

## CFP: Workshop on Computational Intelligence

### Aims and Scope

We apply Artificial Intelligence in ever more application domains but AI still lacks the adaptability and resilience of most biological systems. One of those gaps is probabilistic reasoning and decision making. Nature as a paragon brings fuzzy reasoning, neuronal networks, and learning together, e.g., to decide on a fight-or-flight response. The inspiration of Computational Intelligence originating from natural systems, therefore, aims at closing this gap with theoretical results as well as applying them in real-world applications.

### Call for Papers

Like the IEEE Computational Intelligence Society which describes its focus as "the theory, design, application, and development of biologically and linguistically motivated computational paradigms emphasizing neural networks, connectionist systems, genetic algorithms, evolutionary programming, fuzzy systems, and hybrid intelligent systems in which these paradigms are contained" the Workshop on Computational Intelligence aims to bring together scientists and specialist from industry to tackle some of the challenges of AI and their application. Thus, we invite you to submit original research and application papers including but not limited to the following topics:

#### Fuzzy logic:

Probabilistic models of meaning  
Probabilistic reasoning  
Fuzzy inference  
Decision making in uncertainty  
Evaluation of Probabilistic Models

#### Neuronal Networks:

generalizations of neuronal networks  
Explainable ANN  
Spreading Activation

#### Neuroevolution

Evolutionary computations:  
Online Genetic Algorithms  
ANN and generational learning  
Biased Genetic Algorithms  
Transfer learning with GA

#### Learning theory:

Adversarial Learning  
Reinforcement Learning  
Abductive Deductive Reasoning

### PC:

Prof. Dr. Johannes Föhndrich (Hochschule für Polizei BW)  
Dr. Sebastian Ahrndt (Curamatik UG)  
Prof. Dr. Engelbrecht (Stellenbosch University)  
Prof. Dr. rer. nat. Frank Hoffmann (TU Dortmund)  
Prof. Dr. Frank Klawonn (Ostfalia Hochschule für angewandte Wissenschaften)  
Prof. Dr. rer. nat. habil. Rudolf Kruse (Universität Magdeburg)

Workshop website: <http://ci2021.föhndrich.de/>

The workshop is part of the Informatik 2021 conference. The Informatik 2021 conference

takes place in Berlin 27.09. to 01.10.2021, and will be held in conjunction with the 51th Annual Conference of the German Computer Science Association: INFORMATIK 2021

#### Submission Guidelines

We invite papers, which have to be in English and formatted according to the Springer LNCS style, in the following category:

Full technical papers (12 pages max., excluding references) are expected to report on new research that makes a substantial technical contribution to the field. Additional details may be included in an appendix, which, however, will be read at the discretion of the PC.

#### Important Dates

May 10th: Abstract submission

May 17th: Paper submission

June 30th: Notifications

July 17th: Final versions

Submission will be through the EasyChair conference management system. The submission link is: <https://easychair.org/my/conference?conf=iwci2021>

Full papers and technical communications will be subject to blind peer review based on the standard criteria of relevance, the significance of results, originality of ideas, soundness, and quality of the presentation. Papers accepted in this process will be published via an open access platform like <https://arxiv.org/>. At least one author of each accepted paper must register for the conference and present the contribution.