



UNIVERSITÀ
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DELLE MARCHE

**PhysioECG:
toward the next-generation digital
electrocardiography**

Supervisor: Prof. Laura Burattini

Department of Information Engineering –
<https://www.dii.univpm.it>



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Supervisor: Prof. Laura Burattini Research Group Description

BR3IN DII



Prof. Laura Burattini
Full Professor

ORCID:
0000-0002-9474-7046



Dott. Micaela Morettini
RTD-B

ORCID:
0000-0002-8327-8379



Dott. Agnese Sbrollini
Post-Doc fellow

ORCID:
0000-0002-9152-7216



MHD Jafar Mortada
PhD student

ORCID:
0009-0003-8245-8380

National
collaboration

International
collaboration



Most recent publications:

- 10.1088/1361-6579/ace241
- 10.1093/europace/euac159
- 10.1016/j.bspc.2022.104185
- 10.1016/j.bspc.2021.103210
- 10.1016/j.jelectrocard.2021.10.005



The Department of Information Engineering

Director: Prof. Franco Chiaraluce

The Department of Information Engineering (DII) was established in 2011 following the merge of the previous DIBET (Department of Biomedical, Electronics and Telecommunication engineering) and DIIGA (Department of Computer, Management and Automation engineering).

The Department is a self-managing organizational branch of the university which is dedicated to scientific research, teaching, and contributing to the so called Third Mission of the Higher Education Institution through the dissemination of scientific research findings amongst the community.

Its main aims are to plan, organize and regularly assess the quality of the research activities carried out in the scientific sectors and disciplines under its jurisdiction; to plan, organize and manage bachelor and master courses in Information Engineering and, last but not least, to provide cultural and educational activities and contribute to training and guidance issues according to the students needs.

AT A GLANCE

DII



2023

11 Scientific Area
ING-INF/01 ING-INF/02
ING-INF/03 ING-INF/04
ING-INF/05 ING-INF/06
ING-INF/07 ING-IND/31
ING-IND/35 MAT/09
SECS-P/06



250+
Publications



65 Staff

Bachelor Degree in: Biomedical Engineering, Electronic Engineering and Digital Technologies, Computer and Automation Engineering, Information Engineering for Videogame and Virtual Reality.

Master Degree in: Biomedical Engineering (in english), Electronic Engineering, Computer and Automation Engineering.

Bachelor Degree with professional orientation in Industrial and Information Systems (based in Pesaro).



> 4 M€
Research income



100 PhD, Post-doc,
Research fellows

DII coordinates the PhD in Information Engineering, organized in two curricula:
- Biomedical, Electronics, Telecommunication Engineering and Nanotechnologies (IBETN)
- Computer, Management and Automation Engineering (IIGA)



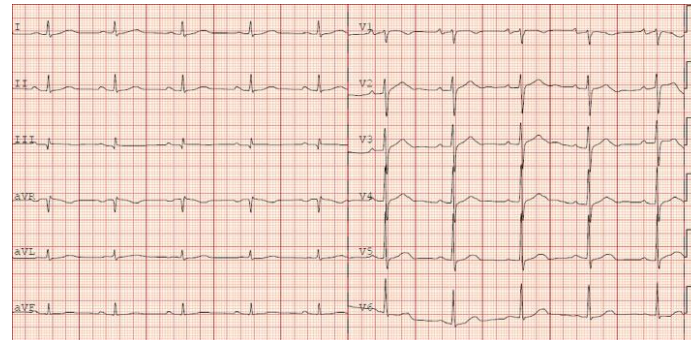
Research
laboratorie
s 32



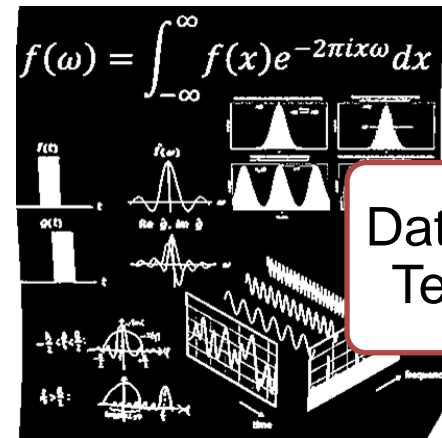
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Project Idea: PhysioECG: toward the next-generation digital electrocardiography

This project aims at exploiting explainable artificial intelligence (XAI) and innovative data analysis techniques to achieve new insights on the electrical physiology and pathophysiology of the heart.

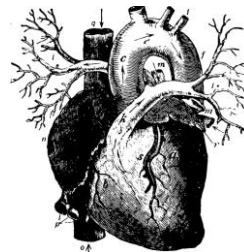


WHY?
HOW?
WHERE?



Data Analysis
Techniques

Explainable
Artificial
Intelligence



**Electrical Physiology and
Pathophysiology**

