Call for Contributions
1. Inform the Chair: with the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=COGNITIVE+2019+Special
Please select Track Preference as **INRI**

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Special track
INRI: Introducing Neural-based Reasoning and Inferencing

Chair and Coordinator:
Dr. Thorsten Gressling, ARS Computer and Consulting, Germany
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along with
COGNITIVE 2019, The Eleventh International Conference on Advanced Cognitive
Technologies and Applications http://www.iaria.org/conferences2019/COGNITIVE19.html
May 05, 2019 to May 09, 2019 - Venice, Italy

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In recent years, impressive advances in the field of cognitive abilities of systems based on deep learning have been achieved. Also with this design exciting results in gaining first, limited strategic conclusions were accomplished. Examples like AlphaGO and the DQN's show very interesting new directions. Despite all this, the logical conclusion like in inferencing and reasoning based on *any* information is still not notably present in the field of deep learning and cognitive computing.

There have been conferences on the building blocks of these questions for many years. From principles of knowledge representation to hundreds of implementations in the field of cognitive computing, many valuable individual contributions have been made. Usable results that implement what we describe as "understanding" are hard to find. Rarely all aspects that are needed to be combined were discussed and grouped in a track like this one.

We will discuss how starting from information representations and concrete knowledge more modern artificial intelligence systems as new class of expert systems could be designed. We expect to find new approaches in ANN (Artificial Neural Networks) topologies and fields like in AutoML, storing and classification as well as questions on mapping logic and data into subsymbolic representations. The transition from the good old symbolic artificial intelligence to the world of neural networks will be illuminated in this track. For that also comparative studies are appreciated.

Topics include, but not limited to:

- Usage of ontologies in deep learning
- Implementation of semantic technologies in perceptrons
- New types of ensembles and topologies from neural networks, Capsules
- Classification in Knowledge-based systems and mapping of Logical issues
- Storing and Processing in subsymbolic systems
- Methods of problem solving and abstraction in neural networks
- Representing non-hierarchical relationships
- Comparative studies of symbolic and subsymbolic systems, a new system of 'species'
- Alternatives to classification, different approaches to extract subsymbolic knowledge
- Injection of data into ANN's
- New approaches to AutoML, non-declarative forming of topologies
- Reorder ANN structures during runtime for knowledge adaptation

Contribution Types
- Regular papers [in the proceedings, digital library]

- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Important Datelines
- Inform the Chair: As soon as you decided to contribute
- Submission: ~~March 10, 2019~~ March 23, 2019
- Notification: ~~March 30, 2019~~ April 8, 2019
- Registration: ~~April 8, 2019~~ April 14, 2019
- Camera-ready: ~~April 8, 2019~~ April 14, 2019

Note: *These deadlines are somewhat flexible, providing arrangements are made ahead of time with the chair.*

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules:
http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals:
http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.:
http://www.proceedings.com/9769.html
- Articles will be archived in the free access ThinkMind Digital Library:
http://www.thinkmind.org

Paper Submission
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=COGNITIVE+2019+Special
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Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

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