

# 9th International Workshop on Neural-Symbolic Learning and Reasoning (NeSy13)

In collaboration with IJCAI 2013

Beijing, 5 August 2013

## Programme

Morning session 1 - chair: Artur Garcez

09:00 - 10:00 Invited talk Kai-Uwe Kuehnberger  
Equipping Symbolic Frameworks with Soft Computing Features

10:00 - 10:30 Johannes Bauer and Stefan Wermter  
Learning Multi-Sensory Integration with Self-Organization and Statistics

10:30 - 11:00 Coffee break

Morning session 2 - chair: Artur Garcez

11:00 - 12:00 Invited talk Alessandro Sperduti  
Linear Autoencoder Networks for Structured Data

12:00 - 12:30 Salvatore Frandina, Marco Gori, Marco Lippi, Marco Maggini and Stefano Melacci  
Inference, Learning, and Laws of Nature

12:30 - 13:30 Lunch

Afternoon session 1 - chair: Luis Lamb

13:30 - 14:30 Invited talk Ron Sun  
Dual-Process Theories and Cognitive Architectures

14:30 - 15:00 Son Tran and Artur Garcez  
Knowledge Extraction from Deep Belief Networks for Images

15:00 - 15:30 Alan Perotti, Artur Garcez and Guido Boella  
Combining Runtime Verification and Property Adaptation through Neural-Symbolic Integration

15:30 - 16:00 Coffee break  
Video of invited talk by Danny Silver:  
On Common Ground: Neural-Symbolic Integration and Lifelong Machine Learning

Afternoon session 2 - chair: Luis Lamb

16:00 - 16:30 Nathan Burles, James Austin and Simon O'Keefe  
Extending the Associative Rule Chaining Architecture for Multiple Arity Rules

16:30 - 17:00 Joseph Townsend, Ed Keedwell and Antony Galton  
Evolution of Connections in SHRUTI Networks

17:00 - 17:30 Discussion: On Chomsky and the Two Cultures of Statistical Learning, by Peter Norvig