

# GRAIL: Call for Papers

## 1st International Workshop on Graphs in Biomedical Image Analysis

September 14th, 2017, Quebec, Canada. (Deadline for submission: June 12th, 2017)

In conjunction with [MICCAI 2017](#).

Website: <https://biomedic.doc.ic.ac.uk/miccai17-grail/>

### Scope

Graphs are powerful mathematical structures that provide a flexible and scalable framework to model objects and their interactions in an interpretable fashion. An important body of work has been developed around different methodological aspects including graphical models, graph-theoretical algorithms, spectral graph analysis, graph dimensionality reduction and graph-based network analysis. New topics are also emerging as the outcome of interdisciplinary studies, shedding light on areas like deep structured models, graph convolutional neural networks and signal processing on graphs. The Workshop on Graphs in Biomedical Image Analysis (GRAIL), organized in conjunction with MICCAI 2017, aims to highlight the potential of graph-based models for biomedical image analysis. GRAIL provides a forum to discuss and encourage the exploration of graph-based models for clinical problems within a variety of biomedical imaging contexts.

### Topics of interest

The covered topics include but are not limited to:

- Probabilistic graphical models for biomedical image analysis
- Discrete and continuous optimization for graphical models
- Signal processing on graphs for biomedical image analysis
- Deep/machine learning on structured and unstructured graphs
- Convolutional neural networks on graphs
- Graphs for large scale population analysis
- Graph-based shape modeling and dimensionality reduction
- Combining imaging and non-imaging data through graph structures
- Graph-based generative models for biomedical image analysis
- Applications of graph-based models and algorithms to biomedical image analysis tasks (segmentation, registration, classification, etc.)

## Invited Speaker



**Prof. Georg Langs** (*Medical University of Vienna / Massachusetts Institute of Technology*)

**Title of the talk:** *"Graphs and Manifold Learning in Computational Neuroscience: Correspondence and Individuality"*

## Important dates and proceedings

Submissions should be done through the [GRAIL CMT portal](#). The submission system will open on May 15th.

Authors should prepare manuscripts of 8-10 pages, including references. The manuscripts should be anonymous, and formatted following the [LNCS Style](#).

All submissions will be peer-reviewed by 3 members of the program committee. The review process will be double-blinded. The selection of the papers will be based on significance of results, technical merit, relevance and clarity of presentation. Proceedings will be published in Lecture Note in Computer Sciences (LNCS) series.

### Important dates

- May 15th, 2017: Submission system opens
- June 12th, 2017: Submission deadline
- July 12th, 2017: Notification of acceptance
- September 14th, 2017: Workshop

## GRAIL Best Paper Award

The authors of the best paper of the workshop will receive a cash price (sponsored by CentraleSupélec and INRIA) and will be invited to submit an extended version of their paper to the journal of [Computer Vision and Image Understanding \(CVIU, Elsevier\)](#).

The acceptance will be based on final reviews by the same reviewers that evaluated the original workshop paper, leading to fast turnaround time for publication.

## Program Committee

(More to be announced)

- **Kayhan Batmanghelich**, University of Pittsburgh / Carnegie Mellon University, US
- **Michael Bronstein**, University of Lugano / Tel Aviv University / Intel Perceptual Computing, Switzerland
- **Eugene Belilovsky**, INRIA / KU Leuven, France
- **Christos Davatzikos**, University of Pennsylvania, US
- **Puneet K. Dokania**, Oxford University, UK
- **Ben Glocker**, Imperial College London, UK
- **Ali Gooya**, University of Sheffield, UK
- **Mattias Heinrich**, University of Luebeck, Germany
- **Dongjin Kwon**, Stanford University, US
- **Lisa Koch**, ETH Zurich, Switzerland
- **Sofia Ira Ktena**, Imperial College London, UK
- **Georg Langs**, University of Vienna / MIT, Austria
- **Ipek Oguz**, University of Pennsylvania, US
- **José Ignacio Orlando**, Conicet / Unicen, Argentina
- **Yangming Ou**, Harvard University, US
- **Nikos Paragios**, CentraleSupélec / INRIA, France
- **Mert Sabuncu**, Cornell University, US
- **Christian Wachinger**, LMU München, Germany

## Organising Committee

- [Enzo Ferrante](mailto:e.ferrante@imperial.ac.uk), Imperial College London, *e.ferrante (at) imperial.ac.uk*
- [Sarah Parisot](mailto:s.parisot@imperial.ac.uk), Imperial College London, *s.parisot (at) imperial.ac.uk*
- [Aristeidis Sotiras](mailto:aristeidis.sotiras@uphs.upenn.edu), University of Pennsylvania, *aristeidis.sotiras (at) uphs.upenn.edu*

## Sponsors

