

Chiara Ravasio

University of Bergamo,
Department of Management, Information and Production Engineering
Via Pasubio 7/b, 24044, Dalmine (BG)

Phone : +39 035.2052330

chiara.ravasio@unibg.it

<https://www.unibg.it/ugov/person/3328>

ORCID: <https://orcid.org/0000-0001-9812-7226>

Scopus ID: 8317507000

SSD: [IIND-04/A - Tecnologie e sistemi di lavorazione](#)

GSD: [09/IIND-04 - Tecnologie e sistemi di lavorazione](#)

WORK EXPERIENCE

- *April 2022 - Today*
Associate Professor
University of Bergamo, Department of Management, Information and Production Engineering
– Italy
- *February 2005 - March 2022*
Researcher
University of Bergamo, Department of Design and Technologies – Italy
- *June 2000 - April 2001*
Production Engineering
Brembo Spa – Italy

Fields of research:

- Manufacturing Technologies
- Unconventional Technologies
- Micromachining
- Development of modelling for prediction process performance
- Evaluation of manufacturing technologies
- Sustainability evaluation

TEACHING ACTIVITIES

Courses at University of Bergamo and Polytechnic of Milano:

- Innovative Manufacturing Technologies
 - Smart Manufacturing Technologies
 - Manufacturing Technologies
 - Manufacturing Studies
 - Technologies and Applications of Stone Materials
 - Forming Processes
-

EDUCATION AND TRAINING

- *September 1993 – April 1999*
Master Degree in Industrial Engineering
University of Bergamo – Italy
 - *April 2001 – May 2004*
PhD in Technologies and Manufacturing Systems with fellowship
Polytechnic of Milano – Italy
 - *June 2003 – December 2003*
Research program: Cutting and material removal with waterjets and abrasive waterjets, Contract number: HPMT-CT-2001-00280
Institute of Materials Science, Department Waterjet Laboratory, University of Hannover – Germany
-

RESEARCH PROJECTS

- Participation in the project "Marketing of the technologies for SME in Lombardia" funded by Regione Lombardia with local coordinator Prof. Maccarini, 2005
 - Participation in the project of national interest PRIN 2006 "Innovative Technologies for Metal Foam (acronym TILAS)" with local coordinator Prof. Maccarini, 2007–2008
 - Participation in the project of national interest PRIN 2008 "INnovative TEchnologies for industrial Metal foam Applications (acronym INTEMA)" with local coordinator Prof. Maccarini, 2010–2011
 - Participation in the project "Lombardy Network of Excellence for Instrumental Mechanics and Laboratories (acronym REMS)" funded by Regione Lombardia, with local coordinator Prof. Maccarini, 2011–2012
 - Participation to "TOUCHPLANT", funded by Regione Lombardia with local coordinator Prof. Previdi, 2014 –2015.
 - Participation in the project "SL4A: Smart Living 4 All", funded by Regione Lombardia with local coordinator Prof. Previdi, 2018 –2019.
 - Participation in the project "I.O.B.: Internet of Beauty", funded by Regione Lombardia with local coordinator Prof. Previdi, 2018 –2019.
 - Participation in the project "SMART4CPPS: Smart Solution for Cyber Physical Production Systems", funded by Regione Lombardia with local coordinator Prof. Previdi, 2018 –2021.
 - Participation in the project KOIOS (Knowledge Extraction, Machine Learning and other AI approaches for secure, robust, frugal and explainable solutions in Defence Applications), funded by the European Union Defence Fund with local coordinator Prof. Mazzoleni, 2024–today
 - Participation in the project of national interest "3A-Italy Circular and Sustainable Made in Italy – MICS (3A-ITALY)" with local coordinator Prof. Pinto, 2025–today
-

OTHER ACTIVITIES

- Reviewer for international journals: Advances in Mechanical Engineering, Journal of Mechanical Engineering Science, Applied Sciences, Journal of Materials Processing Technology, International Journal Precision Engineering and Manufacture, Machines, Journal of the Chinese Institute of Engineers, Journal of Manufacturing Processes, Micromachines, Journal of Micro- and Nano-

Manufacturing, Transactions of the Canadian Society for Mechanical Engineering, Journal of Process Mechanical Engineering, Journal of Materials Engineering and Performance, Journal of Engineering Manufacture, Tribology International, Journal of Cleaner Production

- Member of the Scientific Committee of the World Congress on Micro and Nano Manufacturing, 2017 and 2018.
- Member of the Scientific Committee of the International Conference on Manufacturing Engineering and Materials (ICMEM) 2020 and presentation of the Keynote Speech.
- Presentation of the Keynote Speech in the International Conference on Manufacturing Engineering and Materials (ICMEM) 2025
- Participation in the Teaching Board for the PhD Course in "Technology, Innovation and Management" DTIM at the University of Bergamo, from October 2020 to today
- Participation in the Editorial Board of the International Journal of Electrical and Computer Engineering Systems (IJECES), <https://ijeces.ferit.hr>, Scopus index, from May 2020 to today
- Participation in the Editorial Board of the Advances in Science and Technology Research Journal (ASTRJ), <http://www.astrj.com>, Web of Science index, from May 2020 to today
- President of the Examining Board – State exams – I and II session 2024

SCIENTIFIC PUBLICATIONS

- Ravasio C., Nuove frontiere per il waterjet, Lamiera, 2001
- Ravasio C., Il getto d'acqua ora nei più evoluti centri di lavoro, Macchine utensili, 2001
- Monno M., Petrolati M., Ravasio C., Analysis of an accident happened in a job shop in Italy, Proceedings of 16th International Conference on Water Jetting, 2002, Aix-en-Provence, France
- Monno M., Polini W., Ravasio C., Turchetta S., Erosion of natural stone by abrasive grains, WJTA American Waterjet Conference, 2003, Houston, Texas
- Karpinski A., Louis H., Monno M., Peter D., Ravasio C., Scheer C., Südmersen U., Effects of pressure fluctuations and vibration phenomenon on striation formation in AWJ cutting, Proceedings of 17th International Conference on Water Jetting, 2004, pp. 123–136, Mainz, Germany.
- Monno M., Ravasio C., The effect of pressure on the surfaces generated by waterjet: preliminary analysis, Proceedings of 7th International Conference on Advanced Manufacturing Systems and Technology, 2005, pp. 413–425, Udine, Italy
- D'Urso G., Maccarini G., Pellegrini G., Ravasio C., Analysis and optimization of a die casting process by means of a simulation system, 18th International Conference on Production Research, 2005, Fisciano (SA), Italy
- Monno M., Ravasio C., The effect of pressure fluctuation on the cutting ability of pure waterjet, Proceedings of the 8th International Conference on Management of Innovative Technologies, 2005, pp. 49–55, Fiesa, Slovenia. Selezionato e pubblicato su Journal of Mechanical Engineering 52, 2006, 7–8, pp.443–450
- Monno M., Pellegrini G., Ravasio C., An experimental investigation of the kerf realized by AWJ: the

influence of the pressure fluctuations, Proceedings of 18th International Conference on Water Jetting, 2006, pp. 309–321, Gdansk, Poland

- D'Urso G., Maccarini G., Pellegrini G., Ravasio C., A system for vector control of SEM electron beam: a new application for LIGA technique, Proceedings of 8th International Conference on Advanced Manufacturing Systems and Technology, 2008, pp. 441–451, Udine, Italy
- Maccarini G., Monno M., Pellegrini G., Ravasio C., Characterization of the AWJ kerf: the influence of material properties, Proceedings of 19th International Conference on Water Jetting, October 2008, Nottingham, UK
- Monno M., Ravasio C., The effect of cutting head vibrations on the surfaces generated by waterjet cutting, International Journal of Machine Tools and Manufacture, Vol. 5, Issue 3, Mar.05, pp.355–363
- D'Urso G., Maccarini G., Ravasio C., Rivestimenti polimerici delle lamiere e dei materiali metallici, Lamiera, Marzo 2008, pp. 70–74
- Annoni A., Monno M., Ravasio C., "Water jet, a flexible technology", 2007, Polipress
- D'Urso G., Maccarini G., Pellegrini G., Ravasio C., Characterization of SEM Electron Beam LIGA system, 4M 2009 Conference, pp. 279–282, Karlsruhe, Germany
- G. D'Urso, M. Longo, G. Maccarini, C. Ravasio, Characterization Of An EBL System: The Influence Of Process Parameters On Thickness Resist And Engraving Shapes, International Conference Advances in Materials and processing Technologies, 24–27 October 2010, Paris, France
- G. D'Urso, M. Longo, G. Maccarini, C. Ravasio, Investigation of micro EDM machining of micro holes, Proceedings of 11th International Conference on Advanced Manufacturing Systems and Technology, 2011
- G. D'Urso, M. Longo, G. Maccarini, C. Ravasio, Electrical discharge machining of micro holes on titanium sheets, 5th International Conference on Micro and Nanosystems, Washington, USA, August 2011
- G. D'Urso, M. Longo, G. Maccarini, C. Ravasio, Electrical discharge machining of micro-holes on titanium sheets: effect of process parameters and electrode shape, 4M 2011 Conference, 8–10 November 2011, Stuttgart, Germany
- G. D'Urso, G. Maccarini, C. Merla, C. Ravasio, The influence of electrode shape and material on micro EDM drilling process, 4M 2012 Conference, 9–11 October 2012, Vienna, Austria
- M. Monno, G. Pellegrini, C. Ravasio, The reproducibility in AWJ cutting: an experimental case, Proceedings of 21th International Conference on Water Jetting, September 2012, Ottawa, Canada
- G. D'Urso, E. Gallus, G. Maccarini, C. Merla, C. Ravasio, Micro holes on different materials: a comparison between micro EDM and micro LASER technologies, Proceedings of 8th International Workshop on Microfactories, June 2012, Tampere, Finland
- G. D'Urso, G. Maccarini, C. Merla, C. Ravasio, Integration of micro-EDM and EBL processes in silicon manufacturing, Proceedings of 8th International Workshop on Microfactories, June 2012, Tampere, Finland
- G. D'Urso, G. Maccarini, C. Merla, C. Ravasio, Micro EDM Machining Of small faetures on magnesium plates, Proceedings of 1st International Conference on Design and PROCesses for MEDical Devices, May 2012, Padenghe sul Garda, Italy
- G. D'Urso, G. Maccarini, C. Ravasio, Process performance of micro-EDM drilling of stainless steel,

Int Journal of Advanced Manufacturing Technology, (2014) 72:1287–1298.

- G. D'Urso, G. Maccarini, C. Merla, C. Ravasio, A. Surleraux, Comparison EDM / Dry-EDM in microdrilling process, 4M/ICOMM 2015 Conference, March–April 2015, Milano, Italy.
- G. Maccarini, C. Merla, C. Ravasio, A. Bongiorno, I. Fassi, C. Pagano, Influence of micro injection moulding process parameters on mechanical characteristics of POM and POM/CNT composites, 4M/ICOMM 2015 Conference, March–April 2015, Milano, Italy.
- D'Urso G., Ravasio C., Maccarini G., Giardini C., Giorleo L., Attanasio A., Fiorentino A., Ceretti E., REMS: a laboratory for integrated micro-manufacturing, AITEM Conference, September 2015, Napoli, Italy.
- G. D'Urso, G. Maccarini, C. Ravasio, Influence of electrode material in micro-EDM drilling of stainless steel and tungsten carbide, Int Journal of Advanced Manufacturing Technology, March 2015.
- M. Monno, G. Pellegrini, C. Ravasio, Effect of workpiece heat treatment on surface quality of AWJ kerf, Int. J. Materials and Product Technology, Vol. 51, No. 4, 2015, 345–35.
- G. D'Urso, G. Maccarini, M. Quarto, C. Ravasio, Investigation on power discharge in micro-EDM stainless steel drilling using different electrodes, Journal of Mechanical Science and Technology 29 (10) (2015) 4341–4349.
- G. D'Urso, C. Ravasio, The effects of electrode size and discharged power on micro-electrodischarge machining drilling of stainless steel, Advances in Mechanical Engineering 8 (5) (2016) 1–12.
- G. D'Urso, G. Maccarini, C. Ravasio, Influence of electrode material in micro-EDM drilling of stainless steel and tungsten carbide, International Journal of Advanced Manufacturing Technology, Vol. 85, No. 9–12, 2016, 2013–2025.
- G. D'Urso, G. Maccarini, M. Quarto, C. Ravasio, M. Caldara, Micro-electro discharge machining drilling of stainless steel with copper electrode: The influence of process parameters and electrode size, Advances in Mechanical Engineering, 8 (12) (2016) pp. 1–16.
- G. D'Urso, S. Lorenzi, G. Maccarini, C. Ravasio, Investigation on the migration of material from tool to workpiece in micro-EDM machining, Proceedings of 11th International Conference on Micro Manufacturing Orange County, California, USA, March 2016.
- G. D'Urso, C. Ravasio, M. Quarto, Material-Technology Index to evaluate micro-EDM drilling process, Proceedings of 11th International Conference on Micro Manufacturing Orange County, California, USA, March 2016.
- G. D'Urso, G. Maccarini, M. Quarto, C. Ravasio, Product cost modelling for micro-EDM drilling, 4M/ICOMM 2016 Conference, September 2016, Copenhagen, Denmark.
- M. Monno, G. Pellegrini, C. Ravasio, F. Vigano, Interaction between metallurgical state and process parameters on AWJ kerf, Proceedings of 23rd International Conference on Waterjetting, November 2016, Seattle, USA
- G. D'Urso, C. Ravasio, Material-Technology Index to evaluate micro-EDM drilling process, Journal of Manufacturing Processes, 26, 2017, pp. 13–21.
- G. D'Urso, M. Quarto, C. Ravasio, A model to predict manufacturing cost for micro-EDM drilling, International Journal of Advanced Manufacturing Technology 91(5–8), 2017, pp. 2843–2853.
- G. D'Urso, C. Giardini, G. Maccarini, M. Quarto, C. Ravasio, Analysis of the surface quality of steel

and ceramic materials machined by micro-EDM, European Society for Precision Engineering and Nanotechnology, Conference Proceedings – 18th International Conference and Exhibition, EUSPEN 2018, pp. 431–432.

- G. D'Urso, M. Quarto, G. Pellegrini, C. Ravasio, Towards the prediction of micro-EDM drilling performance on WC varying the hole depth, *Manufacturing Technology* 18(6), 2018, pp. 1041–1047.
- G. D'Urso, G. Giardini, C. Ravasio, Effects of Electrode and Workpiece Materials on the Sustainability of Micro-EDM Drilling Process, *International Journal of Precision Engineering and Manufacturing* 19(11), 2018, pp. 1727–1734.
- G. Giardini, G. Pellegrini, C. Ravasio, S. Lorenzi, T. Pastore, Investigation on the migration of material from tool to workpiece in micro-EDM drilling, *Metallurgia Italiana* 111(4), 2019, pp.13–22.
- G. D'Urso, C. Ravasio, Investigation on the effects of exchanged power and electrode properties on micro EDM drilling of stainless steel, *Manufacturing Technology* 19(2), 2019, pp. 337–344.
- G. Pellegrini, C. Ravasio, Evaluation of the sustainability of the micro-electrical discharge milling process, *Advances in Production Engineering & Management* 14(3), 2019, pp 343–354.
- G. Pellegrini, C. Ravasio, A sustainability index for the micro-EDM drilling process, *Journal of Cleaner Production* 247, 2020, 119136.
- G. Maccarini, G. Pellegrini, C. Ravasio, Effects of the properties of workpiece, electrode and dielectric fluid in micro-EDM drilling process, *Procedia Manufacturing* 51 (2020) 834–841.
- G. Maccarini, G. Pellegrini, C. Ravasio, Keynote lecture: Micro-EDM Process Sustainability Aspects, *Advances in Manufacturing Engineering and Materials II, Proceedings of the International Conference on Manufacturing Engineering and Materials (ICMEM 2020)*, 21–25 June, 2021, Nový Smokovec, Slovakia.
- L. Calabrese, M. Azzolini, F. Bassi, E. Gallus, S. Bocchi, G. Maccarini, G. Pellegrini, C. Ravasio, Micro-Milling Process of Metals: A Comparison between Femtosecond Laser and EDM Techniques. *Journal of Manufacturing and Materials Processing* 5 (2021) 125, EISSN 2504–4494, <https://doi.org/10.3390/jmmp5040125>
- Ravasio C, Pellegrini G, Quarto M. Development of CO2 efficiency index for evaluating sustainability of microelectrical discharge drilling process. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*. Vol 237, Issue 5, 758–769, 2023; doi:10.1177/09544054221111903
- Ravasio C, Pellegrini G, Experimental Investigation on the Effects of the Geometry of Micro Hole on the EDM Drilling Process, 2022, *Manufacturing Technology* 22(4), DOI:10.21062/mft.2022.053
- G. Pellegrini, C. Ravasio, G. Rosace, V. Trovato, Influence of 4-dodecylbenzenesulfonic acid as a surfactant on a graphite-based dielectric in powder mixed electric discharge machining, *The International Journal of Advanced Manufacturing Technology* 2022, DOI:10.1007/s00170-022-10565-w
- Pellegrini, G., Ravasio, C., Study of the Law Motion of the Micro-EDM Drilling Process, *Journal of Manufacturing and Materials Processing*, 2023, 7(5), 165
- Pellegrini, G., Ravasio, C., Investigation on electrode wear in micro-EDM drilling, *Mm Science Journal*, 2024, 2024–November, pp. 7619–7625

- G. Pellegrini, C. Ravasio, G. Rosace, V. Trovato, Comparative Analysis of Different Graphite Concentrations in Micro-PMEDM Drilling, Journal of Manufacturing and Materials Processing 2025, 9(1), 1
- Ravasio C, Conconi S, Stehle D, Pude F, Poloprudský J, Šiška F, Chlupová A, Hloch S, Erosion in the contact periphery in the initiation zone due to erosion of abrasive water jet, International Journal of Advanced Manufacturing Technology 2025, 136(7), pp. 3641–3653
- C. Ravasio, G. Pellegrini, Effects of the dielectric flow rate of internal washing on micro-EDM drilling performance, International Journal of Advanced Manufacturing Technology, 2025, 136(11), pp. 5257–5270
- C. Ravasio, G. Pellegrini, Experimental investigation on micro-EDM hybrid drilling process, Advances in Industrial and Manufacturing Engineering, 2025, 10, 100155
- C. Ravasio, G. Pellegrini, L. Nani, M. Locatelli, S. Lorenzi, Analysis of the surface of micro EDM holes, Mm Science Journal, 2025, pp. 8648–8653

AWARDS

- Best paper Award (Analysis of the surface of micro EDM holes), International Conference on Manufacturing Engineering and Materials ICMEM 2025, 23rdJune –27thJune 2025, Nový Smokovec, Slovakia
- Best paper Award (Investigation on electrode wear in micro-EDM drilling), Transdisciplinary and Emerging Approaches to Multidisciplinary Science, 11.9.2024 – 13.9.2024, Ostrava, Czech Republic
- Best paper Award (Effects of pressure fluctuations and vibration phenomenon on striation formation in AWJ cutting), International Conference on Water Jetting, 2004, pp. 123–136, Mainz, Germany

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

Dalmine, 08.01.2026

Chiara Ravasio

