

# INTERNATIONAL SUMMER SCHOOL BLENDED INTENSIVE PROGRAM

## SMART SYSTEMS FOR AMBIENT ASSISTED LIVING

JULY 8TH, 2024

09.30 -  
9.40

### SMARTAAL - OPENING CEREMONY RECEPTION

Octavian Postolache, Mariana J. Rodrigues, Gonçalo Ribeiro,  
Stefan Postolache

09.40 -  
10.10

### PRESENTATION OF THE SUMMER SCHOOL PROGRAM

Introduction to the Functioning and Activity Content  
Associated with Summer School. Presentation of the  
trainers and summer school participants

10.10 -  
10.30

### COFFEE BREAK

10.30 -  
12.00

### AMBIENT ASSISTING LIVING EVERYWHERE: FROM SMART SENSORS TO AMBIENT ASSISTED LIVING

Prof. Octavian Postolache  
Iscte-IUL and Instituto de Telecomunicações, Portugal

12.00 -  
12.30

### THE AAL TECHNOLOGIES IN THE YEAR 2101

Prof. Nuno Garcia  
Faculty of Sciences, University of Lisbon, Portugal

12.30 -  
13.30

### LUNCH BREAK

13.30 -  
15.30

### E-TEXTILE FOR WEARABLE SOLUTIONS

Prof. Helder Carvalho  
Universidade do Minho, Portugal

# INTERNATIONAL SUMMER SCHOOL BLENDED INTENSIVE PROGRAM

## SMART SYSTEMS FOR AMBIENT ASSISTED LIVING

JULY 9TH, 2024

09.30 -  
10.30

### PRINCIPLES AND APPLICATIONS OF NEAR- INFRARED SPECTROSCOPY

Prof. Francisco Ferrero & Prof. Ana Soldado  
University of Oviedo, Spain

10.30 -  
12.00

### SMART AAL BY MY OWN: MY WORK AND MY TALK

Summer School participants

12.00 -  
13.30

### LUNCH BREAK

13.30 -  
15.00

### 3D MODELING FOR VIRTUAL REALITY

Stefan Postolache  
Iscte-IUL and Instituto de Telecomunicações, Portugal

15.00 -  
16.45

### THERMOGRAPHY FOR AAL

Prof. Joaquim Mendes  
Faculdade de Engenharia, Universidade do Porto

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JULY 10TH, 2024

09.30 -  
10.30

**AAL FROM INDOOR TO OUTDOOR ENVIRONMENT:  
PART I – WEARABLE BIOMEDICAL DEVICES**

Gonçalo Ribeiro

Iscte-IUL and Instituto de Telecomunicações, Portugal

10.30 -  
11.30

**AAL FROM INDOOR TO OUTDOOR ENVIRONMENT:  
PART II – AIR QUALITY MONITORING**

Mariana Jacob Rodrigues

Iscte-IUL and Instituto de Telecomunicações, Portugal

11.30 -  
12.30

**AAL FROM INDOOR TO OUTDOOR ENVIRONMENT :  
PART III -WATER AND SOIL QUALITY MONITORING**

Prof. Octavian Postolache

Iscte-IUL and Instituto de Telecomunicações, Portugal

12.30 -  
14.30

**LUNCH BREAK AND ARRIVAL TO OUTDOOR  
MEASUREMENT SESSION**

14.30 -  
17.00

**AAL IN OUTDOOR ENVIRONMENT: DEPLOYMENT AND  
VALIDATION OF THE DEVELOPED SYSTEMS**

Summer School Participants and Mentors

17.30 -  
19.30

**IEEE IMS COFFEE & TALK - ALL TOGETHER**

Summer School Participants and Mentors



# INTERNATIONAL SUMMER SCHOOL BLENDED INTENSIVE PROGRAM

## SMART SYSTEMS FOR AMBIENT ASSISTED LIVING

JULY 11TH, 2024

09.30 -  
10.30

### WEARABLE SMART SENSORS FOR AAL | INVITED TALK

Prof. Olfa Kanoun  
University of Chemnitz, Germany

10.30 -  
12.30

### DESIGN OF DIGITAL SOLUTIONS FOR THERAPY BASED ON EXTENDED REALITY, SERIOUS GAMES AND GAMIFICATION

Prof. Rui Madeira  
Instituto Politécnico de Setúbal, Nova, Portugal

12.30 -  
14.00

### LUNCH BREAK

14.00 -  
16.30

### CO-DESIGN FOR AAL & CO-DESIGN IN FABLAB

Prof. Alexandra Paio, Iscte-IUL, Portugal  
João Sousa, Vitruvius FabLab, Iscte-IUL

20.00 -  
22.00

### IEEE IMS GALA DINNER

SUMMER SCHOOL OF IEEE I&M 75TH  
ANNIVERSARY CELEBRATION



# INTERNATIONAL SUMMER SCHOOL BLENDED INTENSIVE PROGRAM

## SMART SYSTEMS FOR AMBIENT ASSISTED LIVING - **WORKSHOP**

JULY 12TH, 2024

09.30 –  
10.10

### **PROTECTING OUR PLANET: THE VITAL ROLE OF NONDESTRUCTIVE TESTING IN SUSTAINABILITY**

Prof. Helena Ramos  
Instituto Superior Técnico, Universidade Lisboa,  
Portugal

10.10 –  
10.50

### **IDENTIFYING SMART-METER DATA MINING-BASED ENERGY CONSUMPTION PATTERNS IN LOW VOLTAGE ELECTRIC DISTRIBUTION GRIDS**

Prof. Gheorghe Grigoras  
Technical University Gheorghe Asachi, Romania

10.50 –  
11.30

### **THE NEXT FRONTIERS OF SMART MEDICAL DEVICES**

Prof. Iuliana Chiuchisan  
University of Suceava, Romania

11.30 –  
12.10

### **AMBIENT ASSISTED LIVING: CIVIL AND MILITARY APPLICATIONS**

Prof. Vítor Viegas  
Escola Naval, Portugal

12.10 –  
13.00

### **XOG TECHNIQUES IN ALL FOR DISABLED PEOPLE**

Dr. Alberto López Martínez  
University of Oviedo and UNED, Spain



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## SMART SYSTEMS FOR AMBIENT ASSISTED LIVING

JULY 12TH, 2024

13.00 –  
14.30

### LUNCH BREAK

14.30 –  
15.00

### POSITIONING DETECTION BY WEARABLE DEVICES: A PERSPECTIVE ON MEASUREMENT ACCURACY

Prof. Grazia Iadarola, Polytechnic University of  
Marche, Italy

15.00 –  
15.30

### CONTRIBUTIONS TO BIOENGINEERING - GRADUATE PROGRAM IN HEALTH TECHNOLOGY

Prof. Guilherme Nunes Nogueira Neto, Pontifícia  
Universidade Católica do Paraná, Brasil

15.30 –  
16.00

### BIKE-SHARING SYSTEMS IN URBAN MOBILITY

Prof. Miguel Sales Dias, Iscte - University Institute of  
Lisbon & Iscte - Sintra, Portugal

16.00 –  
17.30

### PRESENTATIONS OF THE DEVELOPED WORK AT THE SUMMER SCHOOL

Summer School Participants

17.30 –  
18.30

### CLOSING CERIMONY AND CERTIFICATE DELIVERY

Octavian Postolache, Mariana J. Rodrigues, Gonçalo  
Ribeiro