

InABRAIN 2017

Special Session on Intelligent Algorithms and Brain Functions

at the 9th 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

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Objectives and topics

Since Descartes who saw the body as a machine that gave the brain a special type of air imbued with vital force, understanding brain functions is a challenging task. Thanks to technological progress and advanced recording methods, there is a huge progress in experiments that enlighten certain aspects of the brain functions. However, we still are at the beginning of understanding deep brain computations and related learning algorithms. There are many intelligent algorithms, which simulate certain functions of the brain such as multilayer neural networks that can learn and classify objects but their intelligence is still very limited. Therefore, the aim of the InABRAIN 2017 Special Session at the 9th Asian Conference on Intelligent Information and Database Systems (ACIIDS 2017) is to present different methods of brain activity recording and testing by means of the intelligent algorithms in order to decipher intelligence of the brain. Our session will offer an opportunity for participants from different labs or clinics to present their research directions and to compare their discoveries. The scope of the InABRAIN 2017 includes, but is not limited to the following topics:

- Machine learning and data mining methods in brain research
- Machine learning algorithms in objects recognition and their neurological meanings
- Data mining methods to assist in brain surgery (e.g. Deep Brain Stimulation in Parkinson's diseases)
- Machine learning in motor symptom progressions in neurodegenerative diseases
- Data mining in brain imaging: CT, MRI, and fMRI
- Estimation of different therapies efficiencies by means of data mining
- Computer-assisted diagnosis and treatment
- Machine learning in brain mapping
- Data Mining - Rough Sets Theory as a tool to study emotional brain
- Brain plasticity and machine learning algorithms
- Social brain and multi-agent systems
- Learning algorithms describing plastic brain changes in social interactions
- Interactive, intelligent descriptors of voice and music features
- Diagnostic data mining emotions classification in music and voice
- Shallow- and deep-learning methods in neurotechnology
- BCI/BMI and neurofeedback approaches in pharma industry
- Brain correlates of creativity and neuroaesthetics

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 (to be invited)

Zbigniew Struzik, RIKEN Brain Science Institute, Japan
Zbigniew Ras, University of North Carolina at Charlotte, USA
Konrad Ciecierski, Warsaw University of Technology, Poland
Piotr Habela, Polish-Japanese Academy of Information Technology, Warsaw, Poland
Peter Novak, Brigham and Women's Hospital, Boston, USA
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Lech Polkowski, Polish-Japanese Academy of Information Technology, Warsaw, Poland
Andrzej Skowron, Computer Science and Mechanics, Warsaw University, Poland
Ryszard Gubrynowicz, Polish-Japanese Academy of Information Technology, Warsaw, Poland
Takeshi Okada, The University of Tokyo, Japan
Dominik Slezak, Computer Science and Mechanics, Warsaw University, Poland
Radosław Nielek, Polish-Japanese Academy of Information Technology, Warsaw, Poland

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: ***inABRAIN 2017: Special Session on Intelligent Algorithms and Brain Functions.***

<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 InABRAIN 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.).