



Call for Papers

Workshop on PRACTical Applications of CognITive Computing in Emerging topics (PRACTICE) 2017

Website: <http://practice2017.commando-humans.net/>

Sponsored by [IEEE SMC Society Technical Committee on Cognitive Computing](#)

Part of the 3rd IEEE International Conference on Cybernetics (CYBCONF 2017)

University of Exeter, UK, 21-23 June 2017

Website: <http://cse.stfx.ca/~CybConf2017>

(1) Important Dates

- **Paper Submission: 23 March 2017 (extended)**
- **Authors Notification: 22 April 2017**
- **Camera-Ready Paper: 15 May 2017**

(2) General Description

Cognitive Computing is a highly interdisciplinary research topic studied in several fields including but not limited to neuroscience, psychology, biology, computer science, electronic engineering, ergonomics, information theory, physics, mathematics and statistics. It has been a very important area in which the SMC community has a lot of interests and been conducting active research. The SMC Society has a dedicated Technical Committee on Cognitive Computing, in order to promote research in this area and collaboration with researchers in other fields. Since cognitive computing looks at human cognitive processes, it plays a key role in all human-involved systems, thus has a lot of overlaps with cybernetics since the latter often involves human users in the whole process.

CYBCONF 2017 has a dedicated topic in Track 2 on Cognitive Systems, but cognitive computing research spans across almost all topics within all three tracks. This special session will cover research going beyond theoretical and foundational issues around Cognitive Systems, focusing mainly on **practical applications** of cognitive computing in **emerging topics** less studied in cybernetics, including but not limited to multimedia computing, image and video processing, information retrieval, cyber security and privacy, human computation, and social computing.

By Cognitive Computing, we consider techniques covering all aspects of cognitive systems and processes including capturing, monitoring, modelling, simulating and evaluating cognitive elements and automated algorithms inspired by knowledge learned from such research especially on how humans behave and how automated algorithms can better serve humans.

(3) Topics of Interests

We welcome submissions addressing research problems in the following topics (not limited to):

- Applications of cognitive computing in image and video processing
- Applications of cognitive computing in image and video coding
- Applications of cognitive computing in biometrics
- Applications of cognitive computing in image and video retrieval
- Applications of cognitive computing in cyber security
- Applications of cognitive computing for protection of user privacy
- Applications of cognitive computing in social computing
- Applications of cognitive computing for better understanding of human behavior in different computer systems
- New approaches to facilitating application-oriented cognitive computing research e.g. eye-tracking and EEG analysis
- Application-specific or adaptive cognitive computing techniques
- Application-specific human-computer interface with key cognitive computing elements

(4) Guidelines for Authors

All papers need to be submitted electronically through the CYBCONF 2017 workshops and special sessions' online submission website (<https://easychair.org/conferences/?conf=cybconf2017wsss>, select the “**PRactical Applications of CogniTive Computing in Emerging topics**” track) with PDF format. The materials presented in the papers should not be published or under submission elsewhere. Each paper is limited to 6 pages (or 8 pages with over length charge) including figures and references using the IEEE Proceedings Manuscripts style (two columns, single-spaced, 10pt). More guidelines for preparing final camera-ready papers can be found at http://www.ieee.org/conferences_events/conferences/publishing/cybconf17.html.

Presented papers will appear in the conference proceedings, available on IEEE Xplore and submitted to be indexed in CPCi (ISI conferences and part of Web of Science) and Engineering Index (EI).

Post-Workshop Journal Special Issues

After the workshop's program is fixed, the workshop organizers will apply for a special issue at a prestigious journal related to cognitive computing such as [IEEE Transactions on Human-Machine Systems](#), [IEEE Transactions on Cybernetics](#), [IEEE Systems, Man, and Cybernetics Magazine](#), [User Modeling and User-Adapted Interaction](#), [Behavior Research Methods](#) (Springer), [International Journal of Human-Computer Studies](#) (Elsevier), [Computers in Human Behavior](#) (Elsevier), [Journal of Visual Communication & Image Representation](#) (Elsevier).

In addition to the above planned journal special issue dedicated to the workshop, CYBCONF 2017 will also invite authors of selected papers (presented at the main conference and associated workshops including PRACTICE 2017) to extend their papers for recommended submissions and publications in the following prestigious journals or their special issues: [IEEE Transactions on Cybernetics](#), [IEEE Systems, Man, and Cybernetics Magazine](#), [Evolving Systems](#) (Springer), and [Peer-to-Peer Networking and Applications](#) (Springer).

(5) Co-Organizers

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(6) Program Committee

- Shujun Li, University of Surrey, UK (Co-Chair)
- Yicong Zhou, University of Macau, China (Co-Chair)
- Hussain Amir, University of Stirling, UK
- Xianbin Cao, Beihang University, China
- Xiaochun Cheng, Middlesex University, London, UK
- Diane Cook, Washington State University, USA
- Xinbo Gao, Xidian University, China
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- Katsushi Ikeuchi, University of Tokyo, Japan
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- Dong Xu, University of Sydney, Australia
- Xin Yao, University of Birmingham, UK
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- Jun Yu, Xiamen University, China
- Yuan Yuan, Chinese Academy of Sciences, China
- Liangpei Zhang, Wuhan University, China
- Lixian Zhang, Harbin Institute of Technology, China
- Catherine Qi Zhao, University of Minnesota, USA
- Mengchu Zhou, New Jersey Institute of Technology, USA