



Luca Parente

EDUCATION AND TRAINING

PhD in Structural Engineering

G. D'Annunzio University of Chieti-Pescara, Sapienza University of Rome, University of Catania

Italy | Field(s) of study: Visiting researcher at Imperial College of London; Defense against natural risks and ecological transition of built environment; Modelling and vulnerability analysis of concrete structures | **EQF level 8**

Research Scholarship

G. D'Annunzio University of Chieti-Pescara

Pescara, Italy | Field(s) of study: Advanced Structural Modeling of Concrete Structures

Master's degree in civil engineering

Sapienza University of Rome

Rome, Italy | Final grade: 110/110

Bachelor's degree in construction engineering

Tor Vergata University of Rome

Rome, Italy | Final grade: 110/110 Cum Laude

PUBLICATIONS

Micromechanical buckling analysis of soft lattice metamaterials accounting for random imperfections

L. Parente, D. Addressi, P. Di Re, C. Gatta, E. Sacco, Mechanics Research Communications, 2025

Corotational force-based beam finite element with rigid joint offsets for 3D frames structures

P. Di Re, D. Addressi, C. Gatta, L. Parente, E. Sacco, Computer Methods in Applied Mechanics and Engineering, 2024

A fiber beam element based on plastic and damage models for prestressed concrete structures

L. Parente, D. Addressi, E. Spacone, Engineering Structures, 2023

WORK EXPERIENCE

 Rome, Italy

Structural Engineering Consultancy for Heritage Concrete Structures

Implemented a dedicated numerical routine to perform real-time verification of reinforced concrete components under combined load and settlement effects, integrating soil-structure interaction modelling within the structural assessment of a heritage dome.

 Pescara, Italy

Numerical Highway Bridge Modelling and Monitoring

Developed and calibrated nonlinear numerical models to support the structural monitoring, digital twin implementation, and structural health prediction of a prestressed concrete highway bridge.

 Rome, Italy

Technical Assistant for Construction and Renovation Projects

Provided support in preparing metric estimates, safety and operational plans, and technical reports within a construction and renovation firm.

TEACHING ACTIVITY

Teaching assistant in the Civil Engineering Master Program

Theory of structures (2 years); Finite element in structural analysis (3 years) - Sapienza University of Rome

CREATIVE WORKS

Ice Figure Skater Achieved two regional gold medals within two years of training, demonstrating strong discipline, commitment, and rapid technical progression.

Board Member for Cultural Association The cultural association Le Querce del Tasso has been active for over ten years, organizing classical concerts and promoting symphonic music among younger generations.

SKILLS

civil engineering / bridge engineering / computational mechanics / CAE software / MATLAB / Python (computer programming) / structuring workflows for model calibration, code verification, and version control / interact verbally in English / scientific writing and report / public speaking experience / graphic design / architectural visualization