

CURRICULUM VITAE
EUROPEAN FORMAT

PERSONAL INFORMATION

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WORK EXPERIENCE

Dates	2011 to present
Name and address of employer	CNR-ISPC (Institute of Heritage Science) CNR Research area Roma 1, Strada Provinciale 35d, 9 – 00010 Montelibretti (Roma) – Italy
Type of business or sector	Research in a public research centre
Occupation or position held	Researcher (Permanent staff)
Main activities and responsibilities	<ul style="list-style-type: none">- Study of conservation issues due to the presence of water in historic masonry and hypogeum sites. Monitoring and measuring humidity through thermography and other non-invasive techniques to define heritage conservation and use strategies based on the impact of climate change.- Study of the earthen architectural heritage in Italy and abroad and experiments to improve its resilience to natural and anthropogenic hazards.-Evaluation of organic/inorganic products for conservation treatments on stone materials (natural and artificial) and pre-standardisation research for drafting of protocols concerning the evaluation of conservation works. Study of sustainable products for the conservation of stone materials also for earthen and contemporary artefacts.-Development and evaluation of products based on photocatalytic products with self-cleaning effect to use outdoor, on natural and artificial stone materials, and indoor in museum interiors for passive protection from air-pollutants.- Scientific manager for the following instruments: handheld XRF spectrometer, infrared thermal camera, 3D Digital Microscope.- Scientific and technical manager for the ISPC-Rome unit of the Laboratory of the Centre of Excellence of DTC Lazio (Technological District for new technologies applied to cultural heritage of Lazio Region) for the R7 network "Diagnostics and chemical-physical characterization" (2020 to present).- Scientific manager for ISPC Rome of the working group for the new project of Infrastructure of CNR Research Area RM1-Montelibretti (since 2022) and scientific manager for ISPC Rome unit of the Labsharing between CNR Research Area RM1 and ACEA Elabori (2019).- Scientific manager for MOLAB ISPC Rome for the facility High-resolution Infrared Thermography in the European E-RIHS infrastructure.
Dates	2017- 2019
Name and address of employer	ICVBC (Institute for the Conservation and Valorization of Cultural Heritage) - CNR CNR Research area Roma 1, Strada Provinciale 35d, 9 – 00010 Montelibretti (Roma) – Italy
Type of business or sector	Management
Occupation or position held	In charge of managing the Rome Unit of the ICVBC-CNR Institute.
Main activities and responsibilities	Coordination of the activities of the Unit; management of human, financial and instrumental resources.

Dates	2023 to present
Name and address of employer	University of Tuscia (UNITUS), Viterbo, Italy
Type of business or sector	Teaching in Degree Course LMR/02 - Conservation and Restoration of Cultural Heritage - Department for Innovation in Biological, Agro-Food and Forest Systems
Occupation or position held	Professor of Chemistry for restoration (CHIM/12)
Dates	2014 to present
Name and address of employer	Sapienza University, Rome, Italy
Type of business or sector	Teaching in Graduate School of Specialization in Demo-Ethno-Anthropological Heritage at Department of History Anthropology Religions Art History, Media and Performing Arts
Occupation or position held	Professor of Environment and Cultural Heritage Chemistry (CHIM/12)
Dates	2012 to present
Name and address of employer	National Standards Commission for the Cultural Heritage (UNI – Normal)
Type of business or sector	Standardization-Cultural Heritage: Conservation of natural and artificial stones
Occupation or position held	Member of UNI-Working Group U870503 "Conservation of Cultural Heritage - Surface protection for porous inorganic materials – Laboratory test methods for the evaluation". Member of UNI-Working Group U870502 "Conservation of Cultural Heritage - Guidelines to characterize natural stone used in cultural heritage".
Main activities and responsibilities	Identify the proper analyses for the characterization of porous inorganic stone materials and the more appropriate methods and methodologies of study aimed at evaluating effectiveness and harmfulness of conservation works to design standards and protocols.
Dates	November 2002-March 2011
Name and address of employer	IMC (Institute of Chemical Methodologies) - CNR, Research area Roma 1, Italy
Type of business or sector	Research in a public research center
Occupation or position held	Researcher (Permanent staff and contract)
Main activities and responsibilities	- Study of the effectiveness of titanium dioxide-based products applied to stone materials of interest in Cultural Heritage, of their durability and of the absence of harmful and side effects in order to apply in the field of Conservation. -Evaluation of the degradation of bronze alloy surfaces treated with corrosion inhibitors and/or artificial patinas. -Analysis of surfaces by atomic force microscopy of metal and organic substrates. -Responsible for the following instruments: atomic force microscope, equipment for electrochemical measurements of LPR and EIS, gamma spectrometer with Ge and NaI detectors, climatic chambers and salt spray cabinet for artificial ageing.

EDUCATION AND TRAINING

Dates	1993-1995
Name and type of organisation providing education and training	University of Catania (Department of Chemistry), University of Florence (Department of Chemistry) and Syremont (Systems for Conservation and Restoration) SpA of Novara (Italy) linked by the National Program for Research and Training in Chemistry for Cultural Heritage of the Ministry of University and Scientific and Technological Research (MURST).
Principal subjects occupational skills covered	Training course on "Products and methods for the conservation of organic materials". Characterization and application of synthetic polymers and microemulsions for strengthening and deacidification of paper.
Title of qualification awarded	Certificate of training as a researcher in Chemistry for Cultural Heritage
Dates	1985-1993
Name and type of organisation providing education and training	University of Rome "La Sapienza" - Department of Chemistry

Principal subjects occupational skills covered
Title of qualification awarded

Organic chemistry (synthesis and reaction mechanisms). Thesis: "Effect of alkali cations on the methoxide ion addition to corands incorporating a thiopyrylium subunit".
Degree in Chemistry (110/110 cum laude)

RESEARCH ACTIVITIES

Research sectors

Chemistry applied to Cultural Heritage – Sustainable conservation practices. Experimentation and evaluation of products and methods for the conservation of natural and artificial stone artefacts in laboratory and on site. Monitoring and control of environmental parameters and chemical-physical characteristics in archaeological sites to define strategies of their conservation and fruition. Conservation of earthen architecture and contemporary artifacts. Study of the degradation of stone and metallic materials. Testing high-resolution diagnostic techniques for paper and stone materials, integrating artificial intelligence methodologies to ensure high levels of data quality and accuracy, and promoting a more sustainable, open-source approach to cultural heritage diagnostics.

Recent Scientific Activities

- PRIN 2022 project, EVER EARTH- Enhance VERnacular EARThen Heritage: strategies to promote conservation, reuse, and new development, with Politecnico di Torino-DAD and Università di Firenze-DIDA (2025-2027).
- Project ORAVIT (OratoRio Annunziata Virtual Information Technologies): multidisciplinary study for the preservation of a 15th-century frescos in central Italy- Call Molab 2022-2023 E-RIHS Infrastructure (2024-2025)
- Diagnostic investigations on the palimpsest of Christ in the Crypt of Santa Cecilia in the Catacombs of San Callisto (Rome) - Pontificia Commissione di Archeologia Sacra (2024). Scientific coordinator.
- Bilateral project CNR- MoES (Albania): Knowledge to protect and enhance earthen vernacular architecture (2023-2024) in collaboration with Polytechnic University of Tirana - Faculty of Architecture and Urbanism.
- PNRR project: M1C3 – Cultura 4.0. "New scenarios for ancient small towns and territories - A community imagines its future", Grotte di Castro (VT, Italy) (2022-2025).
- REMEDIA ("Ricerca diagnostica E MEtodi Di contrasto Al deterioramento causato dall'umidità nei beni culturali") project "Gruppi di Ricerca 2020" Det. n. G04052 del 04/04/2019 – POR FESR LAZIO 2014-2020 - Coordinator for ISPC-Unit activities (2021-2023).
- CIACCO ("Sviluppo e applicazione in situ di tecnologie innovative per il Contrasto alle Infiltrazioni d'Acqua nelle Chiese romane del Centro stOrico") Projects for the second phase FESR 2014-2020 POR - Centre of Excellence of the Cultural Technological District of Lazio Region (2021-2023).
- Bilateral project CNR- MoES (Albania): Industrial heritage: a "fragile" resource to be enhanced. From knowledge to compatible and sustainable reuse (2021-2022).
- MUSEO TO MITREO "Solutions for cultural heritage between past and future" funded by the Technological District for Cultural Heritage and Activities of the Lazio Region - Research and development of technologies for the enhancement of cultural heritage (2020-2021). Coordinator for ISPC-Unit activities.
- MARINO TO MITREO "Functional and technological redevelopment of the archaeological site of the God Mithras in Marino" (Rome) project PON "Culture and Development" - FESR 2014-2020 and PO "Culture and Tourism" - FSC 2014-2020 (2020-2021). Coordinator for ISPC-Unit activities.
- Bilateral project CNR-CACH (Chinese Academy of Cultural Heritage): Identification and Interpretation of a Cultural Route. The example of Maritime Silk Road (2019-2021).
- ADAMO project: Technologies of Analysis, Diagnostics and Monitoring for the preservation and restoration of Cultural Heritage, Centre of Excellence of the District of Technologies for Culture of Lazio Region. Responsible for Diagnostics on site (2018-2019).
- InnovaConcrete (Innovative materials and techniques for the conservation of 20th century concrete-based Cultural Heritage) – European Project (coordinator Universidad de Cadiz/Maria J. Mosquera), H2020-topic NMBP-35-2017 (2018-2020).
- Bilateral project CNR-CNRST (Marocco): Traditional Moroccan Stabilizers for earthen Plasters: set up of experimental methods for the evaluation of the performances (2018-2019).

- ARCHEO 3.0 – National Project (POR FESR 2014-2020, Tuscany region): Integration of enabling technologies for the efficiency of the preventive archaeological excavation (2016-2018).
- Bilateral project CNR-CACH (Chinese Academy of Cultural Heritage): Assessment of innovative methods for conservation of earthen surfaces (2016-2018). Scientific coordinator.
- Study of the conservation of mosaic floors in the archaeological site of Cottanello (Rieti, Italy) and conservative treatments for the enhancement of the site. Sustainable methods for cleaning rust stains on mosaics of the Roman villa.
- Sustainable Restoration aimed at replacing of toxic chemicals or hazardous methods to the health of the restorers and for the environment used in traditional treatments. This issue was also addressed by organizing national, international conferences and trainings (National workshop "Restauro sostenibile 2.0" Roma 11 April 2015, International Workshop "Green Conservation of Cultural Heritage", Roma 27-28 October 2015 and Green Lab, Roma 25-26 May 2016).
- Evaluation and characterization of consolidation treatments with nanoproducts on different lithotypes in the laboratory and on site. This topic of research enabled to establish collaborations with researchers of: - Department of Architecture, Materials Conservation Laboratory of the Middle East Technical University in Ankara (Turkey); - High Institute for Conservation and Restoration (ISCR-Rome); - Superintendency for the Archaeological Heritage of Rome; companies that produce products for conservation/restoration. This topic is developed in the following European and National Projects: Bilateral cooperation project ICVBC-CNR - METU-MCL: Stone consolidation with innovative nanodispersive products for the conservation of cultural heritage in the Mediterranean Basin (2014-2016) and National project TeCon@BC (POR-CReO Fesr 2007-2013): Innovative technologies for the conservation and valorization of Cultural Heritage with the aim of studying the effectiveness of titanium dioxide based products applied to stone materials. Studies of nanomaterials or sustainable solutions for green restoration and conservation of cultural heritage (www.restaurosostenibile.eu).

Books and Articles

- S. CECCARELLI, M. RIPPA, G. CARUSO, L. LUVIDI, S. BOCCUTI, M. PATURZO, V. PAGLIARUOLO, K. FLEISCHER, C. MILIANI, G. RANOCCHIA (2025). Pulsed thermographic analysis of Herculaneum papyri. *Sci Rep* **15**, 34466 (2025). <https://doi.org/10.1038/s41598-025-19911-w>
- L. LUVIDI, A. CASANOVA MUNICCHIA, E. KONSTANTAKOPOULOU, E. ORAZI, M. FERRETTI, G. CARUSO (2025). Combined Use of Non-Destructive Analysis Techniques to Investigate Ancient Bronze Statues. *Sensors* **2025**, 25, 1727. <https://doi.org/10.3390/s25061727>
- S. RESCIC, M. L. LUVIDI, MATTONE, F. FRATINI, L. ÇAPELI, J. MENIKU, A. VOKSHI (2025). Knowing Earthen Architecture in Albania: Investigating some Case Studies in Tirana and Kavaje. In C. Mileto, F. Vegas, A. Hueto-Escobar & S. Manzano-Fernández (Eds.) *Earthen and Vernacular Heritage: Conservation, Adaptive Reuse and Urban Regeneration*. September 10th – 12th, 2025, Valencia (Spain). EdUPV. <https://doi.org/10.4995/HERITAGE2025.2025.19342>
- P. CALICCHIA, S. CECCARELLI, F. COLAO, C. D'ERME, V. DI TULLIO, V. GUARNERI, L. LUVIDI, N. PROIETTI, V. SPIZZICHINO, M. ZAMPELLI, R. ZITO (2024) Multi-Technique Approach for the Sustainable Characterisation and the Digital Documentation of Painted Surfaces in the Hypogeum Environment of the Priscilla Catacombs in Rome. *Sustainability* **2024**, 16, 8284. <https://doi.org/10.3390/su16198284>
- L. LUVIDI, S. RESCIC, F. FRATINI (2024). Le malte antiche e di restauro nel palinsesto della cripta di Santa Cecilia, in "CANTANTIBUS ORGANIS. Il palinsesto decorativo della cripta di S. Cecilia nelle catacombe di S. Callisto", Gangemi Ed. 2024, 75-80, ISBN: 978-88-492-5125-8.
- A. CASANOVA MUNICCHIA, V. DI TULLIO, M. FERRETTI, L. LUVIDI, N. PROIETTI (2024). Indagini analitiche per lo studio dei pigmenti e dello stato di conservazione, in "CANTANTIBUS ORGANIS. Il palinsesto decorativo della cripta di S. Cecilia nelle catacombe di S. Callisto", Gangemi Ed. 2024, 81-90, ISBN: 978-88-492-5125-8.
- E. KONSTANTAKOPOULOU, A. CASANOVA MUNICCHIA, L. LUVIDI, M. FERRETTI (2024). Comparison of Different Methods for Evaluating Quantitative X-ray Fluorescence Data in Copper-Based Artefacts, *Condens Matter* **2024**, 9(1), 5; <https://doi.org/10.3390/condmat9010005>
- L. LUVIDI, S. RESCIC, F. FRATINI (2024). L'abito urbano del borgo antico di Grotte di Castro percepito attraverso le sue superfici, in "L'Acqua e gli Etruschi. Casi studio dall'Etruria meridionale", Atti del I convegno, 21-23 marzo 2023, Grotte di Castro, CNR Ed. Collana Fonti Etrusche. Storia, Archeologia, Paesaggio – vol 1, ISBN: 978 88 8080 552 6, <https://doi.org/10.19282/FONTIETRUSCHE-2023>.

- O. A. CUZMAN, L. LUVIDI, C. COLANTONIO, A. RAO, S. TAITI (2023). Biodiversity and conservation correlation in the case of a Roman fresco located in a semi-confined environment, *International Biodeterioration & Biodegradation* 181 (2023) 105605.
- S. RESCIC, M. MATTONE, F. FRATINI, L. LUVIDI (2023). Conservation of Earthen Bricks in Architecture: An Experimental Campaign to Test Different Treatments on Vernacular Built Heritage, *Heritage*, 6 (2), 1541-1566; <https://doi.org/10.3390/heritage6020083>.
- F. FRATINI, S. RESCIC, L. LUVIDI (2022), Can Tourism and Natural Parks Coexist? Comparison of Europe, China, and the United States of America, *Geosciences*, 12 (12), 430, <https://doi.org/10.3390/geosciences12120430>.
- L. LUVIDI, F. PRESTILEO, M. DE PAOLI, C. RIMINESI, R. MANGANELLI DEL FA', D. MAGRINI, F. FRATINI (2021), Diagnostics and Monitoring to Preserve a Hypogeum Site: The Case of the Mithraeum of Marino Laziale (Rome), *Heritage*, 4, 4264-4288. <https://doi.org/10.3390/heritage4040235>.
- N. PROIETTI, P. CALICCHIA, F. COLAO, S. DE SIMONE, V. DI TULLIO, L. LUVIDI, F. PRESTILEO, M. ROMANI, A. TATÌ (2021). Moisture damage in ancient masonry: a multidisciplinary approach for in situ diagnostics. *Minerals*, 11, 406 (pp. 23). <https://doi.org/10.3390/min11040406>.
- L. LUVIDI, F. FRATINI, S. RESCIC, J. ZHANG (eds) (2021), *Past and present of the earthen architectures in China and Italy*, CNR Edizioni, Roma, pp. 251, e-ISBN 978 88 8080 315 7, p-ISBN 978 88 8080 470 3.
- F. FRATINI, L. LUVIDI, S. RESCIC (2021), Earth materials: characterization and traditional/innovative techniques of conservation. In *Past and present of the earthen architectures in China and Italy*, CNR Edizioni, Roma, pp. 85-99, e-ISBN 978 88 8080 315 7.
- L. GENOVESE, L. LUVIDI, F. FRATINI, R. VARRIALE (2021) Earthen walled villages in the Shanxi Province: Laoniawan (老牛灣) case. In *Past and present of the earthen architectures in China and Italy*, CNR Edizioni, Roma, pp. 229-238, e-ISBN 978 88 8080 315 7.
- S. RESCIC, M. MATTONE, F. FRATINI, L. LUVIDI (2021). Earthen Plasters Stabilized through Sustainable Additives: An Experimental Campaign. *Sustainability*, 13, 1090 (pp. 31). <https://doi.org/10.3390/su13031090>.
- L. LUVIDI, F. FRATINI, S. RESCIC, L. GENOVESE, R. VARRIALE, J. ZHANG (2019). Earthen walled villages in the Shanxi Province: a heritage at risk of disappearing. In *Proceedings of 2019 ICOMOS CIAV & ISCEAH International Conference "Vernacular and Earthen Architecture towards Local Development"* September 6th-8th, 2019, Pingyao (China), Tongji University Press, pp. 163-170, ISBN 978-7-5608-8656-5.
- R. VARRIALE, L. GENOVESE, L. LUVIDI, F. FRATINI (2019). Identification and Interpretation of a Cultural Route: Developing integrated solutions for enhancing the vernacular historic settlements. In *Proceedings of 2019 ICOMOS CIAV & ISCEAH International Conference "Vernacular and Earthen Architecture towards Local Development"* September 6th-8th, 2019, Pingyao (China), Tongji University Press, pp. 601-608, ISBN 978-7-5608-8656-5.
- P. CALICCHIA, F. COLAO, D. CAPITANI, S. DE SIMONE, V. DI TULLIO, L. LUVIDI, F. PRESTILEO, M. ROMANI, A. TATÌ, N. PROIETTI (2020). Reliefs of moisture infiltration in the apse of the church of San Nicola in carcere during the restoration work. In: *Proceedings of the 1st Conference of the Technological District of Cultural Heritage Lazio-Centre of Excellence*, Rome 30 September 2019, L'Erma di Bretschneider Ed., pp. 149-151, ISBN 978-88-913-1970-8
- L. LUVIDI, S. OVIDE, A. BRUNETTO, F. PRESTILEO, D. FERRO (2019). Laser cleaning of metallic threads of a 15th century Italian velvet liturgical vestment. In: *Proceeding of Italian Conference APLAR 6. Applicazioni Laser nel Restauro*, Firenze, 14-16 settembre 2017, Nardini Ed. pp. 379-393, ISBN 978-88-404-0090-7.
- D. RIGAGLIA, V. ROMÈ, L. CAPOROSSO, A. ZANINI, A. BRUNETTO, V. DI TULLIO, L. LUVIDI, E. CATELLI, R. MAZZEO, G. INSOLERA (2019). L'impiego della strumentazione laser Long Q-Switching nella pulitura degli affreschi di Antonio da Viterbo, detto il Pastura, nel Duomo di Tarquinia (VT). In: *Proceeding of Italian Conference APLAR 6. Applicazioni Laser nel Restauro*, Firenze, 14-16 settembre 2017, Nardini Ed. pp. 133-148, ISBN 978-88-404-0090-7.
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- A. MACCHIA, L. LUVIDI, F. PRESTILEO, E. M. STELLA, C. SFAMENI (2018), Comparison of Traditional and Sustainable Methods for Cleaning Rust Stains on Mosaics of the Cottanello Roman Villa, in *Proceedings of 5th International Conference YOCOCU 2016*, Museo Reina Sofia Eds., NIPO: 828-18-001-9, pp. 152-155

- V. BEOLCHINI, F. PRESTILEO, F. GALLI, L. GENOVESE, L. LUVIDI (2018) The Tusculum project: knowledge, conservation and valorization in Proceeding of VI International Congress of Yococu Matera, 22-26 May 2018.
- L. GENOVESE, L. LUVIDI, F. FRATINI, R. VARRIALE (2018) Underground space in Italy and China: from the history to smart-planning in Proceeding of VI International Congress of Yococu Matera, 22-26 May 2018.
- S. OVIDE, L. LUVIDI, F. PRESTILEO, D. FERRO, C. DEGRIGNY, A. BRUNETTO (2017), Valutazione di metodi di pulitura per i filati metallici di un piviale fiorentino del XV secolo, atti del XV Congresso Nazionale IGIC – Lo Stato dell'Arte – Università degli Studi di Bari Aldo Moro – 12/14 ottobre 2017, ISBN 9-788-840-444-598, pp. 233-243.
- L. Luvidi, E. M. Stella (2017) Conservazione dei pavimenti musivi della villa di Cottanello: stato dell'arte delle conoscenze, in P. Pensabene, C. Sfameni (a cura di), La Villa Romana di Cottanello. Ricerche 2010-2016, EdiPuglia, ISBN 978-88-7228-783-5, pp. 181-186
- V. DI TULLIO, E. GIOVENTÙ, N. PROIETTI, L. LUVIDI, A. M. MECCHI AND D. CAPITANI (2017) A study of water mobility in hydrogels suitable for biocleaning mural paintings: a unilateral NMR study in Gels in the Conservation of arts, Archetype Publications, London, ISBN 978-1-909492-50-9, pp. 227-230.
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- L. LUVIDI, A. M. MECCHI, M. FERRETTI, G. SIDOTI (2016), Treatments with self-cleaning products for the maintenance and conservation of stone surfaces, International Journal Of Conservation Science, vol. 7, Special Issue 1, pp. 311-322.
- C. SFAMENI, L. LUVIDI, E. M. STELLA, M. VOLPI (2016), Nuovi mosaici e nuove ricerche presso la villa romana di Cottanello (Ri), in "Atti del XXI Colloquio AISCOM", Reggio Emilia 18-21 marzo 2015, Ed. Scripta Manent Tivoli, pp.235-343, ISBN 978-88-909657-2-2.
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