

CURRICULUM VITAE

Federico G. Lastaria

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- **Contact information** federico.lastaria@polimi.it
- **Date of birth** November 5, 1955
- **Birthplace** Milano (Italy)
- **Citizenship** Italian
- **Research and teaching interests**
 - Differential geometry.
 - Geometric methods for physics and engineering.
 - Geometric algebra.
 - Combinatorics.
 - Improving high school and university mathematics curricula.
- **Education**
 - Ph.D. in Differential Geometry, from Milan State University.
 - M.S. in Mathematics, from Milan State University. (Diploma cum laude)
- **Scholarships and grants**
 - 1980. Scholarship from the *Italian National Research Council* (CNR).
 - 1985-1989 Ph.D. scholarship from Milan State University.
 - 1990-1991 Senior research grant from the *Istituto Nazionale di Alta Matematica* (*High Mathematics National Institute*).
- **Teaching responsibilities**
 - 1993 - 2016 Politecnico di Milano, School of Industrial Engineering and Information. Degree Programmes in Aerospace Engineering, Mechanical Engineering, Energy Engineering.
Course level: First-year undergraduate.
Role: Instructor.
Courses taught since 1993 - such as *Geometria*, *Elementi di Analisi Matematica A e Geometria*, *Analisi Matematica B*, *Analisi e Geometria 1* (ID code 081360), *Analisi e Geometria 2* (ID code 081372) - include topics from:

- * Analysis 1
- * Analysis 2
- * Geometry
- * Linear algebra
- * Discrete mathematics
- 1992-1993 Università di Roma 2 School of Engineering:
 - * Linear Algebra and Analytic Geometry.
- 1989 - 1990 Degree Programme in Physics, Como University. Teaching assistant in the course of
 - * Geometry.
- **Teaching assignments at the Specialization School in Mathematics for High School Teachers.** (Silsis).
 - 2003 - 2009
 - * Algebra and combinatorics.
 - * Supervisor of final theses
 - 1996 - 2003 Specialization School on Mathematics and Didactics of Mathematics. Lectures on:
 - * Functions and combinatorics.
 - * Symmetries.
- **Other teaching responsibilities.**
 - 1984-1991 High school teacher of mathematics and physics.
 - 1999-2003 Mathematics teacher in a prison (Milano).
- **Academic service positions**
 - 2001-2003 National coordinator of the project: *Scientific cooperation and organization of post-graduate studies in mathematics with Birzeit University*. (Cooperation between the mathematics departments of seven Italian universities and the Mathematics Department of Birzeit University, Palestine). The project was funded by the Italian University and Research Ministry.
 - 2005-2007 Member of the Didactic Assessment Committee of the Faculty of Industrial Engineering of the Politecnico di Milano.
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- **Talks in International Conferences**
 - The International Conference on Mathematics Education Into the 21st Century, Cairo, 1999.
 - The International Conference on Mathematics Education Into the 21st Century, Amman, 2000.

- Third International Palestinian Conference on Mathematics and Mathematics Education (IPCM). August 9-12, 2000. Bethlehem, Palestine.
- International Conference on Mathematical Sciences, Gaza, Palestine, 15-17 May 2006.
- New Trends in Mathematics and Physics, Birzeit University, Palestine, July 27-30, 2008.

• **Articles and reports**

- Lastaria, F.G., *Metriche omogenee con la stessa curvatura*, Ph.D. Thesis in Mathematics, 1989, Università di Milano.
- Lastaria, F.G., *Homogeneous metrics with the same curvature*, Simon Stevin Journ. of Pure Appl. Math., 65 (1991) pp. 267-281.
- Lastaria, F.G., *Comparison of metrics on three-dimensional Lie groups*, Rend. Mat. Acc. Lincei, s. 9, vol. 2 (1991) pp. 207-210
- Lastaria, F.G., Tricerri F., *Curvature-orbits and locally homogeneous Riemannian manifolds*, Ann. Mat. Pura Appl., CLXV (1993), pp. 121–131.)
- Lastaria, F.G., *On separable algebras in Grothendieck Galois theory*, Le Matematiche, Catania, 127-136, LI, (1996)
- Lastaria, F.G., *Azioni e rappresentazioni di gruppi*, Corso di Perfezionamento in matematica e didattica della matematica, Note del corso, (1996)
- Lastaria, F.G. e Betti R., *Per una concezione dialettica della matematica*, Lett. Mat. Pristem, 12-14, 25, (1997)
- Lastaria, F.G., *Introduzione alla Combinatoria*, Corso di Perfezionamento in matematica e didattica della matematica, Note del corso, (1998)
- Lastaria, F.G., *Lie subalgebras of real and complex orthogonal groups in dimension four*, , Journal of Mathematical Physics, 449-453, 40, (1999)
- Lastaria, F.G. e Saita M., *Esercizi di Algebra Lineare*, C.U.S.L., Milano, 1998.
- Lastaria, F.G. e Saita M., *Appunti di Algebra Lineare*, C.U.S.L., Collana Scientifica, Milano, 1999.
- Lastaria, F.G. , *An Invitation to Combinatorial Species*, Proceedings of the International Conference on Mathematics Education Into the 21st Century, Cairo, 1999.
http://ii.uwb.edu.pl/akk/sem/sem_rota.htm
- Lastaria, F.G. , *Introduzione al dossier: "Categorie e spazio: un profilo"*, lettera matematica pristem, Springer, 31, (1999)
- Frezzotti, A., Lastaria, F.G., Mortola, S., *Through the bars. Teaching and learning mathematics in jail*, Proceedings of the International Conference on Mathematics Education Into the 21st Century, Amman, 2000.
<http://math.unipa.it/grim/jourdain>
- Lastaria, F.G. , *On the Category-Theoretic Approach to Differential Geometry*, Proceedings of the Third International Palestinian Conference on Mathematics and Mathematics Education, Bethlehem University, 2000.

- Lastaria, F.G., Munarini, E., Torri, D., *Enumerative Combinatorics: methods and applications*. Subjclass: 05A05, 68R05 Quaderno del Seminario Matematico dell'Università Cattolica di Brescia.
<http://www.dmf.unicatt.it/cgi-bin/preprintserv/semmat/Quad2001n22>
- Lastaria F.G., *On the derivatives of one-forms along their metrically associated vector fields*, The International Conference on Mathematical Sciences, Gaza, Palestine, May 2006.
- Lastaria F.G., *Infinitesimal Stokes's Formula and Integration Theory of Forms and Pseudo-Forms*, New Trends in Mathematics and Physics, Birzeit University, Palestine, July 27-30, 2008.
- A. Kramer, F. Lastaria, N. Zagaglia Salvi, *Perfect matchings of a graph associated with a binary de Bruijn digraph*, Discrete Mathematics 310(22), 3241-3245 (2010).
- L. Frigerio, F. Lastaria, N. Zagaglia Salvi, *Adjacent vertex distinguishing edge colorings of the direct product of a graph by a path or a cycle*, Discussiones Mathematicae Graph Theory 31(3) (2011) 547-557.
- A. Dama, F. Lastaria, *Explicit versus implicit method for radiative heat transfer in gray and diffuse enclosures*, International Journal of Heat and Mass Transfer 55 (2012) 3829-3833.
- (a cura di F. Lastaria), *Isaac Newton, "De Quadratura Curvarum". Introductio*. Traduzione dal latino e note di Federico Lastaria. (2014)
- F. Lastaria, Luigi Quartapelle, *Rappresentazioni del gruppo SO_3 e moduli di Lamé.*, 2016. (Preprint).

• **Pedagogical and research guidelines.**

- Paying attention to political and social environment.
 - * Support to the *Right to Education Campaign*. International campaign to defend the rights of Palestinian students and teachers living under the racist Israeli Occupation and under the siege of Gaza.
- Emphasizing the importance of deep and wide mathematical education, trying to avoid artificial barriers between geometry, analysis, algebra, mathematical physics and so on.
- Improving specialization that leads to deeper comprehension of mathematics and to enrichment of the quality of teaching and research, while avoiding excess of self-referential specialism.
- Improving scientific dialogue and cooperation between experts in different fields, to enhance the quality of research and teaching.

Milano, July 25, 2016.