



PERSONAL INFORMATION	Alessandra Simona Donatella Rocco	
		
		
	✉ alessandra.rocco@ino.cnr.it	
	Sex Date of birth Nationality	
CURRENT POSITION	Researcher	
RESEARCH TOPICS / EXPERIENCES	<ul style="list-style-type: none"> ▪ Using non invasive diagnostic and optical techniques for diagnosis on Cultural Heritage ▪ Using NDT and non- contact techniques for identification of invisible/barely visible damages in composite laminates ▪ Realization of coherent sources based on optical parametric oscillator for high precision and high sensitivity spectroscopy ▪ Realization of continuous UV laser sources by means of Second Harmonic Generation in Ferroelectric Crystals ▪ Realization and testing of high power laser based on diode-pumped transparent ceramic slabs ▪ Evaluation of Fiber Bragg grating sensors by digital holographic technique ▪ Realization and implementation of laser based spectrometers for Continuous in-situ measurements of volcanic gases at Phlegrean Fields ▪ Monitoring of soil CO₂ emissions by means of IR spectroscopy ▪ Atomic spectroscopy ▪ Realization of Outreach Dissemination activities, in Science Festivals, collaborations with schools 	
KEYWORDS	Optics, Cultural Heritage, Sensors, laser sources, fiber optics, spectroscopy, diagnostic, outreach, dissemination	
SCIENTIFIC / TECHNICAL QUALIFICATION (source: Scopus)	▪ H-index (if applicable)	▪ 9
	▪ No. publications (relevant with respect to the "KEYWORDS"):	▪ 38
	▪ No. citations (if applicable):	▪ 323

EDUCATION AND TRAINING

2001/12/18	Doktor der Naturwissenschaften, Leibnitz Universitaet Hannover
1996/10/16	Dottore in Fisica (vecchio ordinamento), Università Federico II Napoli
1986	High School Diploma

WORK EXPERIENCE

since 2010/02/01	Researcher CNR (Consiglio Nazionale delle Ricerche), Istituto Nazionale di Ottica, Largo E. Fermi, 5 Firenze Italy, www.cnr.it , www.ino.it
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2005/04/01- 2010	Researcher non –permanent position
2001-2005	Scholarship, Post-Doc Position
	Istituto Nazionale di Ottica Applicata, Largo E. Fermi, 5 Firenze Italy,

MAIN ROLES AND RESPONSIBILITIES

Since 2019/06/30	▪ Contact person reMOLAB (Mobile laboratories for non-invasive diagnostic) ground-lab of INO in Naples, in the SHINE (StrengtHening the Italian Nodes of E-RIHS) project
Since 2021/05/31	▪ contact person/coordinator for the outreach/diffusion activities of INO-Napoli Section, in the CNR-CREO (Campania Rete Outreach) network
Since 2018	▪ Coordinator and Tutor for the PCTO (Percorsi per Competenze Trasversali e Orientamento) – collaboration between CNR Institutes and Secondary Schools.

TEACHING EXPERIENCE

Since 2018	Tutor for the PCTO (Percorsi per Competenze Trasversali e Orientamento) – collaboration between CNR Institutes and Secondary Schools, in the framework of “A scuola di Astroparticelle, viaggio nella fisica Moderna” 2018, 2019, 2021, 2022, 2023 editions.
Since 2006	Involved in outreach activities, collaborating to the organization and realization of the “exhibit”, as well as participating to the festivals themselves. Participating to: <ul style="list-style-type: none"> • European Researcher’s Night (2006, 2007, 2008, 2012, 2015, 2018, 2019, 2020, 2021, 2022, 2023 editions). • Festival della Scienza di Genova (2021, 2022, 2023) • Futuro Remoto 2015, 2018, 2019, online 2020, 2021, 2022, 2023 editions • Comicon 2023 • Lucca Comics and Games- 2023 Involved in the realization and participating to the outreach network “CREO” (Campania REte Outreach) of CNR Institutes with one section in Campania Region

MAIN RESEARCH EXPERIENCE

Since 2019	▪ reMOLAB (Mobile laboratories for non-invasive diagnostic) ground-lab of INO in Naples, in the SHINE (StrengtHening the Italian Nodes of E-RIHS) project.
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2010-2012	HALG (High average power light source in the green , total financing 260000.00 €) and SIMPAS (Sistemi innovativi di misura per la protezione dell'ambiente e della salute total financing 2.256.833€) Projects: realization of coherent sources based on OPO, emitting in the IR and stabilized on Optical Frequency Comb for high resolution and high sensitive spectroscopy.
2009-2010	UVICOLS Project: realization of CW laser sources based of non-linear generation in periodically poled
2007-2009	Dual-R&D Project. Amplitude and frequency stabilization of a 1W IR laser.
2011-2015	Monitoraggio innovativo per le coste e l'ambiente marino (MONICA, total financing 7.491.100,00) realizing a monitoring network of new optical sensors to monitor highly active volcanic areas (Phlaegrean Fields).
2011-2015	Backplane Ottico per Apparati ICT di Alta Capacità (Backop): tutor for the training.

OTHER RELEVANT EXPERIENCES

1997-2000	▪ PhD Student, Leibnitz Universitaet Hannover
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ADDITIONAL INFORMATION

Publications

Riminesi C., Manganelli Del Fà R., Brizzi S., Rocco A., Fontana R., Bertasa M., Grifoni E., Impallaria A., Leucci G., De Giorgi L., Ferrari I., F. Giuri F., Penoni S., Felici A.,

Architectural assessment of wall paintings using a multimodal and multi-resolution diagnostic approach: The test site of the Brancacci chapel in Firenze,

Journal of Cultural Heritage 66 (2024) 99–109,

<https://doi.org/10.1016/j.culher.2023.11.012>

Pagliarulo V.; Rocco A.; Langella A.; Riccio A.; Ferraro P.; Antonucci V.; Ricciardi M.R.; Toscano C.; Lopresto V.

Impact damage investigation on composite laminates: Comparison among different NDT methods and numerical simulation

Measurements Science and Technology (2015)

Ricciardi I., De Tommasi E., Maddaloni P., Mosca S., Rocco A., Zondy J.-J., De Rosa M., De Natale P.

Frequency-comb-referenced singly-resonant OPO for sub-Doppler Spectroscopy

OPTICS EXPRESS (2012)

Ricciardi I., De Rosa M., Rocco A., Ferraro P., De Natale P.

„Cavity-enhanced generation of 6 W cw second-harmonic power at 532 nm in periodically-poled MgO:LiTaO₃“

OPTICS EXPRESS **18** pp.10985 (2010)

A. Rocco, G. De Natale, P. De Natale, G. Gagliardi, L. Gianfrani

“A diode-laser based spectrometer for in-situ measurements of volcanic gases”,

Appl. Phys. B **78**, 235–240 (2004)

Rocco, A.; Wicht, A.; Rinkleff, R.H.; Danzmann, K

“Anomalous dispersion of transparent atomic two- and three-level ensembles”

PHYSICAL REVIEW A, **66** 5(2002) 053804

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV