Gerosa Riccardo
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Education

- 1990-1995

  High school G.Galilei – Erba (CO)

  Final mark: 58/60

- 1995-2000

  Politecnico di Milano

  Master of Science in Mechanical Engineering (final mark 98/100) with a thesis about the aging of aluminum alloys studied by dilatometry and by mechanical and corrosion tests ("L'invecchiamento delle leghe leggere seguito con prove dilatometriche") – Supervisor: Prof. Giuseppe Silva.

- 2001

  Politecnico di Milano

  Engineer qualifying examination

- 2003-2006

  Politecnico di Torino

  PhD in Metallurgy Engineering with a thesis about the characterization of large plastic molds by metallografic, mechanical and fracture mechanics tests ("Caratterizzazione meccanica e microstrutturale di stampi di grosse dimensioni per materie plastiche") – Supervisors: Prof. Donato Firrao, Prof Giuseppe Silva, Prof. Barbara Rivolta

Didactic activity

- Lessons and seminars for the course "Costruzione di Macchine II" (Prof. Angelo Terranova) at Politecnico di Milano from the AY 2003-2004 to the AY 2004-2005.
- Lessons and seminars for the course "Machine Design" (Prof. Angelo Terranova) at Politecnico di Milano from the AY 2005-2006 to the AY 2006-2007 (in English language).
- Lessons and seminars (in English language) for the course "Advanced Design for Mechanical Systems" (Prof. Stefano Miccoli) at Politecnico di Milano in the AY 2006-2007 (in English language).
- Lessons and seminars for the course "Materiali" for Mechanical Engineers (Prof. Barbara Rivolta) at Politecnico di Milano from the AY 2003-2004 to the AY 2004-2005.

- Lessons and seminars for the course “Complementi di Metallurgia” for Mechanical Engineers (Prof. Barbara Rivolta) at Politecnico di Milano from the AY 2003-2004 to the AY 2004-2005.
- Lessons and seminars for the course Metallurgia (Prof. Barbara Rivolta) at Politecnico di Milano from the the AY 2005-2006 to the AY 2006-2007.
- Lessons and seminars for the course “Comportamento Meccanico dei Metalli per Ingegneri Meccanici” (Prof. Giuseppe Silva) at Politecnico di Milano in the AY 2005-2006.
- Lessons and seminars for the course “Metallurgia” per Ingegneri Meccanici (Prof. Giuseppe Silva) at Università degli Studi di Pavia from the AY 2005-2006 to the AY 2009-2010.
- Lessons and seminars (in English language) for the course “Mechanical Metallurgy” (Prof. Barbara Rivolta) - Master of Science in Mechanical Engineering at Politecnico di Milano from the AY 2006-2007 to the AY 2011-2012.
- Lessons and seminars for the course “Metallurgia e Materiali non Metallici” (Prof. Barbara Rivolta) at Politecnico di Milano in the AY 2006-2007.
- Professor of the course “Laboratorio di Processi Metallurgici” at Politecnico di Milano in the AY 2008-2009.
- Professor of the course “Metallurgia e Materiali non Metallici” at Politecnico di Milano from the AY 2009-2010 to the AY 2017-2018.
- Professor of the course “Applied Metallurgy” - Master of Science in Mechanical Engineering at Politecnico di Milano from the AY 2010-2011 to the AY 2022-2023.
- Professor of the course “Laboratory of Mechanical Metallurgy” - Master of Science in Mechanical Engineering at Politecnico di Milano from the AY 2018-2019 to the AY 2023-2024.
- Professor of the course “Materials for sustainable industry” - Master of Science in Mechanical Engineering at Politecnico di Milano from the AY 2023-2024 to the AY 2024-2025.
- Professor of the course “Laboratory of materials and damage analysis” - Master of Science in Mechanical Engineering at Politecnico di Milano in the AY 2024-2025.

Teacher in the following courses dedicated to the mechanical and the metallurgical industry:

- “Le leghe di alluminio per l’industria meccanica” –Tecnochora S.p.A. (Lecco) - February/April 2004.
- 6th course of “Basic Metallurgy” - Tecnochora S.p.A. (Lecco) – September/October 2004.
- “La fatica nel cedimento dei particolari metallici” – Tecnochora S.p.A. (Lecco) – July 2004.
- “Il comportamento fragile dei materiali metallici” - Tecnochora S.p.A. (Lecco) – July 2004.
- “Le leghe di alluminio per l’industria meccanica” - Gandini SpA, Canzo (CO) – October/November 2004.
- Basic metallurgy course about ferrous materials - Fomas SpA, Osnago (LC) – February/April 2005.

- 7th course of “Basic Metallurgy” – Politecnico di Milano – September/October 2005.
- 8th course of “Basic Metallurgy” – Politecnico di Milano – September/October 2006.
- 9th course of “Basic Metallurgy” – Politecnico di Milano – September/October 2007.
- Basic Metallurgy course – API Lecco – February/April 2008.
- 10th course of “Basic Metallurgy” – Politecnico di Milano – September/October 2008.
- Metallurgy course – Costacurta S.p.A. – June 2009.
- Training course “Potenziamento delle competenze alla Gilardoni Vittorio", Progetto “Disegno meccanico e tecnologia" - API Lecco – October 2010.
- “Failure Analysis & Forensic Engineering” – October 2012.
- Metallurgy course – Mario Frigerio S.p.A. – November/December 2013.
- “Failure Analysis & Forensic Engineering” – October 2014.
- 11th course of “Basic Metallurgy” – Politecnico di Milano – September/October 2016.
- Basic Metallurgy course – Ugitech Italia Srl – October 2017.
- Basic Metallurgy course – M.S.Ambrogio S.p.A. – October 2018.
- Basic Metallurgy course – M.S.Ambrogio S.p.A. – October/November 2020.
- Metallurgy course – Forge Fedriga Srl – Settembre 2018/Giugno 2019.

Research activity and projects

- Experimental activity and data analysis for the research project “Valutazione della legge di ingrossamento del grano austenitico in alcuni acciai da costruzione” – Tenaris Dalmine S.p.A. – 2003-2004.
- Experimental activity and data analysis for the research project “Valutazione delle caratteristiche meccaniche di acciai da polvere sinterizzati in un forno innovativo” - Stame srl – 2004.
- Experimental activity and data analysis for the research project “Verifica del comportamento alla tensocorrosione di acciaio inossidabile austenitico in presenza di saldature laser” - ABB SACE SpA – 2005.
- Research project PRIN 2003, “Tenacità a frattura degli acciai per stampi per materie plastiche: trasformazioni strutturali al raffreddamento e analisi della propagazione di cricche” – Industrial partner Lucchini RS SpA. – 2003.
- Research project PRIN 2005, “Progettazione di acciai innovativi a saldabilità migliorata per stampi per materie plastiche: valutazione del comportamento a frattura, a fatica e ad usura anche in presenza di saldature” – Industrial partner Lucchini RS SpA. – 2005.
- Experimental activity and data analysis for the research project “Caratterizzazione Meccanica, Strutturale e di Lavorabilità di una serie di quattro acciai destinati alla fabbricazione di stampi per materie plastiche” - Lucchini RS SpA – 2008.
- Experimental activity and data analysis for the research project “Study of the hot deformation process of microalloyed steels” – Tenaris Dalmine spa - 2009-2010.
- Experimental activity and data analysis for the research project “Investigation of high strength steels for fasteners”- Brugola OEB Industriale S.p.A. – 2012.

- Experimental activity and data analysis for the research project “Investigation on new steels for moulds” - Lucchini RS – 2012
- Experimental activity and data analysis for the research project “Nuova fase di certificazione della materia prima da impiegarsi durante il processo di stampaggio tramite pressofusione, da realizzarsi attraverso apposito innovativo dispositivo integrato al sistema di produzione aziendale” – Costamp S.p.A – 2012.
- Experimental activity and data analysis for the research project "Caratterizzazione del comportamento meccanico di acciai innovativi" - Lucchini RS – 2012.
- Experimental activity and data analysis for the research project “Prove meccaniche e ricerca delle condizioni di stiratura ottimale per raddrizzatura delle barre estruse in leghe di titanio per uso aeronautico” – Siderval S.p.A – 2012.
- Experimental activity and data analysis for the research project EU-funded DiGeSpo– 2010-2013.
- Experimental activity and data analysis for research project “Verifica dello stato tensionale residuo in manufatti realizzati mediante esecuzione di saldature con materiale d’apporto” - Belleli Energy - 2013
- Supervisor of the research project “Influenza del processo produttivo sulle proprietà metallurgiche di vergella laminata presso l’impianto Arlenico di Lecco” - Arlenico S.p.A. – 2016.
- Experimental activity and data analysis for the research project “Analisi metallurgica di acciai innovativi per prodotti laminati a caldo” - Duferco S.P.A. – 2018.
- Supervisor of the research project “Effetti del processo di laminazione termomeccanica sulle proprietà metallurgiche di vergella in acciaio speciale” - Arlenico S.p.A. – 2019.
- Experimental activity and data analysis for the Horizon 2020 research project “PUZZLE_DIE: an innovative solution for a faster and cheaper car weight reduction to help carmakers to meet European limits to CO2 emissions” - COSTAMP GROUP S.P.A. – 2017-2020.
- Experimental activity and data analysis for the research project “Influenza del ciclo produttivo su profili strutturali e suole in acciaio laminato” - TRAVI E PROFILATI DI PALLANZENO S.P.A. – 2021.
- Supervisor of the research project “Laminazione termomeccanica di vergella in acciaio speciale: proprietà metallurgiche e controllo dei difetti superficiali” - Arlenico S.p.A. – 2021.

Scientific activity

The scientific activity is documented by papers, works presented at national and international conferences about the following topics:

- **Powder Metallurgy.** Many experimental works were carried out in this research field, especially on steel powders with different chemical composition and heat treatments. The experimental activity regarded the microstructural and the mechanical characterization with particular attention to the fracture mechanics.
- **Traditional and innovative steels.** In this research field, the phase transformations induced by specific heat treatments were investigated by dilatometry and other laboratory tests. The influence of the microstructure on the static and the dynamic properties of special steels (stainless and not-stainless) was studied at ambient and high temperature conditions.
- **Non-ferrous alloys.** In this research field, the phase transformations and the precipitation of hardening compounds were studied by dilatometry and mechanical tests varying the heat treatments parameters. Experimental works were performed on aluminum, titanium and nickel alloys.

COMPETENCES

Language

	Speaking	Reading	Writing	Listening
Italian	Native	Native	Native	Native
English	Good	Good	Good	Good

Technical skills

- Use of laboratory machines and instruments in the metallurgical and the mechanical fields for the execution of static and dynamic tests.
- Knowledge of Microsoft Office software (Word, Excel, Access)
- Knowledge of MATLAB and AutoCAD software
- Knowledge of FEM software (PATRAN, ABAQUS)

WORK EXPERIENCE

- July 2001 – October 2001
  ETA spa – Canzo (CO)
  Assembly operator

- October 2001- July 2002
  Fomas spa – Osnago (CO)
  R&D Department

- September 2002 – January 2003
  Technical institute Romagnosi – Erba (CO)
  Teacher of “Mathematics” and “Civil and industrial plants”

- January 2003 - MAY 2006
  Politecnico di Torino
  PhD in Metallurgy Engineering

- March 2005 – July 2005
  Foundation Luigi Clerici – Lecco (LC)
  Teacher of “Mathematics” and “Metallurgy”

- March 2006 - March 2007
  Politecnico di Milano
  Scholarship funded by Hoganas AB (Hoganas, Sweden) for the research project: “Approfondimenti sulla legge di propagazione di cricche di fatica in acciai sinterizzati” - Project supervisor: Prof. Barbara Rivolta

- March 2007 - March 2008
  Politecnico di Milano
  Scholarship funded by ABB SACE SpA (Lenno (Co)) for the research project: ”Approfondimenti sulle leggi di propagazione di cricche in materiali metallici innovativi“- Project supervisor: Prof. Barbara Rivolta

- March 2008 - December 2008
  Politecnico di Milano
  Scholarship funded by Prometeo project: ”Approfondimenti sulle leggi di propagazione di cricche in materiali metallici innovativi“– Project supervisor: Prof. Barbara Rivolta

- December 2008 – December 2021
  Politecnico di Milano
  Assistant Professor - Department of Mechanical Engineering – Politecnico di Milano

- From January 2022
  Politecnico di Milano
  Associate Professor - Department of Mechanical Engineering – Politecnico di Milano