Gruppo Nazionale di Bioingegneria

XLI ANNUAL SCHOOL

BIOMEDICAL ENGINEERING FOR SUSTAINABLE DEVELOPMENT

SEPTEMBER 12-15, 2022

AULA MAGNA, CASA DELLA GIOVENTÙ UNIVERSITARIA, UNIVERSITÀ DI PADOVA, VIA RIO BIANCO, 12, 39042 – BRIXEN (ITALY) & ON-LINE




SCIENTIFIC ORGANIZERS:
ARTI AHLUWALIA – UNIVERSITY OF PISA
LEANDRO PECCHIA – UNIVERSITY OF WARWICK
STEFANO SEVERI – UNIVERSITY OF BOLOGNA
CARMELO DE MARIA – UNIVERSITY OF PISA

LOCAL ORGANIZER: **BIOENGINEERING NATIONAL GROUP (GNB)**
ORGANISING SECRETARY: **PRAGMA CONGRESSY (PAVIA)**

Speakers

A. AHLUWALIA (UNIVERSITY OF PISA, ITALY)
D. VITO (METABOLISM OF CITIES LIVING LAB, SAN DIEGO STATE UNIVERSITY, CALIFORNIA)
L. DI PIETRO (1MED, SWITZERLAND)
A. STEFANINI (WHO CONSULTANT)
P. MAKOBORE (UGANDA INDUSTRIAL RESEARCH INSTITUTE, UGANDA)
L. PECCHIA (UNIVERSITY OF WARWICK, UK)
V. MANGANO (UNIVERSITY OF PISA, ITALY)
C. DE MARIA (UNIVERSITY OF PISA, ITALY)
S. SEVERI (UNIVERSITY OF BOLOGNA, ITALY)
C. GIULIANI (CORAX, ITALY)
C.PERAZZINI (IBD, ITALY)
A. DIAZ LANTADA (UNIVERSIDAD POLITECNICA DE MADRID, SPAIN)
R. CASTALDO (UNIVERSITY OF WARWICK, UK)
G. SIGNORINI (POLYTECHNIC OF MILAN, ITALY)
D. PIAGGIO (UNIVERSITY OF WARWICK, UK)
V. CALDERAI (UNIVERSITY OF PISA, ITALY)
D. ATWINE (MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY, UGANDA)
G. FICO (UNIVERSIDAD POLITENICA DE MADRID, SPAIN)
E. IADANZA (UNIVERSITY OF FIRENZE, ITALY)
L. GURBETA POKVIC (UNIVERSITY OF SARAJEVO, BOSNIA AND HERZEGOVINA)
A. VELAZQUEZ BARUMEN (WHO)

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WARWICK THE UNIVERSITY OF WARWICK

IFMBE

Registration

For registration, please access the following link:
https://soci.grupponazionalebioingegneria.it/utenti/front/accedi

GNB members*		
Participants	**Early bird registration by June 30, 2022**	**From July 1, 2022**
PHYSICAL ATTENDANCE		
Academic staff	300€	350€
PhD student	140€	170€
One day registration	-	100€
VIRTUAL ATTENDANCE		
Academic staff	110€	140€
PhD student	60€	80€

NON-GNB members*		
Participants	**Early bird registration by June 30, 2022**	**From July 1, 2022**
PHYSICAL ATTENDANCE		
Academic staff	420€	480€
PhD student	200€	240€
PhD student from LMIC	50€	50€
Graduate student	120€	150€
One day registration	-	130€
VIRTUAL ATTENDANCE		
Academic staff	210€	240€
PhD student	120€	140€
PhD student from LMIC - light	25€	30€
Graduate students	50€	70€
Graduate students light	25€	30€

***GNB REGULAR MEMBERSHIP 50 €, GNB STUDENT MEMBERSHIP 30 €**

TO REGISTER AS A GNB MEMBER, GNB MEMBERSHIP CODE IS REQUIRED IN THE REGISTRATION FORM. TO BECOME GNB MEMBER, PLEASE VISIT: HTTPS://SOCI.GRUPPONAZIONALEBIOINGEGNERIA.IT/UTENTI/FRONT/ACCEDI.
ALL THE REGISTRATION FEES, EXCEPT FOR "GRADUATE STUDENTS LIGHT" AND "PHD STUDENT FROM LMIC LIGHT", INCLUDE THE SCHOOL PROCEEDINGS BOOK, PUBLISHED BY PATRON.

ALL REGISTRATION FEES INCLUDE VAT.

XLI ANNUAL SCHOOL

AIM of the Annual School

This school aims to offer students an alternative view and approach to the problems and applications of biomedical engineering, from the perspective of low-middle income countries (LMICs) and rural contexts. Actually, those applications are not limited to LMICs, but also to other contexts where resources may be lacking (e.g. natural disasters, epidemics, pandemics). The school will follow a "hands-on" teaching approach that allows students to explore the salient steps of medical device design starting with the analysis of needs, classification according to European legislation for medical devices and then identification of the standards using the UBORA platform, to guide and support the design process.

SUSTAINABLE DEVELOPMENT GOALS

Program

Monday, 12-09-2022

Need assessment and life cycle of a medical device

Introduction: program and objectives of the school. Overview on global health	**Arti Ahluwalia** (University of Pisa)
Biomedical Engineering and sustainable development goals	**Domenico Vito** (San Diego State University)
Life cycle of medical devices: regulations in a worldwide market	**Licia Di Pietro** (1MED)
Keynote: Healthcare in low resources settings	**Angelo Stefanini** (WHO Consultant)
Needs assessment in low resources settings and the role of biomedical engineers	**Philippa Makobore** (University of Calgary)
Biomedical and clinical engineers' contribution during pandemics toward global health	**Leandro Pecchia** (University of Warwick)
Case study: Medical Technologies for combatting malaria	**Valentina Mangano** (University of Pisa)
Introduction to UBORA and working groups creation	**Carmelo De Maria** (University of Pisa)

Tuesday, 13-09-2022

Innovation (part 1)

Reverse and frugal innovation	**Stefano Severi** (University of Bologna)
Case study: Start-up companies for accessible healthcare	**Caterina Giuliani** (Corax) **Corrado Ghidini** (IBD)
Key enabling design and manufacturing technologies for open-source medical devices	**Andres Diaz Lantada** (University of Madrid)
Case Study: AI for Pneumonia detection in LMICs	**Rossana Castaldo** (University of Warwick
Case Study: Medical Device solution for Maternal Health	**Gabriella Signorini** (Polytechnic of Milan)
Case Study: BAMBI: Ballon Against (post-partum) Maternal BleedIng	**Maria Laura Costantino** (Polytechnic of Milan)
Group Work	

Wednesday, 14-09-2022

Innovation (part 2)

Use of smartphones for frugal innovation: guided hands on (Part 1)	**Davide Piaggio** (University of Warwick)
Use of smartphones for frugal innovation: guided hands on (Part 2)	**Davide Piaggio** (University of Warwick)
Right to the access to medical technologies	**Valentina Calderai** (University of Pisa)
Implementing a clinical study in low resources settings	**Daniel Atwine** (Mbarara University of Science and Technology)
Safety and security in smartphone applications	**Giuseppe Fico** (University of Madrid)
Group Work	

Thursday, 15-09-2022

Management of medical technologies

Management and maintenance of medical technologies in low resources settings	**Ernesto Iadanza** (University of Siena)
AI for medical device maintenance and metrology in LMICs: the case of Bosnia and Herzegovinian	**Lejla Gurbeta Pokvic** (International Burch University)
GNB Award Ceremony	
Right to the access to medical technologies	**Adriana Velazquez Barumen** (WHO)
Group Presentation	
Award ceremony and closing remarks	