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Bio-MEMS and Medical Microdevices III

**Sander van den Driesche
Ioanna Giouroudi
Manuel Delgado-Restituto**
Editors

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- 3 Biomedical Sensors and Microfluidics III
Manuel Delgado-Restituto, Instituto de Microelectrónica de Sevilla (Spain)

Introduction

8–9 May 2017 the Bio-MEMS and Medical Microdevices III conference took place in Barcelona, Spain. This conference was part of the SPIE Microtechnologies 2017 symposium.

Fifteen contributions, including a plenary session, were divided over three oral sessions and a poster session.

There were two main trends visible during this year's conference: Label-free bio-sensing, and biomicrofluidic systems.

Label-free bio-sensing techniques and methods to investigate biological cells and analytes were presented. In most of the contributions, light (ranging from the visible spectrum up to the mid-infrared wavelength region) was used as main source for medical analysis.

Contributions concerning biomicrofluidic systems were also strongly present at this conference. The potential of 3D cell culturing, impedance spectroscopy of cardiac cells, and magnetic markers, amongst others, were addressed.

Technological aspects of seizure detection, cochlear implants, and smart catheters were further topics also addressed during the conference.

Plenary speaker Jose A. Garrido, Institut Català de Nanociència i Nanotecnologia (ICN2) (Spain), gave an overview of graphene technologies for bioelectronics and neuroprosthetics.

On the following pages, you will find the full papers of the authors who presented their work at the conference.

I would like to thank all contributing authors for making this conference a success. Also, I would like to thank the co-chairs Ioanna Gioroudi, Technische Universität Wien, (Austria), and Manuel Delgado-Restituto, Instituto de Microelectrónica de Sevilla, (Spain) and session chair Georgios Kokkinis, Technische Universität Wien (Austria), for their assistance and for hosting sessions. Special thanks go to the symposium chair Ulrich Schmid, Technische Universität Wien, (Austria), the symposium co-chairs Jacopo Iannacci, Fondazione Bruno Kessler, (Italy) and José Luis-Sánchez-Rojas Aldavero, Universidad de Castilla-La Manch (Spain), the local co-chair Carles Cané, Ctr. Nacional de Microelectronica, (Spain), and the SPIE staff. Finally, I would like to thank the programme committee for advertising the Bio-MEMS and Medical Microdevices III conference, and for reviewing the abstracts.

Sander van den Driesche

