Paolo Mazzetti

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RESEARCH INTERESTS

CURRENT
Summary

Knowledge generation from Earth Observation, Digital ecosystems, Big Data, Open Science

WORK EXPERIENCE

01/03/2024 – CURRENT Montelibretti (RM), Italy
ACTING DIRECTOR OF CNR-IIA INSTITUTE OF ATMOSPHERIC POLLUTION RESEARCH - NATIONAL RESEARCH COUNCIL OF ITALY

01/03/2018 – 29/02/2024 Sesto Fiorentino (FI), Italy
HEAD OF THE DIVISION OF FLORENCE OF CNR-IIA INSTITUTE OF ATMOSPHERIC POLLUTION RESEARCH - NATIONAL RESEARCH COUNCIL OF ITALY

31/05/2011 – CURRENT Sesto Fiorentino (FI), Italy
RESEARCH SCIENTIST INSTITUTE OF ATMOSPHERIC POLLUTION RESEARCH - NATIONAL RESEARCH COUNCIL OF ITALY

- Research project management
- Research activity in geospatial information and knowledge modeling
- Design of cyber-infrastructures for multidisciplinary applications

14/07/2005 – 30/05/2011 Tito Scalo (PZ), Italy
RESEARCH SCIENTIST INSTITUTE OF METHODOLOGY FOR ENVIRONMENTAL ANALYSIS - NATIONAL RESEARCH COUNCIL OF ITALY

- Research project management
- Research activity in geospatial information and knowledge modeling;
- Design of cyber-infrastructures for multidisciplinary applications;
- Grid technology

31/05/1995 – 13/07/2005 Prato
RESEARCH CONSULTANT UNIVERSITY OF FLORENCE; CNR; POLITECNICO DI MILANO; PIN S.C.R.L.

Research activity in microwave remote sensing (weather radar); geospatial data sharing

31/05/1995 – 29/04/2010 Florence, Italy
ADJUNCT PROFESSOR UNIVERSITY OF FLORENCE

- Professor of "Telematics" class for the degree in Information Engineering
- Supervisor of more than 40 thesis for the degree in Information Engineering

EDUCATION AND TRAINING

08/2016 – 12/2021
DEGREE IN LOGIC, PHILOSOPHY AND HISTORY OF SCIENCE University of Florence

Field of study Philosophy and ethics | **Final grade** cum laude |

Thesis 'It from Bit': il problema del rapporto tra informazione e realtà (in Italian) / 'It from Bit': issues in the relationship between information and reality

31/08/1986 – 19/12/1993 Florence, Italy
DEGREE IN ELECTRONIC ENGINEERING University of Florence

Field of study Information and Communication Technologies | **Final grade** cum laude |

Thesis Impiego del radar per la predizione dell'attenuazione e nell'osservazione di campi di precipitazione ad elevata dinamica (in Italian) / Use of radar for attenuation prediction and observation of highly dynamic precipitation fields

LANGUAGE SKILLS

Mother tongue(s):   **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office | Microsoft Word | Microsoft Excel | Microsoft Powerpoint | Outlook | Zoom | Skype | Google Drive | Google Docs | Team-work oriented | Good listener and communicator | Organizational and planning skills | Internet user | Decision-making | Critical thinking | Gmail | Reliability | Responsibility | Research and analytical skills | Analytical skills | Python programming language

HONOURS AND AWARDS

2017
"Fiorino d'argento" – Città di Firenze

Awarded in the context of the Florence Academic Leader Programme 2017 (FALP 2017)

2014
Geospatial World Innovation Award – Geospatial World

Member of the CNR-IIA working group awarded in section "Technology Innovation in Interoperability" for the "GEOSS Brokering Framework"

2011
Best paper at the ISESS 2011 – ISESS

Author of the paper "Environmental Information Systems on the Internet - A Need for Change" awarded in 'eEnvironment and Cross-border Services in Digital Agenda for Europe' track

2008
Best application demo at EGEE'08 Conference – EGEE

Author of the "G-RISICO: A Wild Fire Risk Assessment application running on an advanced Grid infrastructure" application

NETWORKS AND MEMBERSHIPS

08/2024 – CURRENT Geneve
WMO Study Group on Future Data Infrastructure (SG-FIT)

Co-chair of the Study Group on Future Data Infrastructure (SG-FIT)

08/03/2023 – CURRENT
Chair of the European Chapter of the International Society for Digital Earth (ISDE)

ISDE is an international organization principally promoting academic exchange, science and technology innovation, education, and international collaboration towards Digital Earth (http://www.digitalearth-isde.org/)

2021 – 2022
Agriculture of Data Core Group

Member representing ERA-PLANET - European Research Area Network on Earth Observation

2020 – 2022
GEO Programme Board

Principal Representative of Italy

2018 – CURRENT
National Working Group on Land Degradation Neutrality

Member

2018 – CURRENT
International Society for Digital Earth Council

Member

2018 – CURRENT
GEOSS Infrastructure Development Task Team

Principal Representative of Italy

2017 – 2019 Geneva, Switzerland
GEOSS Expert Advisory Group

Member

05/2016 – 02/2024 Montelibretti (RM), Italy
Governing Board of CNR-IIA

Member

2013 – 2024
Arctic Data Committee

Representative of Italy

2013 – 2016 Vienna, Austria
Earth and Space Science Informatics (ESSI) Division of the European Geosciences Union (EGU)

Deputy President

2013 – 2015
GEO Institutions and Development Implementing Board (IDIB)

Member

2009 – 2011
GEOSS Evaluation Team on "Architecture and Data Management"

Member

- ## PROJECTS

01/03/2025 – 29/02/2028
DIGITAL SAGE (The Data Space for a Sustainable Green Europe)

Contribution to activity "Architecture & Use Case Requirements"

01/01/2025 – 31/12/2028
HORIZON InFlaMe (Counter-acting the pandemic potential of flaviviruses: addressing virus-host interactions and defense strategies to design new therapeutics against WNV and DENV)

Contribution to activities "Climate change impacts on the distribution of animal hosts and vectors" and "Climate change impacts on the likelihood of epidemic outbreaks"

01/09/2024 – 31/08/2028
HORIZON MONALISA (MONitoring and Assessing prevention and restoration soLutIons to combat deSertificAtion)

Activity Coordinator of "Data and model interoperability to support advanced applications"

01/09/2022 – 28/02/2027
HORIZON TRIGGER (SoluTions foR mItiGatinG climate-induced hEalth tReaths)

PI for CNR-IIA

11/2021 – 12/2025
HIS-Central (Implementation of the central node of the Italian Hydrologic Information System)

Project Coordinator for CNR-IIA

31/10/2021 – 29/04/2025
H2020 I-CHANGE (Individual Change of HAbits Needed for Green European transition)

Work package leader of "Observation integration and interoperability of data"

01/06/2022 – 31/12/2024
ESA DAB4GPP

Project Coordinator

01/09/2022 – 30/04/2024
DIGITAL GREAT (The Green Deal Data Space Foundation and its Community of Practice)

PI for CNR-IIA

31/12/2020 – 29/06/2024
LIFE20 NewLife4Drylands (Remote sensing oriented nature based solutions towards a new life for drylands)

Project Coordinator

2019 – CURRENT
WHOS DAB

Design and implementation of a mediation solution based on the Discovery and Access Broker (DAB) technology in the context of the WHOS Phase II Initial Implementation Plan

01/02/2016 – 31/01/2022
H2020 ERA-PLANET (The European network for observing our changing planet)

- • Until February 2018:
  - • Work Package Leader of SMURBS "ERA-PLANET principles and KETs for interoperability";
  - • Work Package Leader of GEOEssential "Interoperability, Data Sharing and Management development", "Knowledge Management services";
  - • Work Package Leader of IGOSP "Interoperability, mid-stream and down-stream services";

- Since March 2018:
  - Coordinator of CNR-IIA-Firenze unit activities in ERA-PLANET and in the Transnational Projects SMURBS, GEOEssential, IGOSP, ICUPE;
  - Work Package Leader of ERA-PLANET "Strategic research policy development, coordination of European programs and supporting International Policies"
  - Member of the ERA-PLANET Steering Committee

2017 – 2019
ESA DAB4EDGE (GEO-DAB Support for European Direction in GEOSS Common Infrastructure Enhancements)

Project Coordinator

2014 – 2019
H2020 ECOPOTENTIAL (Improving Future Ecosystem Benefits through Earth Observations)

Until February 2018: Work Package Leader of "ECOPOTENTIAL Virtual Laboratory Platform";
Since March 2018: Coordinator of CNR-IIA-Firenze unit activities in the project

2013 – 2017
CIP-PSP ENERGIC-OD (European NEtwork for Redistributing Geospatial Information to Communities - Open Data)

Technical Coordinator

2012 – 2016
FP7 MED-SUV (MEDiterranean SUpersite Volcanoes)

Task Leader of "Multidisciplinary Interoperability Infrastructure"

2012 – 2015
FP7 IASON (Fostering sustainability and uptake of research results through Networking activities in Black Sea & Mediterranean areas)

Work package leader of "Assessment of existing and on-going research efforts in the Mediterranean and Black Sea"

2011 – 2015
MIUR PNR ND-SoS-Ina (NextData System of Systems Infrastructure)

Scientific responsible for CNR-IIA Unit

2011 – 2015
ESA Prod-Trees (Enriching EO Ontology Services Using Product Trees)

Work Package Leader of "User requirement" and "Enhancement specification"

2010 – 2014
FP7 EARTHSERVER (European Scalable Earth Science Environment)

Coordinator of Networking Activities

2010 – 2013
FP7 ENVIROFI (Environmental Observation Web in Future Internet)

Task Leader of "Stakeholder Analysis: Communities, Architectures and Technologies"

2009 – 2013
FP7 UncertWeb (The uncertain enabled model web)

Task Leader of "Discovery and access methodology and services"

2009 – 2012
FP7 EGIDA (Coordinating Earth and Environment projects for GEOSS)

Work package Leader of "EGIDA Methodology and Use-Cases"

2008 – 2011

FP7 G-MOSAIC (Gmes for Management of Operations, Situation Awareness and Intelligence for regional Crises)

Activity coordinator of "Standards for Earth Observation data"

2007 – 2011

FP7 SAFER (Services and Applications For Emergency Response)

Activity Coordinator of "Gateway service network develolopment"

2005 – 2008

FP6 CYCLOPS (CYber-Infrastructure for CiviL protection ProcedureS)

Work package Leader of "Research and Innovation strategies definition"

2003 – 2006

P.O.N. Revilab (Potenziamento della rete ad alta velocità per l'interconnessione dei laboratori CNR-IMAA)

Scientific and Technical Coordinator

- ## PUBLICATIONS

Bibliometric Indicators

Scopus) h-index: 20; citations: 1,706
Web of Science) h-index: 20; citations: 1,372
Google Scholar) h-index: 25; citations: 2,563

Publications list

Publication list available at Google Scholar (https://scholar.google.it/citations?user=i9Bn80IAAAAJ&hl=it)

Most relevant publications:

- **Mazzetti, P.**, & Nativi, S. (2024). The model-as-a-resource paradigm for geoscience digital ecosystems. *Environmental Modelling & Software*, *176*, 106002. https://doi.org/10.1016/j.envsoft.2024.106002
- **Mazzetti, P.**, Nativi, S., Santoro, M., Giuliani, G., Rodila, D., Folino, A., Caruso, S., Aracri, G., & Lehmann, A. (2022). Knowledge formalization for Earth Science informed decision-making: The GEOEssential Knowledge Base. *Environmental Science & Policy*, *131*, 93–104. https://doi.org/10.1016/j.envsci.2021.12.023
- Boldrini, E., Nativi, S., Pecora, S., Chernov, I., & **Mazzetti, P.** (2022). Multi-scale hydrological system-of-systems realized through WHOS: The brokering framework. *International Journal of Digital Earth*, *15*(1), 1259–1289. https://doi.org/10.1080/17538947.2022.2099591
- Nativi, S., **Mazzetti, P.**, & Craglia, M. (2021). Digital Ecosystems for Developing Digital Twins of the Earth: The Destination Earth Case. *Remote Sensing*, *13*(11), 2119. https://doi.org/10.3390/rs13112119
- Giuliani, G., Chatenoux, B., Benvenuti, A., Lacroix, P., Santoro, M., & **Mazzetti, P.** (2020). Monitoring land degradation at national level using satellite Earth Observation time-series data to support SDG15–exploring the potential of data cube. *Big Earth Data*, 1–20. https://doi.org/10.1080/20964471.2020.1711633
- Nativi, S., **Mazzetti, P.**, & Craglia, M. (2017). A view-based model of data-cube to support big earth data systems interoperability. *Big Earth Data*, *1*(1–2), 75–99. https://doi.org/10.1080/20964471.2017.1404232
- Baumann, P., **Mazzetti, P.**, Ungar, J., Barbera, R., Barboni, D., Beccati, A., Bigagli, L., Boldrini, E., Bruno, R., Calanducci, A., & others. (2016). Big data analytics for earth sciences: The EarthServer approach. *International Journal of Digital Earth*, *9*(1), 3–29. https://doi.org/10.1080/17538947.2014.1003106
- Nativi, S., **Mazzetti, P.**, Santoro, M., Papeschi, F., Craglia, M., & Ochiai, O. (2015). Big data challenges in building the global earth observation system of systems. *Environmental Modelling & Software*, *68*, 1–26. https://doi.org/10.1016/j.envsoft.2015.01.017
- Nativi, S., **Mazzetti, P.**, & Geller, G. N. (2012). Environmental model access and interoperability: The GEO Model Web initiative. *Environmental Modelling & Software*. https://doi.org/10.1016/j.envsoft.2012.03.007
- Bastin, L., Cornford, D., Jones, R., Heuvelink, G., Pebesma, E., Stasch, C., Nativi, S., **Mazzetti, P.**, & Williams, M. (2013). Managing uncertainty in integrated environmental modelling: The UncertWeb framework. *Environmental Modelling & Software*, *39*, 116–134. https://doi.org/10.1016/j.envsoft.2012.02.008

DATA PROTECTION CONSENT

I authorize the processing of personal data present in the CV according to the Regulation of the European Parliament 679/2016