



COLLABORATIVE BIOMEDICAL ENGINEERING FOR OPEN-SOURCE MEDICAL TECHNOLOGIES

*September 1-2, 2018
Convention Centre "Le Benedettine"*

CALL FOR PARTICIPANTS

"Open source Medical Technologies" means sharing the design, documentation, source-code, ideas and blueprints, as well as results and collected data, with other professional medical device designers.

The conference aims at developing concrete strategies to reinforce research on sustainable healthcare through global collaborative design, a process which holds the key to economic growth, competitiveness, health, quality of life.

DAY 1

13.30
Registration

14.30
Opening Ceremony

15.00-16.30 | Session 1
Open source medical devices: design, prototyping, tools and R&D

16.30
Coffee Break

17.00-18.30 | Session 2
Teaching methodologies on new fabrication technologies, and design approaches in the context of BME

19.00
Welcome party

DAY 2

9.00-10.30 | Session 3
Needs assessment in low resources settings and high-income countries towards open source design

10.30
Coffee Break

11.00-12.30 | Session 4
Biomedical Engineering: Ethical problems in Advanced Health Technologies

14.00
Closure

SPEAKERS

Victor Konde
United Nation Economic
Commission for Africa,
Ethiopia

Andres Diaz Landata
Universidad Politecnica de
Madrid, Spain

June Madete
Kenyatta University, Kenya

Philippa Makobore
Uganda Industrial Research
Institute, Uganda

John Gershenson
Penn State University, US

Leandro Pecchia
University of Warwick, UK

Alessandro Tognetti
University of Pisa, Italy

Gaetano Valenza
University of Pisa, Italy



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ORGANIZED BY:

 **Centro E. Piaggio**
bioengineering and robotics research center

Con il patrocinio di:



UNIVERSITÀ DI PISA

Detailed program

Saturday 1st September 2018

13:30	Registration
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Opening Ceremony	
14:30	Greeting from hosting institution and Scientific Committee <ul style="list-style-type: none"> Prof. Arti Ahluwalia (University of Pisa, Italy)

Session 1: Open source medical devices: design and prototyping, tools for R&D	
	Chair: Prof. Martin Nzomo (Kenyatta University, Kenya) Keynote speaker: Dr. Ashwin K Whitchurch (ProtoCentral, India) Open Source Innovation and entrepreneurship
15:00	Speakers: – Prof. Alessandro Tognetti (University of Pisa, Italy)
16:30	Wearable devices and methods to assess gait parameters in daily life Dr. Youssoufa Mohamadou (Universite des Montagnes, Cameroon) Open source research collaboration between researchers in Cameroon and Bangladesh Dr. Tarek Loubani (Glia Inc. and Western University, Canada) Free/Open source medical devices: Making health more accessible

16:30	Coffee Break
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Session 2: Teaching methodologies on new fabrication technologies, and design approach and problem-solving in the context of BME.	
	Chair: Dr. Eng. Carmelo De Maria (University of Pisa, Italy) Keynote speaker: Prof. Johan Malmqvist (Chalmers University of Technology, Sweden) CDIO - Engineering education for the 21st Century
17:00	Speakers: Prof. Andres Diaz Landata (Universidad Politecnica de Madrid, Spain) CDIO methodology applied to biomedical engineering design courses at ETSII-UPM: 10 years, 100 biodevices, 1000 students
18:30	Prof. Luis Ignacio Ballesteros Sánchez (Universidad Politecnica de Madrid, Spain) Promotion of open-innovation in a team-based active learning approach to teaching

Session 3: Needs assessment in low resources setting and in high-income countries towards the Open Source Design	
9:00 – 10:30	<p>Chair: Prof. Mainen Moshi (Muhimbili University of Health and Allied Sciences, Tanzania)</p> <p>Keynote speaker: Prof. Heikki Terio (Karolinska Institute, Sweden) Role of ICT tools for needs assessment</p> <p>Speakers: Prof. June Madete (Kenyatta University, Kenya) Status and impact of BME in Kenya</p> <p>Eng. Philippa Makobore (Uganda Industrial Research Institute, Uganda) Open source medical device design of an infant warmer in Uganda</p> <p>Prof. Leandro Pecchia and Dr. Davide Piaggio (University of Warwick, UK) Towards a framework for designing medical devices resilient to lower resource settings: case study on a photopupillary reflex tool via smartphone</p>

10:30	Coffee break
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Session 4: Open Source Medical Technologies for accessible and equitable healthcare	
11:00 – 12:30	<p>Chair: Prof. Arti Ahluwalia (University of Pisa, Italy)</p> <p>Keynote speaker: Prof. Sergio Cerutti (Politecnico of Milan) Biomedical Engineering: Ethical problems in Advanced Health Technologies.</p> <p>Speakers: Dr. Victor Konde (United Nation Economic Commission for Africa, Ethiopia) Engineering and Universal Access to Quality Healthcare: An African Perspective</p> <p>Dr. Mannan Mridha (The Royal Institute, Sweden) Improving Health Care and Patient Safety to achieve health equity by Using Innovative Medical Devices and ICT Tools: Examples from Bangladesh</p> <p>Eng. Manuel Catalano (Istituto Italiano di Tecnologia and University of Pisa) Open Source Soft Robotics Technologies for the design of functional and affordable prosthetics hands</p> <p>Prof. Arti Ahluwalia (University of Pisa, Italy) Safety by Open Design</p>

12:30	Closure
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