IEEE CBMS 2018
31st IEEE CBMS International Symposium on Computer-Based Medical Systems

General Chairs
Bridget Kane
Karlstad University, Sweden

Pedro Pereira Rodrigues
University of Porto, Portugal

Program Chairs
Carolyn McGregor
*University of Ontario Inst. Tech.,
Toronto, Canada*

Jaakko Hollmen
Aalto University, Finland

Paolo Soda
*Università Campus Bio-Medico di
Roma, Italy*

**Organisation and
Program Committee**
For the complete list see
https://cbms2018.hotell.kau.se

Important dates
Special track proposals:
January 8th, 2018

Paper Submissions
Abstract Submission
Feb 05, 2018

*Paper submission due
(general & special tracks)
February 19, 2018*

*Final camera-ready paper
and pre-registration
May 07, 2018*

*CBMS symposium
June 18-21, 2018*

Website:
CBMS2018.hotell.kau.se
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Contact
CBMS2018@easychair.org

The 31st International Symposium on Computer-Based Medical Systems, CBMS 2018, will be held at Karlstad University, Karlstad, Sweden, from June 18 to 21st, 2018. IEEE CBMS 2018 provides an international scientific forum to discuss the latest scientific research developments in the field of computational medicine, biomedical informatics and related fields. During the CBMS symposium, there will be regular and special track (ST) sessions with technical contributions peer-reviewed and selected by an international programme committee, as well as keynote talks and tutorials given by leading experts in their fields. Regular and ST presentations will cover a broad range of issues in, and not limited to, the following areas:

e-Health
Computer Vision
Serious Games for Healthcare
Software Systems in Medicine
Radiomics and radiogenomics
Big Data Analytics in Healthcare
Cognitive Computing in Healthcare
Network and Telemedicine Systems
Technology Enhanced Medical Education
Content Analysis of Biomedical Image Data
Web-Based Delivery of Medical Information
Human-Computer Interaction (HCI) in Healthcare
Active and healthy ageing systems and data analytics
Technology in Clinical and Healthcare Services Research
Biomedical Signal and Image Processing and Machine Vision
Computer Supported Cooperative Work in Healthcare (CSCW)
Medical Robotics, Intelligent Medical Devices and Smart Technologies

Call for Papers

IEEE CBMS 2018 invites original unpublished scientific contributions that are not submitted concurrently to a journal or another conference. Studies should be conducted to goods research practice standards with due regard for ethics in their study design. Submissions from medically-qualified researchers engaged in medical practice and informatics research are particularly welcome, especially those studies that describe the design, experience and use of technology in clinical settings.

Prospective authors are expected to submit their contributions to the general track or one of the special tracks if relevant. Please see submission guidelines for further details.

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Special Track Chairs
Javid Taheri
Karlstad University, Sweden

Behnaz Ghoraani
Florida Atlantic University, USA

Important dates
Special track proposals:
January 8th, 2018

Notification of special
track acceptance
January 15th, 2018

Contact
ST-chairs.CBMS2018@kau.se

Industry Chairs
Line Melby
SINTEF, Norway

Ricardo Cruz-Correia
University of Porto, Portugal

Important dates
Industry submissions:
February 19th, 2018

Industry Notification
April 2nd, 2018

Contact
industry-chairs.CBMS2018@kau.se

CBMS symposium
June 18-21, 2018

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Call for Special Tracks Proposal

CBMS 2018 invites proposal for ST organisation that will be held in parallel with the general conference track, consisting of a group of papers in a sub-discipline of a medical informatics or a special field. ST papers should report on significant unpublished work, are required to meet the same standard as other submissions, and are included in the conference proceedings. Organiser(s) of each ST are responsible for the quality of the papers in their track and manage the review process accordingly, assigning a Program Committee for the ST. If you are interested in organising an ST, please submit your proposal before January 8th, 2018 by email to ST-chairs.CBMS2018@kau.se. Each proposal needs to include: (i) ST title, (ii) rough estimate of the expected size (usually, 4-5 papers per session, 1-3 sessions per track), (iii) a brief biography of ST organiser(s) and list of ST program committee members, (iv) a draft of ST call for papers.

Special Awards

The IEEE Technical Committee on Computational Life Science (TC CLS), tccls.computer.org, offers best papers and travel awards. Eligibility for the award is restricted to papers where the first author is a full-time student. As well as making the submission via EasyChair in the normal way, such submissions must also be sent to the CBMS Chairs, marked as 'Student Paper for consideration for award' and accompanied by a letter of support from the student's supervisor. Mail documents to CBMS2018@easychair.org

Best papers will be invited to submit extended versions for a Special Issue that will be announced later.

Industry

CBMS 2018 will have a special industry track session, where we invite (a) scientific papers or (b) demonstrations/posters.

Scientific papers and Demonstration poster outline:
We invite papers (not exceeding 6 pages in length), describing innovative computer based medical devices or software applications, including practical experiences with such innovations. The papers should be scholarly articles presenting scientific methods, measurements, and experiments. Marketing and sales materials will not be accepted. The papers will be evaluated based on practicality, innovation, scientific rigour, value of the device or application to users, and novelty. Papers will be published in the proceedings of the conference along with the other papers under the industry track.

Doctoral Colloquium
Pieter Toussaint
NTNU, Trondheim Norway

Allan Tucker
Brunel University London, England, UK

Important dates

Doctoral Consortium Submissions:
February 19, 2018

DC *Notification of acceptance*
April 2nd, 2018

Slides due:
June 1st, 2018

Doctoral Consortium
June 21, 2018

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CBMS2018.hotell.kau.se
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Contact
doctoral-chairs.CBMS2018@kau.se

Doctoral Colloquium

The Doctoral Consortium for CBMS 2018 will take place on 21 June 2018. It will provide an opportunity for PhD students to present their research plans or their preliminary work in an informal and supportive atmosphere. The PhD students will be able to discuss the problems that their PhDs are addressing, any preliminary results, and their future plans. The DC offers an opportunity to discuss any problems that they have encountered, and gain valuable advice and constructive feedback from experienced researchers in the field.

The Doctoral Consortium will involve presentations by participating PhD students (selected by the Doctoral Consortium chairs) as well as a number of invited talks / tutorials on different related topics in the field.

DC submissions should focus specifically on a PhD thesis or subsection of a thesis. To apply for participation at CBMS 2018 Doctoral Consortium, please submit a research plan on a topic related to the areas covered in the general call for papers for the conference. Each submission should be in the same format as the main conference papers except it should consist of approximately 3-5 pages describing your research work. In particular:

- Title and author
- The research problem that your PhD addresses
- Your planned approach and methods for solving the problem
- How your approach compares to other known approaches
- Any preliminary results or expected results
- Future plans and directions with specific questions

TCCLS
Technical Committee on
Computational Life Sciences

IEEE

Tutorial Proposals

Tutorial Chairs
Ernestina Menasalvas
Spain

Panagiotis Papapetrou
Stockholm University, Sweden

Important dates
Special track proposals:
January 8th, 2018

Notification of special track acceptance
January 15th, 2018

Tutorial Proposal Submissions

Proposal submission due February 19, 2018

Notification of Tutorial proposal acceptance April 2nd, 2018

Slides Due
June 1st, 2018

CBMS symposium June 18-21, 2018

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Contact
tutorial-chairs.CBMS2018@kau.se

Tutorials are intended to provide a comprehensive introduction to established or emerging research topics of interest for the computational medicine community. These topics include but are not restricted to related research fields such as Big Data Analysis and Knowledge Discovery, Knowledge Representation, Decision Support and Recommendation Systems, privacy and security, Signal and Image Processing, Clinical and Healthcare Services Research and Medical Education, but also well-developed tools and suites for use of computing in healthcare and medicine. The ideal tutorial should attract a wide audience intertwining academia and industry. It should be broad enough to provide a basic introduction to the chosen area, but it should also cover the most important topics in depth.

We are inviting two types of tutorials:
- A Traditional Tutorial will cover the state-of-the-art research, development and applications in a specific CBMS related area, and stimulate and facilitate future work. Tutorials on interdisciplinary directions, novel and fast-growing directions, and significant applications are highly encouraged. We also encourage tutorials in areas that are somewhat different from the usual CBMS mainstream, but still very much related to the CBMS mission and objectives of advances in computational medical systems.
- A Hands-on Tutorialwill feature in-depth hands-on training on cutting edge systems and tools of relevance to computational biomedical community. These sessions are targeted at novice as well as moderately skilled users. The focus should be on providing hands-on experience to the attendees. The pace of the tutorial should be set such that beginners can follow along comfortably. The tools & systems themselves must be available under open-source licenses (e.g. Apache 2.0, MIT, BSD etc.) and have proven track record of success in the community. Tutorials should introduce the motivation behind the tool, associated fundamental concepts, and work through examples and demonstrate its application to relatable real-life use cases.

All tutorials will be part of the main conference technical program, and will be available free of charge to the attendees of the conference. Tutorials will be either half-day (approximately 3.5 hours) or full-day (approximately 7 hours).

Submission Guidelines for ALL Authors

Your submissions should report scientific research that is in compliance with good research practice standards, such as those available at

http://ec.europa.eu/research/participants/data/ref/fp7/89888/ethics-for-researchers_en.pdf

and

http://www.who.int/medicines/areas/quality_safety/safety_efficacy/gcp1.pdf

Each contribution must be prepared following the IEEE two-column format, and should not exceed the length of 6 (six) Letter-sized pages; the authors may use LaTeX or Microsoft Word templates when preparing their manuscripts. Word and Latex Templates are available at:

https://cbms2018.hotell.kau.se

Papers must be submitted electronically using the Easychair conference management system available online at:

https://easychair.org/conferences/?conf=cbms2018

All scientific submissions are peer-reviewed by three reviewers of the Program Committee. All accepted papers are included in the conference proceedings, and will be published by the IEEE in *X*plore in full-text, with DOI.

For each accepted paper, at least one author must register at the conference before the Author Registration Deadline. Some journal special issue will follow, details will be advised.

This conference has been listed in the Norwegian Register for Scientific Journals Series and Publishers as Scientific level 1, and as B1 in Conference Ranks.