

ACADEMIC CV

Denny Coffetti

Current position

Researcher (RTD-A) at University of Bergamo (Italy), Department of Engineering and Applied Sciences

Academic affiliation

Department of Engineering and Applied Sciences (DISA)
University of Bergamo
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Academic career

National Academic Qualification as Associate Professor, ING/IND-22 “Materials Science and Technology”, 2023

Bachelor degree in “Building Engineering” (cum laude) at University of Bergamo, 2012

- Thesis “Experimental study of fiber-reinforced cement-based materials at high strain rates”. Research in collaboration with SUPSI University of Lugano (Switzerland)

Master degree in “Building Engineering” (cum laude) at University of Bergamo, 2015

- Thesis “Experimental study of phase change materials (PCM) for sustainable and energy-saver plasters”

PhD in “Engineering and Applied Sciences” at University of Bergamo, 2019

- Thesis “Alternative binders as a milestone of 3R strategy for sustainable construction materials”. Research in collaboration with University of Calabria (Italy) and University of Basilicata (Italy)

Main research topics

- Sustainability of cementitious materials
- Alternative binders to Portland cement (calcium sulphoaluminate cements and alkali activated materials)
- Durability and corrosion of reinforced concrete structures in aggressive environments
- Use of industrial by-products as aggregate replacement for environmentally friendly cementitious materials

Main teaching activity

Full courses:

- “Diagnostic techniques for the durability of reinforced concrete structures”, MD course at University of Bergamo, Italy, from 2023 to present
- “Buildings”, course at Fondazione Istituto Tecnico Superiore per le Nuove Tecnologie per il Made in Italy – JobsAcademy, San Paolo d’Argon (BG), Italy, from 2019 to 2020

Tutorships:

- “Buildings materials”, BD course at University of Bergamo, Italy, from 2016 to present
- “Repairing materials for existing structures”, MD course at University of Bergamo, Italy, from 2016 to present

- “Metallic materials”, BD course at University of Bergamo, Italy, from 2017 to present
- “Polymeric, ceramic and composite materials”, MD course at University of Bergamo, Italy, from 2017 to present (not continuative)
- “Biomaterials”, BD course at University of Bergamo, Italy, from 2016 to present (not continuative)
- “Science and technology of light alloys”, MD course at University of Bergamo, Italy, from 2021 to present
- “Materials for advanced engineering applications”, MD course at University of Bergamo, from 2021 to present

PhD Schools:

- “Circular economy and low-carbon actions for building materials industry” at the PhD course “Engineering and Applied Science”, University of Bergamo, Italy, July 2022
- “Self-healing techniques for durable concretes” at “Luca Bertolini” PhD School on “Durability, corrosion, diagnostic and restoration techniques for reinforced concrete structures”, Milan, Italy, September 2019

Awards and recognitions

- 2019 AIMAT National Award for the best PhD Thesis in the field of Material Engineering
- 2021 ACI (American Concrete Institute) Italy Chapter – FEDERBETON for the best PhD Thesis in the field of Concrete Technology
- 2021 “Luca Bertolini” memorial Award organized by ACI (American Concrete Institute) Italy Chapter for the best scientific paper in the field of cementitious materials, corrosion in concrete

Research projects and collaborations

Academic collaborations:

- Visiting Researcher at the Faculty of Chemistry, Technical University of Munich, Germany, February–March 2023 (prof. J. Plank, prof. L. Lei)
- Visiting PhD student at the Department of Mechanical, Energy and Management Engineering of the University of Calabria, Italy, in June 2018 (prof. F. Crea)
- Visiting PhD student at the School of Engineering of the University of Basilicata in July 2018 (prof. A. Telesca)
- Research activities in the DYMAT laboratory at the SUPSI University, Switzerland, since 2012 (prof. E. Cadoni)

Industrial collaborations:

- “LCA analysis of concrete and artificial aggregate industry in Italy”, ENEA, 2023
- “Study on repair materials for reinforced concrete structures in accordance with EN 1504”, Chryso Italia Spa, 2023
- “Study on special concretes for restoration of bridge decks”, TECNE Spa, 2023
- “Study on crystalline admixtures for self-healing watertight concretes”, Chryso Italia Spa, 2023
- “Study on materials for the conservation and restoration of mosaic of Battistero di San Giovanni in Florence”, Opera di Santa Maria del Fiore di Firenze, 2023
- “Study on steam-cured concretes for precast tunnel elements”, Chryso Italia Spa, 2023
- “Study of damage mechanisms of airport concrete slabs on ground”, CSIA, 2023
- “Study on structural fibers for fiber reinforced concretes”, Chryso Italia Spa, 2023

- “Study on the carbonation rate of concretes protected by migrant corrosion inhibitors”, Master Builders Solutions Italia Spa (Italy), 2022
- “Innovative low-stiffness cementitious shotcrete for tunnel lining”, Calcestruzzi Spa (Italy), 2022
- “Experimental study on shrinkage reducing admixtures for concrete”, MAPEI Spa (Italy), 2022
- “Study on the behavior of aerated concretes for tunnelling”, ISARCO Scarl (Italy), 2021-2022
- “Deterioration mechanisms of reinforced concrete railways sleepers”, TEB Spa (Italy), 2021-2022
- “Research on the carbonation rate and chloride resistance of concrete protected by means of cementitious sealants”, Master Builders Solutions Spa (Italy), 2020-2021
- “Experimental study on fillers for concrete and mortars”, CNR – Istituto per le Tecnologie della Costruzione (Italy), 2020-2021
- “Study on durability of expansive concretes in cold environments”, Calcestruzzi Spa (Italy), 2019-2020
- “Experimental study on durability of reinforced concrete railway sleepers”, Astaldi Spa (Italy), 2019-2020
- “Study of migrating corrosion inhibitors for concretes”, BASF CC Spa (Italy), 2019-2020
- “Research on materials for restoration and conservation of mosaics of Battistero di San Giovanni in Florence”, Opera di Santa Maria del Fiore di Firenze (Italy), 2018-2019
- “Research on ground granulated blast-furnace slag cements for Portland-free plasters compliant with EN 998-2 GM15 class”, Cugini Spa (Italy), 2018-2019
- “Experimental study on ultrafine fly ash – limestone blends for concrete production”, Cementerie Barbetti Spa (Italy), 2018
- “Experimental study on concretes manufactured with electric arc furnace slag-based recycled aggregates as natural aggregates replacement”. Ageco 2 Spa (Italy), 2018
- “Comparative study on commercial mortars for restoration of reinforced concrete structures”, BASF CC Spa (Italy), 2018
- “Study on innovative carboxylic acid-based self-healing admixtures for watertight concretes”, BASF CC Spa (Italy), 2016-2017
- “Research on calcium sulphoaluminate cement-based blends containing supplementary cementitious materials for low environmental impact cementitious materials”, Italcementi Spa (Italy), 2015-2018

Minor collaborations with:

- ARS Aedificandi Spa, Arte-Cemento Srl, BASF CC Spa, Colabeton Spa, Giovanni Bozzetto Spa, Italcementi-Heidelberg Spa, Knauf Gips KG, Thrakon

Supervision of thesis

Co-supervisor or assistant supervisor of 36 bachelor and master degree thesis at Department of Engineering and Applied Sciences at University of Bergamo

Divuligation activity

- Author of 38 Scopus indexed documents (21 articles, 11 conference papers, 4 reviews and 2 editorials) with 839 citations and H-index equal to 17
- Author of 21 no-indexed conference proceedings and 6 no-indexed papers

- Editor of journal “Buildings - MDPI” and “Frontiers in Sustainability”
- Editor of American Concrete Institute Special Publications SP-354 and SP-355, July 2022.
- From 2017 revisor for the several international journals among which:
 - Cement and Concrete Composites Q1, SJR 2.894
 - Waste Management Q1, SJR 1.807
 - Construction and Building Materials Q1, SJR 1.662
 - Journal of Environmental Management Q1, SJR 1.441
 - Ecological Engineering Q1, SJR 1.096
 - Journal of Building Engineering Q1, SJR 0.974
 - Case Studies in Construction Materials Q1, SJR 0.972
 - Ceramics International Q1, SJR 0.936
 - Structural Concrete Q1, SJR 0.912
 - Polymers Q1, SJR 0.770
 - International Journal of Architectural Heritage Q1, SJR 0.719
 - Materials Q2, SJR 0.682
 - Symmetry Q2, SJR 0.540
 - Crystals Q2, SJR 0.538
 - Environments Q2, SJR 0.495
- From 2020 “MDPI Reviewer Board” member
- Speaker at 12 international (Canada, China, Russia, Italy, online) and 13 national conferences

Affiliations to scientific associations and consortiums

- INSTM (Consorzio Interuniversitario Nazionale per la Scienza e la Tecnologia dei Materiali), from 2015 to present
- AIMAT (Associazione Italiana di Ingegneria dei Materiali) from 2015 to present
- ACI-IC (American Concrete Institute, Italy Chapter) from 2016 to present
- CSGI (Consorzio interuniversitario per lo sviluppo dei Sistemi a Grande Interfase), from 2017 to present
- AIM (Associazione Italiana di Metallurgia) from 2017 to present
- ICerS (Società Ceramica Italiana) from 2017 to 2021

Bergamo, 14/12/2023

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