

# General information

The workshop collects some results of the three-years Research Program "BioForming" ([www.bioforming.it](http://www.bioforming.it)), funded by the Italian Ministry of Education (MIUR) and coordinated by the Polytechnic University of Bari.

Presentations will be given by the Scientific Coordinators of the 3 Research Units of the project "BioForming" (Polytechnic University of Bari, University of Calabria and Politecnico di Milano) and also by national and international experts.

The present workshop is aimed to show and debate about the possibility of using innovative sheet forming processes, i.e. Super Plastic Forming (SPF) and Single Point Incremental Forming (SPIF), for the manufacturing of highly customized prostheses using both Titanium alloys and polymers. In addition, the surface treatments able to improve the quality/duration and the specific properties of the implants (like osseointegration and antibacterial behavior) will be discussed, as well.

Contributions of national and international experts from both the Academy and the industry will give the possibility to draw future perspectives for applications and research.



June 14<sup>th</sup>, 2017

**Production of highly  
customised  
biomedical Titanium  
prostheses:  
innovation  
&  
perspectives**

Bioforming

Processi di formatura ad elevata flessibilità per la realizzazione di protesi biomedicali in lega di Titanio



# Agenda

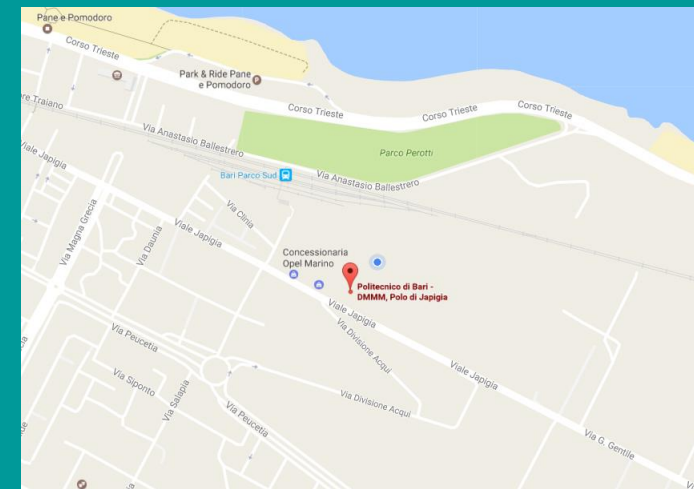
Wednesday, June 14<sup>th</sup>

# Bioforming

Processi di formatura ad elevate flessibilità per la realizzazione di protesi biomedicali in lega di Titanio



- 09:00 - 10:30 **Registration and welcome**
- 10:30 - 10:40 Opening
- 10:40 - 11:00 The production of biomedical implants by Super Plastic Forming  
Prof. **G. Palumbo** (Scientific Coordinator of the Research Unit at the Polytechnic University of Bari)
- 11:00 - 11:20 Biomechanical issues in cranial prosthesis manufacturing  
Prof. **T. Villa** (Scientific Coordinator of the Research Unit at the Politecnico di Milano)
- 11:20 - 11:40 A new perspective for custom-made prosthesis design & manufacturing by Incremental Forming  
Prof. **G. Ambrogio** (Scientific Coordinator of the Research Unit at the University of Calabria)
- 11:40 - 12:00 Titanium craniofacial prostheses: a design procedure for identifying the optimal fixation  
Prof. **G. Fragomeni** (University of Catanzaro)
- 12:00 - 13:30 **Lunch**
- 13:30 - 14:00 Incremental Sheet Forming of Polymers: results of Cranial Prostheses as a case study  
Prof. **M.L. Garcia-Romeu** (Universitat de Girona)
- 14:00 - 14:30 Regenerative Strategies in the Era of Personalized Medicine  
Dr. **Marco Tatullo** DDS , PhD (Scientific Director of Tecnologica Research Institute)
- 14:30 - 15:00 The use of incremental forming for patient specific medical implants: opportunities and challenges  
Prof. **J. Dufloy** (Katholieke Universiteit Leuven)
- 15:00 - 15:30 Neurosurgery: surgical practice and new perspectives  
Prof. **G. Volpentesta** (University of Catanzaro, Neurosurgery)
- 15:30 - 15:50 Biomimetic porous titanium scaffolds for large bone critical defect reconstruction  
Prof. **A. Crovace** (Direttore della sezione di Chirurgia Veterinaria, Università degli Studi di Bari)
- 15:50 - 16:15 **Coffee Break**
- 16:15 - 17:30 Tour of the labs of the Polytechnic University of Bari at DMMM



**Location: UNI.VERSUS - CSEI**  
**Dept. of Mechanics,**  
**Mathematics & Management**  
**Polytechnic University of Bari ,**  
**Viale Japigia, 188 – 70126 Bari**

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