

# The 5th MICCAI-Workshops on Computing and Visualization for Intravascular Imaging and Computer Assisted Stenting (MICCAI CVII-STENT)

## Call for Papers

In conjunction with 19th MICCAI 2016 Conference held in

Athens, Greece.

We again bring together the two very successful MICCAI-Workshop series (CVII and STENT) on technological and scientific research concerned with endovascular procedures. A continuous communication between surgeons/physicians and scientific and industrial researchers is crucial for bringing forward innovative solutions to the clinics: we aim to provide an interchange platform for medical experts and technological researchers concerned with all aspects of endovascular interventions.

The workshop will focus on imaging, treatment and computed assisted technological advances in diagnostic and intraoperative imaging. Such techniques offer increasingly useful information regarding vascular anatomy and function and are poised to have dramatic impact on the diagnosis, analysis, modeling, and treatment of vascular diseases.



### Important Dates:

#### Pre-registration for submission

Friday, 3 June 2016

#### 8 page paper or 2 page abstract submission

Friday, 10 June 2016

#### Author notification

Friday, 15 July 2016

#### Camera-ready submission

Friday, 5 August 2016

#### Workshop

Monday, 17 October 2016

**Paper submissions** are welcome on all topics related to intravascular imaging and computer assisted stenting. **Topics of the workshop include but are not limited to:**

## CVII

- Atherosclerotic plaque image analysis and characterization
- Quantification of vascular morphology and function
- Tissue classification of intravascular images
- Computer-aided diagnosis of vascular disease
- Segmentation and anatomic modeling from IVUS, OCT, CTA, X-ray angiography, IVMR, ...
- Image-based biomechanical models of vascular anatomy and function
- Registration of intravascular images
- Image processing methods for intravascular contrast agent applications
- Hemodynamic image-based modeling
- Percutaneous imaging/intervention, including IVUS, OCT and IVMR.

## STENT

- Imaging for struts/stent detection, reconstruction, and assessment
- Computer-aided interventions for stenting procedures
- Detection and visualization of fluid dynamic changes induced by stents
- Computer-aided diagnosis of post-deployment diseases
- Planning and navigation of vascular treatments
- Segmentation, registration and anatomic modeling of vascular images
- Image-based biomechanical and hemodynamic models of stents, vascular anatomy, and function
- Analysis and improvement of stent design
- Virtual stenting and virtual deployment
- Monitoring and follow-up for stent implants

**This year, to increase presentation and discussion of the state-of-the-art in CVII-STENT, we are accepting two submission formats in Springer LNCS style:**

- Full 8 page papers
- Short 2 page abstracts (accepted abstracts will only be considered for poster presentation)

**Authors retain the copyright to all submitted work and are free to use their article for other publications. By submitting to this workshop, the authors grant permission for inclusion of their research in the proceedings available on the workshop website and on the Workshops USB key.**

## Call for Challenge

This year we are pleased to announce that there will jointly with the workshop we will run a challenge on intraoperative tool tracking in fluoroscopy. Further details can be found in <http://hamlyn.doc.ic.ac.uk/Challenge2016/>

### Organizational Chairs

Simone Balocco, University of Barcelona  
Maria A. Zuluaga, University College London  
Guillaume Zahnd, Erasmus MC  
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Heinz Kölbl, Endoscout GmbH  
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