact, during the last editions the conference has gained an increasingly important practical component. In LPNMR’13 we have had 12 application descriptions covering a very wide spectrum of domains such as Natural Language, Computational Biology or Game Playing. The distinction for best application description was awarded to:

Daniela Incezan: *An Application of ASP to the Field of Second Language Acquisition.*

The conference also included 8 system descriptions, being the best paper award in this category for:

Evgenii Balai, Michael Gelfond and Yuanlin Zhang: *Towards Answer Set Programming with Sorts.*

3 Associated workshops

As said before, apart from co-located events CLIMA XIV and WoMO’13, the LPNMR’13 conference had four associated workshops: two of them already present in the previous edition, LPNMR’11, and two of them of new creation. Marcello Balduccini acted as LPNMR Workshops Chair and was responsible for the revitalization experienced in this section.

1. The 5th International Workshop on *Acquisition, Representation and Reasoning with Contextualized Knowledge* (ARCOE-LogIC’13) co-chaired by Michael Fink, Martin Homola, Ivan José Varzinczak and Alessandra Mileo, was already present in LPNMR-11 in Vancouver as LogIC and

it was now in its third edition. In this case, it was joined with workshop ARCOE that was in its 5th edition. The workshop was eventually joint/coordinated with WoMO'13 sharing their programs.

2. The 2nd Workshop on *Grounding and Transformations for Theories with Variables* (GTTV'13) co-chaired by David Pearce, Shahab Tasharofi, Evgenia Ternovska, and Concepción Vidal, was created in LPNMR-11 in Vancouver and this was its second edition, with 4 presentations plus an invited talk and around 20 participants.
3. The 1st Workshop on *Learning and Non-Monotonic Reasoning* (LNMR'13), co-chaired by Katsumi Inoue and Chiaki Sakama, was created in this edition and became a great success, with 6 papers and an invited talk. It was probably the most successful workshop in number of attendees with around 25 participants.
4. The 1st Workshop on Natural Language Processing and Automated Reasoning (NLPAR'13), co-chaired by Chitta Baral and Peter Schüller, was also created in LPNMR-13 and, again, constituted a great success, with 6 papers and 2 invited presentations, and around 20 participants.

4 Social activity

The conference had an intense social program including a Welcome Reception on Sunday 15th at the University of Corunna Headquarters Building, a Visit to Santiago de Compostela and its famous cathedral on Tuesday 17th and a Conference Dinner at Corunna on Wednesday 18th. As most participants were accommodated in the downtown hotel that acted as conference venue, many informal meetings took place in the hotel hall and open rooms. A picture gallery can be found at the following link:

<http://lpnmr2013.udc.es/?q=node/44>

An important fact that should be remarked is that LPNMR had 31 students among its participants, that is, a **35% of participants were students**. This is probably the best indicator of the good health and growing potential of the research area. The organization provided registration discounts and accommodation grants for students plus **3 volunteer grants** that also included full registration.

5 Acknowledgments

We would like to thank the sponsors of LPNMR'13: Artificial Intelligence Journal, Association of Logic Programming, IEMath-Galicia Network, the CITIC Research Center at Corunna, Deputación da Coruña, the Spanish Association for Artificial Intelligence (AEPIA), the University of Corunna and the New Mexico State University. Special thanks to the organization committee, Felicidad Aguado, Gilberto Pérez, Concepción Vidal, Martín Diéguez and Javier Parapar for all their thorough work during these last two years. We are also thankful to Marcello Balduccini for his work as Workshops Chair and Wolfgang Faber, James Delgrande and Nicola Leone for their guidance and support. We would also like to acknowledge EasyChair and Springer for respectively simplifying the reviewing process and the publication of the conference proceedings volume. Finally, we also thank the journal Theory and Practice on Logic Programming (TPLP) for allowing a fast track publication of the two best contributions among the accepted papers.

6 Conclusions and Next Edition

The next edition of LPNMR will take place in 2015 at Lexington, Kentucky, USA and will be chaired by Victor Marek, with Mirosław Truszczyński and Giovambattista Ianni as Program Committee chairs. We send them our best wishes and all our support, knowing we will surely have a successful and memorable event.

A Coruña, December 10th, 2013.

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