LUCA ZOLI –Ph.D

Personal data

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Current Position

Researcher (TI) at Institute of Science, Technology and Sustainability for Ceramics of the National Research Council (ISSMC-CNR).
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SCIENTIFIC PUBLICATIONS

Luca has published 89 research peer-reviewed papers, 1 Encyclopedia chapter, as well as invited talks or co-authored of invited talks at international conferences and holds 4 patents; **SCOPUS**: **H-Index: 33** (cit. **3002**).
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PROFESSIONAL APPOINTMENTS

2014, September to present **Researcher** at CNR-ISSMC, Topic: structural ceramics, ultra-high temperature ceramics (UHTC), Ceramic matric composites (CMCs).
2024: Visiting Researcher at TAMU, JHU and Italian Ambassy in July.
2019-2017: three times **visiting researcher** at AIRBUS (CRT, ex-AGI) at Ottobrunn Germany, host: SCHOBERTH Achim, experiments for manufacturing of materials via industrial process, collaboration within C3HARME project.
2018, April: **member of the Italian delegation** at NASA, Cleveland, Ohio.
2016, July: **Visiting Researcher** at University of Colorado Boulder, (USA) Department of Mechanical Engineering, host: Prof. Rishi Raj, Bilateral project co-founded by Ministry of Foreign Affairs and International Cooperation (MAECI) and ISTEC-CNR.
2015, March-January: **Short term scholar** at University of Colorado Boulder, (USA) Department of Mechanical Engineering, Tutor Prof. Rishi Raj in collaboration with ISTEC-CNR.
2014-2013: **Post-Doc fellow** (17 months) at ISTEC-CNR in ultra-high temperature ceramics (UHTC) Group coordinated by Dr. D. Sciti.
2013-2012: **Chemist** at environmental research center (EX-Montedison), Marina di Ravenna (RA), Italy, environmental monitoring of Piallassa Baiona contract: "autorita' portuale Ravenna".
2012-2010: **Chemist** at THEOLAB, Torino, Italy, detachment of Ravenna for environmental monitoring of EX-ENICHEM, industrial area of Ravenna.
2010: **Fellow** (August) at IZSLER, health public corporation, detachment of Bologna, Italy; **Leonardo fellow** (September) at Labtarna, Vilnius, Lithuania.
June-July 2008: **Marco Polo Fellow** at Alicante University, Alicante, Spain, Tutor Prof. Miguel Yus. (During PhD)

EDUCATION

2009: **PhD in Chemistry** at the University of Bologna (XXIII cycle).
2009: **National qualification** to pursue professional works as Chemist at the University of Bologna.
2006: **M.Sc in advanced methodology in chemistry** at the University of Bologna.

AWARDS and Merits

Startcup Emilia Romagna 2020: project K3RX won the 2nd prize of EUR 6,000 at the competition for the "best business idea"
Marzotto 2031: project K3RX won 6 months of incubation at Romagnatech, got the 5th position among 300 proposals for the best business idea

PNI 2020: project K3RX reached 5th position among 200 proposals for the best business idea.
Leonardo Fellowship: Oltregenius project 2010 for Italian graduates to working periods abroad. Ravenna district (Italy).
Marco Polo Fellowship: Marco Polo Program 2008 for young Italian Researchers to research periods abroad. University of Bologna, Italy.

RESEARCH GRANTS WON/INVOLVED/KEY PERSONELL SINCE 2015

- Principal investigator of research contract funded by US Army office, INFINITE (Liquid phase sintering of C fiber reinforced ultra-high temperature ceramics composites) [W911NF2220088], (18/07/2022-17/07/2025) partners: University of Missouri, total budget $ 450.000,00; ISTEC budget $ 360.000,00.
- Research project funded by ASI (with A. Moccia, Fedrico II (UNINA), Italy, PI) RODIO: "Radar per Osservazione della terra ad apertura sintetica Distribuita su cluster di cubesat con micropropulsori ad alta tecnologia per nuovi servizi Operativi", (2022-2024, 18 M), Total budget € 2.504.860,00 DII, TASI, Telespazio, T4i, Euro.Soft, TDS and Sintema involved. Role: key personnel CNR unit. ISTEC budget € 40.121,00.
- Principal investigator of research project funded by ESA and CNES, WINTERTIME "Low Earth orbit environment ageing effect on Ultra-High Temperature Ceramic Matrix Composites", call AO-2020-Euromaterial Ageing (2020-2023, 48 months).
- Industrial development contract (with Ing. Galli, Leonardo s.p.a, Italy as PI) funded by MISE (Invitalia), LAMPO: "Leonardo Automated Manufacturing Processes for Composites", (2019-2023), partners: MAE, aviorec, CNR (DSCTM, DIITET), total budget € 87.469.216,00, CNR budget: € 4.380.000,00; ISTEC budget ISTEC: € 236.000,00; Role: co-Pi ISTEC-CNR unit.
- Research project funded by ASI (with A. Airoldi, DAER, Italy, PI) AM3AC2A: "Approccio Multiscala per la Modellazione di Materiali CMC e UHTCMC per Componenti Riutilizzabili per l'Aerospazio", (2020-2023), Total budget € 238.813,69, Petroceramic s.p.a involved. Role: key personnel CNR unit.
- EU Horizon 2020 (with D Sciti, CNR-ISTEC, Italy, PI), C3HARME: Next generation ceramic composites for combustion harsh environments and space (2016-20). Total budget €8,033,035; 12 partners involved. Role: leader of Task 2.1 (WP2) e CNR unit leader of task 4.1 (WP4), key personnel in WP5 e WP6
- Regional project (with F. Monteverde, CNR-ISTEC, PI) HI SCORE: HI PERFORMANCES SUSTAINABILITY AND COST REDUCTION IN MACHINE TOOL INDUSTRY (2016-2018), partial budget €177.249,36 Euro;
- Bilateral project funded by Ministry of Foreign Affairs (with D Sciti, CNR-ISTEC, Italy, PI) Ultrahigh Temperature Ceramic Matrix Composites by Additive Manufacturing Using Polymer (2016-2018), Total budget €87.000, Boulder University and Italian Aerospace Research Center (CIRA) involved.

SHORT LIST OF FIVE MOST CITED SCIENTIFIC PUBLICATIONS IN THE FIELD OF MATERIAL SCIENCE

- Efficacy of a ZrB2–SiC matrix in protecting C fibres from oxidation in novel UHTCMC materials Zoli, L., Sciti, D. Materials and Design, 2017, 113, pp. 207–213. Cited 68
- A review of cold sintering processes Grasso, S., Biesuz, M., Zoli, L., Reece, M.J. et al. Advances in Applied Ceramics, 2020, 119(3), pp. 115–143. Cited 102
- On the thermal shock resistance and mechanical properties of novel unidirectional UHTCMCs for extreme environments Zoli, L., Vinci, A., Galizia, P., Melandri, C., Sciti, D. Sci. Rep., 2018, 8(1), 9148. Cited 62
- Oxidation behaviour of a continuous carbon fibre reinforced ZrB2–SiC composite Vinci, A., Zoli, L., Landi, E., Sciti, D. Corrosion Science, 2017, 123, pp. 129–138. Cited 50
- Continuous SiC fibers-ZrB2 composites Zoli, L., Medri, V., Melandri, C., Sciti, D. Journal of the European Ceramic Society, 2015, 35(16), pp. 4371–4376. Cited 33

Data

15/01/2025

Signature