



## Guest Editors

### Marco Di Rienzo

Fondazione Don Gnocchi  
mdirienzo@dongnocchi.it

### Omer T. Inan

Georgia Institute of Technology  
omer.inan@ece.gatech.edu

### Pierre-Francois Migeotte

Université Libre de Bruxelles  
pf.migeotte@gmail.com

### Kwang-Suk Park

Seoul National University  
kspark@bmsil.snu.ac.kr

## KEY DATES

### DEADLINE FOR SUBMISSION:

1st May 2014

### FIRST REVIEWS DUE:

1st July 2014

### FINAL DECISION:

15th Sept 2014

## Editor-in-Chief:

Guang-Zhong Yang, PhD,  
FREng, FIEEE, FIET, FAIMBE, FIAMBE  
Director & Founder,  
The Hamlyn Centre  
Level 4, Bessemer Building  
Imperial College London  
London SW7 2AZ  
T: +44 (0)20 7594 1499  
F: +44 (0)20 7594 5196



## “Unobtrusive Assessment of the Mechanical Aspects of Cardiovascular Performance”

The need for unobtrusive cardiovascular monitoring in extra-clinical settings is imperative, but remains unfulfilled. As the population of patients burdened with chronic cardiovascular dysfunction, including heart failure, continues to grow, we should find solutions 1) to obtain an efficient surveillance of the patient's health status also in daily life, 2) to enable physicians to tailor therapy and rehabilitation programs on the basis of the real patient reaction to the everyday challenges, and 3) to expand our understanding of cardiovascular pathophysiology during spontaneous behavior. In clinical settings, some of the most important parameters of cardiovascular performance that physicians consider, often by ultrasound measures, are related to the mechanical aspects of cardiovascular function. However, current technology does not facilitate the unobtrusive assessment of cardiovascular mechanics at home or during outdoor activities. For this reason, we open this call for papers on innovative approaches to monitor cardiovascular mechanics in daily life. We look forward to theoretical, methodological and experimental contributions with a physiological and clinical applicability. Papers uncovering signals origin, biological interpretation, and practical applications will be preferred to manuscripts entirely devoted to technology developments.

Topics include, but are not limited to:

- Measurements of recoil forces in response to the output of the heart, including ballistocardiography and seismocardiography
- Measurements of blood flow, including impedance cardiography and photoplethysmography
- Measurements of heart sounds
- Interpretation of unobtrusive cardiomechanical measurements, and exploring their physiological origins
- Clinical studies with unobtrusive cardiomechanical measurements
- Physiology-driven cardiomechanical signal modeling approaches

## Submission of manuscripts

Submitted articles must not have been previously published or currently submitted for journal publication elsewhere. As an author, you are responsible for understanding and adhering to our submission guidelines. You can access them at the IEEE Computer Society (<http://www.computer.org>) and IEEE Engineering in Medicine & Biology Society (<http://www.embs.org/>) web sites. Manuscripts must be prepared according to the format of the IEEE Transactions (<http://jbhi.embs.org/for-authors/>) and electronically submitted through the web-based Manuscript Central (<http://embs-ieee.manuscriptcentral.com/>). When submitting, authors are requested to choose “**Unobtrusive Assessment of the Mechanical Aspects of Cardiovascular Performance**” in the manuscript type to indicate that the paper is intended for this special issue. The J-BHI managing editor for this special issue is Dr Carmen Poon.

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