

Supervisor Project Idea

Supervisor

Insert a brief CV and/or external link, the total number of publications, the ORCID link, 5 of the most significant/recent publications, and a list of funded projects and awards. **max 300 words**

Supervisor: Francesco Maria Chelli (<https://orcid.org/0000-0003-1056-0119>)

Scopus: 53 papers, 1642 citations, h-index 23

Co-supervisor: Mariateresa Ciommi (<https://orcid.org/0000-0003-4131-4543>)

Scopus: 39 papers, 825 citations, h-index 11

Co-supervisor: Domenico Potena (<https://orcid.org/0000-0002-7067-5463>)

Scopus: 143 papers, 1039 citations, h-index 18

List of publications

- Mariani, F., Ciommi, M., Recchioni, M.C. (2023). Two in one: a new tool to combine two rankings based on the Voronoi diagram. *Social Indicators Research*, 1-17.
- Ciommi, M., Gigliarano, C., Chelli, F. M., Gallegati, M. (2022). It is the Total that Does [Not] Make the Sum: Nature, Economy and Society in the Equitable and Sustainable Well-Being of the Italian Provinces. *Social Indicators Research*, 1-32.
- Agovino, M., Casaccia, M., Ciommi, M., Ferrara, M., Marchesano, K. (2019). Agriculture, climate change and sustainability: The case of EU-28. *Ecological Indicators*, 105, 525-543.
- Cela, E., Ciommi, M. (2018). Ageing in a multicultural Europe: Perspectives and challenges. *Building Evidence for Active Ageing Policies: Active Ageing Index and its Potential*, 211-237.
- Ciommi, M., Gigliarano, C., Emili, A., Taralli, S., Chelli, F. M. (2017). A new class of composite indicators for measuring well-being at the local level: An application to the Equitable and Sustainable Well-being (BES) of the Italian Provinces. *Ecological indicators*, 76, 281-296.

Funded projects

- European Union-Next Generation EU. Project Code: ECS00000041; Title: Innovation, digitalization and sustainability for the diffused economy in Central Italy (VITALITY) (Ciommi, 250h/year)
- PRIN-PNRR2022: Quality of Work in Residential long-term care services in Italy: determinants and strategies (QWoRE). Project code: P2022E5M9Y (Ciommi, Member of the UNIVPM unit)
- European Framework for Measuring Progress - e-Frame (Grant agreement ID: 290520) Funded by the European Commission - Europe 2020 strategy (Chelli, Ciommi)

Award:

- 2015: Award for the paper "Ageing in a multicultural Europe: perspectives and challenges" by the European Commission as "Highly commended paper" (Ciommi)

Research Group Description

Provide the name of the reference department and a brief description of the research group, including external links, and available instrumentations and infrastructures. **max 300 words**

Department of Economics and Social Sciences (DISES) and Department of Information Engineering (DII).

DISES is one of the departments of the Faculty of Economics at UNIVPM.

The main research areas developed concern: Growth and Economic Development, Demography, Econometrics, International Economics and Trade, Environmental Economics, Labor Economics, Industrial, Business and Innovation Economics, Monetary Economics, Public Economics, Regional Economics, Macroeconomics, Economic Sociology, Social and Health Organizations, Economic Statistics, History of Economic Thought, and Economic History.

The Economic Statistics (ES) Unit is mainly devoted to the definition and computation of Composite indicators (both from a theoretical and empirical point of view). Together with Social Scientists (SS) and Engineers (E), the ES unit is developing new measurement tools.

<https://dises.univpm.it/en/home-english/>

DII is one of the departments of the Faculty of Engineering at UNIVPM.

DII promotes activities in most research areas of the Information Engineering field, including: Applied Economics, Artificial Intelligence and Real-Time Operating Systems, Automation, Bio-engineering, Circuit Theory, Computational Intelligence, Discrete Optimization and Mathematical Programming, Electrical and Electronic Measurements, Electromagnetism, Electronics, Nanoelectronics, Operational Research, Optics and Photonics, Robotics and Mechatronics, Signal Processing, Software Engineering, Systems and Control Theory, Business Technology, and Telecommunications.

The Department is structured in several research groups and is equipped with numerous laboratories and computer facilities. Most of researchers have strict collaborations with other research institutions such as other universities and agencies, joining national and international research programs. Particular attention is dedicated to the technology transfer towards public and private companies, and to the collaboration with the local, social and economic background.

<https://dii.univpm.it/en-gb/home/>

Research group members:

- **DISES: Francesco M. Chelli (supervisor, ES), Mariateresa Ciommi (co-supervisor, ES), Maria Cristina Recchioni (ES), Francesca Mariani (ES), Marco Arlotti (SS), Alex Mircoli (E)**
- **DII: Domenico Potena (co-supervisor, E)**

Title and goals

Provide the title of the topic and a short summary of the project idea. *max 200 words*

TITLE: COmposite Indicators for MEasuring Vulnerability of an Aging Italy (COMEVA)

Short Summary:

The problem of aging is an irreversible global trend affecting all European Countries. This is particularly true in Italy, where declining birth rates and better survival odds for older people have significantly aged its population.

Aim of this project is to propose the definition of new indicators able to capture the vulnerability of older people within the health, social and economic domain, in order to propose to policy makers new instruments able at catching changes. In this way, it would be easier for them to select the most effective interventions to improve the quality of their citizens' lives.

The joint expertise of DISES and DII members may lead to new approaches in the measurement of vulnerability in at least two different strands.

On the one hand, the skills of DISES members on the construction of Composite Indicators may lead to new knowledge in the elderly population well-being.

On the other hand, thanks to DII's expertise, to classical approaches for the measurement of vulnerability, natural language processing (NLP) techniques will be investigated.

Finally, the joint work of the two departments will focus on new approaches in the definition and construction of NLP scores (Sentiment scores).

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