

Curriculum Silvia RESCIC

Silvia RESCIC, Degree in Geology and PhD in Science for Conservation of Cultural Heritage at the University of Florence. Since 1998 she has carried out research activities at the Centre for the Study on the Causes of Decay and Methods of Conservation of Works of Art, CNR, Florence (now ISPC Institute of Heritage Science). Since 2009 she is full time researcher. Disciplinary field GEO/09- Mining georesources and mineralogical-petrographic applications for the environment and Cultural Heritage

PREVIOUS POSITIONS/ FELLOWSHIPS

1998-2009

- four research grants for a total duration of six years,
- five collaborative contracts for a total duration of two years;
- two fixed-term contracts as III level researcher for a total duration of one years and half

EDUCATION AND TRAINING

31/05/2004 - 05/06/2004

Tuscany Region Directorate General of training policies and of the activities of the Cultural Heritage, Institute of Applied Physics "Nello Carrara" IFAC CNR of Florence.
Innovative technologies and methodologies for the study and restoration of archaeological artefacts

16/09/2002 - 05/10/2002

Scuola Normale Superiore of Pisa, Advanced Training Course
GIS and Digital Technologies for the interpretation and communication of the historic landscape and archaeological sites

1998-1999

University of Florence, Faculty of Sciences, post-graduate course "Science for Conservation of Cultural Heritage Dissertation- Study of the problems of conservation of soft limestone that are dug and built the Sassi of Matera

ORGANISATION OF SCIENTIFIC AND DISSEMINATION EVENTS

05-30 maggio 2023

Organisation of a photographic exhibition entitled: Industrial Heritage between Italy and Albania. At the Polytechnic Faculty of Tirana (FAU) as part of the bilateral CNR/MOES (Albania) project: Industrial Heritage: a 'fragile' resource to be enhanced. From knowledge to compatible and sustainable reuse

06-09 October 2015

Member of the organizational and scientific committee of the *The International Congress on Earth Architecture in North Africa Architecture de terre tradition et nouvelles perspectives d'habiter*, Marrakech, Morocco

21 March 2012

Organization and organizational secretariat Fifth Workshop *Geopolymeric Materials for Cultural Heritage* - "Geopolymers" Working Group

TUTOR ACTIVITY

She deals with and has been involved in tutoring and technical-scientific support for Bachelor, Master and Doctoral thesis

PARTICIPATION IN EUROPEAN E NATIONAL PROJECTS

He has participated and continues to be involved in various regional, national, and European projects.

- HARDROCK European project (Contract: SMT4-CT96-2065) Development of a new method to determine the superficial hardness of exposed monumental rocks, 1996-1999.
- CNR - Cultural Heritage Project: assessment of changes in physical characteristics induced by consolidation and protective treatments applied to natural and artificial stone materials, 2000-2001
- BIOREINFORCE European project (Contract: EVK4-CT2000- 00037) Biomediated Calcite Precipitation for Monumental Stones Reinforcement, years 2001-2004.
- DIAS European project (Contract: EVK4-CT2002-00080) Integrated tool for in situ characterisation of effectiveness and durability of conservation techniques in historical structures, 2002-2005.
- EU-ARTECH European project (Contract: RII3-CT-2004-506171), Access, Research and Technology for the conservation of the European Cultural Heritage, years 2008-2009
- National project TeCon@BC (POR-CReO Fesr 2007-2013, Tuscany region): Innovative -technologies for the conservation and valorization of Cultural Heritage, years 2010- 2012.

- European project ECO-CEMENT (Contract FP7 Grant 282922): New microbial carbonate precipitation technology for the production of high strength, economical and Ecological Cement, years 03/2013-02/2015
- Bilateral cooperation CNR/ METU/MCL(Turkey): Stone consolidation with innovative nanodispersive products for the conservation of cultural heritage in the Mediterranean Basin, 2014-2016);
- Bilateral cooperation CNR/CNRST(Morocco):Stabilization of earthen plasters: exchange of knowledge and experiences between Italy and Morocco, 2014-2016)
- Bilateral cooperation ICVBC/CNR-CACH/CINA: Assessment of innovative methods for conservation of earthen surfaces, 2016-2018)
- National project ARCHEO 3.0 (POR FESR 2014-2020, Tuscany region): Integration of enabling technologies for the efficiency of the preventive archaeological excavation 2016-2018)
- European Project InnovaConcrete /Innovative materials and techniques for the conservation of 20th century concrete-based cultural heritage (coordinator Universidad de Cadiz /Maria J. Mosquera,H2020-NMBP-2016-2017 two-stage/NMBP-35-2017/Second Stage/SEP760858-2 2018-2021)
- Bilateral cooperation CNR/CNRST (Morocco): Traditional Moroccan stabilizers for earthen plasters: set up of experimental methods for the evaluation of the performances, 2018-2020.
- Joint archaeological laboratories CNR /CSIC (Spain): ARCHAEOtech - Technologies and procedures for quality improvement and time saving in the archaeological activities, 2019-2021;
- Bilateral cooperation CNR/MOES (Albania): Industrial Heritage: a 'fragile' resource to be enhanced. From knowledge to compatible and sustainable reuse, 2021-2022
- Bilateral cooperation CNR/MOES (Albania): Knowledge to protect and enhance earthen vernacular architecture, 2023-2024,
- Prin 2022 project, entitled EVER EARTH- Enhance VERnacular EARThen Heritage: strategies to promote conservation, reuse, and new development, with POLITO DAD and UNIFI DIDA, 2025-in progress
- CoResCem project: Un nuevo material artístico en el patrimonio inmueble de los siglos XIX-XX. Conservar y Restaurar el Cemento Natural, with Instituto del Patrimonio Cultural de España, and POLITO DAD, 2025-in progress
- Joint archaeological laboratories CNR / Universidad de Castilla-La Mancha (Spain): The cruciform hall of the Roman villa of Noheda (Spain) from excavation to virtual reconstruction: an example of multidisciplinary archaeological process, 2025-in progress

RESEARCH ACTIVITIES

Her research activity concerns the application of investigation methodologies typical of the sciences, in particular, of applied petrography, to the study of architectural stone materials. In particular, her recent research activity concern:

During her research, she has focused on:

- the chemical-physical and mineralogical-petrographic characterisation of natural and artificial stones (mortars/cements, ceramics, plasters) and raw earth artefacts belonging to historical, industrial and contemporary architectural heritage and archaeological sites, with the aim of understanding their use throughout history, studying their degradation mechanisms and proposing methods for their conservation;
- the validation and optimisation of micro-destructive techniques to assess the mechanical properties of stone materials in architectural and monumental heritage in order to determine their state of conservation and the effectiveness of conservation treatments, in particular products with a consolidating action (systems: Drilling Resistance Measurement; portable Indenter; Peeling system; portable Micro-sandblasting), both in the laboratory and in situ;
- evaluation and selection of compatible and sustainable materials/treatments for architectural heritage materials, in particular for raw earth artefacts, in order to increase their resilience to atmospheric agents;
- in situ monitoring of the state of conservation of untreated and treated natural and artificial stone materials in order to determine their durability and plan maintenance and conservation interventions;
- in situ monitoring of the state of conservation of stone materials in architectural heritage.