

# SANDRO CAPARRINI

## Personal address:

### Professional address:

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## CURRICULUM VITAE ET STUDIORUM

### EDUCATION & WORK EXPERIENCE

#### Education

- Ph.D. in MATHEMATICS, University of Turin, Italy, 2005. Dissertation: “The origin of vector calculus in geometry and mechanics.”
- *Diploma* (one-year course) in “Pedagogy of Mathematics and Physics”, University of Turin, Italy, 1998.
- *Diploma* (one-year course) in “Pedagogy of Mathematics”, University of Turin, Italy, 1997
- M.S. in MATHEMATICS (Italian “laurea”, 4 years), University of Turin, Italy, 1996. Dissertation: “The theory of relativity in Italy: 1900-1940.”
- M.S. in PHYSICS (Italian “laurea”, 5 years), University of Turin, Italy, 1988. Dissertation: “Interactions of slow antiprotons with light nuclei.”

#### Teaching experience

- 10/2021 to 01/2022 Politecnico di Torino: Full responsibility of the course *History of Things* (60 hrs).
- 10/2020 to 06/2021 Politecnico di Torino: Co-teach and assist in teaching *History of Things, Epistemology of Machines*.
- 03/20 to 06/20, Politecnico di Torino: Full responsibility of the Ph.D. course *Introduction to the History of Science* (20 hrs).
- 10/2019 to 06/2020 Politecnico di Torino: Co-teach and assist in teaching *History of Things, History of Technology, Philosophy of Engineering, Epistemology of Machines*.
- 10/2018 to 06/2019 Politecnico di Torino: Co-teach and assist in teaching *History of Things, History of Technology, Philosophy of Engineering, Epistemology of Machines*.
- October 2011 – June 2012, University of Lille 1: *History of mathematics* (for the Licence), *History of mathematics* (for the Master), *Introduction to the history of science, Calculus II*.

- October 2010 – June 2011, University of Lille 1: *History of mathematics* (for the *Licence*), *History of mathematics* (for the *Master*), *Introduction to the history of science*, *Calculus I*.
- 01/08 to 04/08: Full responsibility of the course *History of the Teaching of Elementary Mathematics* (60 hrs), Dept. of Mathematics, University of Ferrara.
- 04/02 to 05/02: Full responsibility of the course *History and Philosophy of Mathematics* for High School teachers (20 hrs), University of Udine.
- 2000 - *Concorso ordinario* for teaching Mathematics and Mathematics for Economy in High Schools; *abilitazione* in Physics and Mathematics & Physics.
- 10/99 to 06/2000: Co-teach and assist in teaching *History of Mathematics*, Dept. of Mathematics, University of Turin.
- 10/89 to 08/99: Teacher of *Mathematics and Physics* at high schools in Italy.
- 10/88 to 08/89: Co-teach and assist in teaching *Electromagnetism and Optics*, Dept. of Physics, University of Turin.

### Professional Memberships

- Founding member of the *Italian Society for the History of Mathematics* (SISM).
- Member of the *Euler Society* (USA).

### Employment

- September 2018 – August 2021: “Ricercatore di tipo A” in History of Science (Politecnico di Torino, Italy)
- September 2011 – August 2012: Attaché temporaire d'enseignement et de recherche (ATER) in History of Mathematics (University of Lille 1, France.)
- September 2010 – August 2011: Attaché temporaire d'enseignement et de recherche (ATER) in History of Mathematics (University of Lille 1, France.)

### Awards and scholarships

- September 2008 – August 2010: May Fellowship at the *Institute for the History and Philosophy of Science and Technology* (Victoria College, University of Toronto, Canada).
- September 2007 – August 2008: post-doc scholarship (“assegno di ricerca”) at the *Dept. of Mathematics* of the University of Ferrara, Italy.
- November 2006 – August 2007: post-doc scholarship at the *Cohn Institute for the History and Philosophy of Science* (Tel Aviv, Israel).
- September 2005 – August 2006: post-doc scholarship at the *Dibner Institute for the History of Science and Technology* (Harvard and MIT, Cambridge, Mass., USA).
- Slade Prize for 2003 of the *British Society for the History of Science* for the essay “Early Theories of Vectors”. The prize is awarded biennially to the writer of an essay that makes a critical contribution to the history of science. “The judges agreed that your subject matter is highly original in challenging the customary understanding of the emergence of vector calculus. We feel you provide a succinct case study of the resolution of a problem in one field by the development of techniques and philosophical approaches rooted in other fields, and that you bring to light two previously underestimated sources to support your analysis. We very much appreciated your crisp and scholarly style.” See [<https://www.bsbs.org.uk/prizes/bsbs-slade-prize>].

### *Habilitations to conduct self-contained university teaching and to obtain a professorship*

- Storia delle matematiche (= History of Mathematics).
- Storia e filosofia della scienza (= History and Philosophy of Science).

- Fisica teorica delle interazioni fondamentali (= Theoretical physics of fundamental interactions).

## PUBLICATIONS

### Books and monographs

- *Eulero: dai logaritmi alla meccanica razionale* (= *Euler: from logarithms to rational mechanics*), Grandangolo Scienza no. 24. Milano, Corriere della sera, 2017. Reprinted in 2020.
- *Fermat: i numeri per spiegare il mondo*, (= *Fermat: numbers to explain the world*), Grandangolo Scienza no. 9. Milano, Corriere della sera, 2016. Reprinted in 2020.
- (with Rossana Tazzioli) *Alle origini della fisica teorica: la corrispondenza tra Augusto Righi e Tullio Levi-Civita (1901-1920)* (= *At the origin of theoretical physics: the correspondence between Augusto Righi and Tullio Levi-Civita (1901-1920)*), Milano, PRISTEM 2011, 120 p.
- *I manoscritti di Giovanni Plana dell'Accademia delle Scienze di Torino. Catalogazione e Note storiche*, (= *The manuscripts of Giovanni Plana in the Turin Academy of Science. Description and Historical Notes*), Quaderni CRISIS I, M.S. Litografia. Turin 2000, 289 p.

### Peer-reviewed articles and other contributions to edited works

- “Ruffini e la matematica del suo tempo,” in *Paolo Ruffini, matematico e presidente della Società dei XL. Atti del Convegno all'Accademia dei XL*, edited by Giovanni Paoloni and Enrico Rogora. To appear.
- “Remarks on Lagrange’s *Mécanique Analytique*,” in *Theory, evidence, data: the philosophy of George E. Smith*, edited by Chris Smeenk and Marius Stan, Boston Studies in the Philosophy of Science, Boston, Springer. To appear.
- “When Did Torques and Angular Velocities Become Vectors? A Historical Comedy of Errors,” *American Journal of Physics*. To appear.
- “La teoria delle macchine di S.D. Poisson (1833),” in *Ad limina: Frontiere e contaminazioni transdisciplinari nella storia delle scienze. Atti del Convegno nazionale della Società Italiana di Storia della Scienza: Catania, 30 maggio-1 giugno 2022*, edited by Claudia Addabbo, Elena Canadelli, Luigi Ingaliso, Daniele Musumeci, Luca Tonetti, Valentina Vignieri, Marta Vilardo, Milano, Editrice Bibliografica, 2023, p. 111-123.
- “Siméon-Denis Poisson’s Theory of Machines (1833),” in *Sustainable Development Goals – proceedings of the I4SDG Workshop 2021*, edited by Giuseppe Quaglia, Alessandro Gasparetto and Victor Petuya, Boston, Springer, 2022, p. 601-607.
- (with Guillaume Jouve) “Editoriale,” *Lettera Matematica PRISTEM* **88-89**, March 2014, p. 3. English translation: “Letter from the Editors,” *Lettera Matematica - International Edition*, vol. 2, Issue 1-2 (June 2014), p. 1-2. Online: <https://link.springer.com/journal/40329/2/1/page/1>
- “La personalità di Lagrange,” *Lettera Matematica PRISTEM* **88-89**, March 2014, p. 8-9. English translation: “The Personality of Lagrange,” *Lettera Matematica - International Edition*, vol. 2, Issue 1-2 (June 2014), p. 9-11. Online: <https://link.springer.com/journal/40329/2/1/page/1>
- “Lagrange e l’Accademia delle Scienze di Torino,” *Lettera Matematica PRISTEM* **88-89**, March 2014, p. 36-37. English translation: “Lagrange and the Turin Academy of

- Sciences,” *Lettera Matematica - International Edition*, vol. 2, Issue 1-2 (June 2014), p. 35-37. Online: <https://link.springer.com/journal/40329/2/1/page/1>.
- “La storia della Méchanique analitique,” *Lettera Matematica PRISTEM* **88-89**, March 2014, p. 46-55. English translation: “The History of the *Méchanique analitique*,” *Lettera Matematica - International Edition*, vol. 2, Issue 1-2 (June 2014), p. 47-54. Online: <https://link.springer.com/journal/40329/2/1/page/1>
  - “Lagrange e i fondamenti dell’Analisi,” *Lettera Matematica PRISTEM* **88-89**, March 2014, p. 56-58. English translation: “Lagrange and the Foundations of Analysis,” *Lettera Matematica - International Edition*, vol. 2, Issue 1-2 (June 2014), p. 55-57. Online: <https://link.springer.com/journal/40329/2/1/page/1>
  - “Esami di matematica dei tempi andati,” *Lettera Matematica PRISTEM* **88-89**, March 2014, p. 56-58. English translation: “Mathematics examinations of days past,” *Lettera Matematica - International Edition*, vol. 2, Issue 1-2 (June 2014), p. 75-78. Online: <https://link.springer.com/journal/40329/2/1/page/1>
  - “Joseph-Louis Lagrange: cronologia essenziale”, *Lettera Matematica PRISTEM* **88-89**, March 2014, p. 94-96. English translation: “Joseph-Louis Lagrange: Essential Timeline,” *Lettera Matematica - International Edition*, vol. 2, Issue 1-2 (June 2014), p. 93-96. Online: <https://link.springer.com/journal/40329/2/1/page/1>
  - “A note on ‘oblique-angled diameters’,” *The Mathematical Spectrum* **44** (2012), p. 122-124.
  - “A Walk Through Mathematical Turin,” *The Mathematical Intelligencer* **32** (2010), p. 59-68.
  - “An Unpublished Letter by Lagrange Concerning the Turin Academy of Science,” *Atti della Accademia delle Scienze di Torino* **141**, Classe di Scienze Fisiche, Matematiche e Naturali (2007): pp. 45-52
  - “Il calcolo vettoriale di Domenico Chelini (1802-1878),” (= “The vector calculus of Domenico Chelini (1802-1878)”), *Bollettino di storia delle scienze matematiche* **27** (2007), p. 197-218.
  - (with Giovanni Paoloni) “Il Dibner Institute,” (= “The Dibner Institute”), *Lettera Matematica PRISTEM* **59**, June 2006, p. 60-64.
  - (with Franco Pastrone), “E. Frola (1906-62): An Attempt Toward an Axiomatic Theory of Elasticity,” *Journal of Elasticity* (Essays and Papers Dedicated to the Memory of Clifford Ambrose Truesdell III), **72** (2003), p. 43-55.
  - “Guido Fubini e la trasformata di Laplace: storia di un manoscritto inedito,” (= “Guido Fubini and the Laplace transform: history of an unpublished manuscript”), *Bollettino di storia delle scienze matematiche* **23** (2003), p. 47-63.
  - “The Discovery of the Vector Representation of Moments and Angular Velocity,” *Archive for History of Exact Sciences* **56** (2002), p. 151-181.
  - “On the History of the Principle of Moment of Momentum,” *Sciences et Techniques en Perspective*, (2)**3**, 1999, p. 47-56.

### Monographic articles and contributions to edited monographic volumes

- “Rational mechanics,” in *The SAGE encyclopedia of theory in science, technology, engineering, and mathematics*, 2 vols., edited by James Mattingly, Los Angeles, SAGE Publications, 2023, vol. 2, p. 767-771.
- “Principle of Least Action” in *Encyclopedia of Early Modern Philosophy and the Sciences*, edited by D. Jalobeanu D. and C. Wolfe, Springer, 2020, p. 1665-1670.
- “Euler e la meccanica dei fluidi: una rivoluzione scientifica?” (= “Euler and fluid mechanics: a scientific revolution?”), in *Conferenze e seminari dell’Associazione Subalpina*

- Mathesis, 2017-2018*, edited by L. Giacardi, M. Oggero and C. Sabena, Turin: L'Artistica Editrice, 2018, p. 33-47.
- “Giovanni Antonio Amedeo Plana,” in *Tra le carte della scienza: l'archivio storico dell'Accademia delle Scienze di Torino dal passato alla modernità*, edited by E. Borgi and D. Caffaratto, Turin: Hapax Editore, 2017, p. 34-35.
  - “La relatività in Italia (1905-1940),” (= “The theory of relativity in Italy (1905-1940)”), in *Conferenze e seminari dell'Associazione Subalpina Mathesis, 2016-2017*, edited by L. Giacardi, M. Mosca and C. Sabena, Turin: L'Artistica Editrice, 2017, p. 297-308.
  - (with Craig Fraser) “Mechanics in the Eighteenth Century,” in *The Oxford Handbook of the History of Physics*, edited by J. Buchwald and R. Fox, Oxford: Oxford University Press, 2013, p. 358-405.
  - (with Livia Giacardi) Notes on the works of Giuseppe Domenico Botto and Ottaviano Fabrizio Mossotti in *Tra Il teatro di tutte le scienze e le arti: Raccogliere libri per coltivare idee in una capitale di età moderna (Torino 1559-1861)*, Turin: Compagnia di San Paolo, 2011, p. 259-261.
  - “I manoscritti di Giovanni Plana (1781-1864), astronomo reale di Torino,” (= “The manuscripts of Giovanni Plana (1781-1864), royal astronomer of Turin”), *Annali del Centro Pannunzio 2009-2010*, anno XL, Turin: Centro Pannunzio, 2009, p. 217-228.
  - “Augustin-Louis Cauchy nel suo tempo,” (= “Augustin-Louis Cauchy in his time”), in *Conferenze e seminari dell'Associazione Subalpina Mathesis, 2008-2009*, edited by F. Ferrara, L. Giacardi and M. Mosca, Turin: Kim Williams Books, 2009, p. 83-94.
  - “Leonhard Euler (1707-1783),” in *Conferenze e seminari dell'Associazione Subalpina Mathesis, 2007-2008*, edited by F. Ferrara, L. Giacardi and M. Mosca, Turin: Kim Williams Books, 2008, p. 31-52.
  - “Editor’s Notes”, in *Discovering the Principles of Mechanics 1600-1800: Essays by David Speiser*, edited by S. Caparrini and K. Williams, Basel-Boston-Berlin: Birkhäuser, 2008, p. 269-282.
  - “Euler’s Influence on the Birth of Vector Mechanics,” in *Leonhard Euler: Life, Work and Legacy*, edited by Robert E. Bradley and Edward C. Sandifer, Amsterdam, etc.: Elsevier, 2007, p. 459-477.
  - “On the Common Origin of Some of the Works on the Geometrical Interpretation of Complex Numbers,” in *Two Cultures: Essays in honour of David Speiser*, edited by Kim Williams, Basel-Boston-Berlin: Birkhäuser, 2006, p. 139-151.
  - (with David Speiser), “How Should We Study the Nexus of Architecture and Mathematics?”, *Nexus Network Journal*, vol. 6 no. 2 (Autumn 2004), p. 7-12.
  - “The Theory of Vectors at the Beginning of the Nineteenth Century,” in *Variar para encontrar. Variar pour mieux trouver. The Lore of Variation: Finding Pathways to Scientific Knowledge*, edited by C. Alvarez, J. Rafael Martinez, P. Radelet de Grave, J. Lacki, México: Universidad Nacional, Autónoma de México, Universitas Catholica Lovaniensis, Université de Genève, 2004, p. 235-257.
  - “Early Theories of Vectors,” in *Essays on the History of Mechanics: in Memory of Clifford Ambrose Truesdell and Edoardo Benvenuto*, edited by Massimo Corradi, Antonio Becchi, Federico Foce and Orietta Pedemonte, Basel-Boston-Berlin: Birkhäuser, 2003, p. 179-198.
  - (with Silvia Roero), “Mario Gliozzi, storico della scienza,” (= “Mario Gliozzi, historian of physics”), in *Due studiosi laici: Mario e Giuliano Gliozzi (in occasione dei 100 anni della FNISM)*, Turin, Unione culturale “Franco Antonicelli”, 2003, p. 11-22.
  - “Lettere di C. Agostinelli e di I. Opatowski a T. Levi-Civita”, (= “Letters of C. Agostinelli and I. Opatowski to T. Levi-Civita”). in *Aspetti di Meccanica e di Meccanica Applicata nella corrispondenza di Tullio Levi-Civita (1873-1941)*, edited by P. Nastasi and R. Tazzioli, Quaderni P.RI.ST.M, Università Bocconi, 2003, p. 413-426, 569-576.

- “La semplice storia dei numeri complessi,” (= “The simple history of complex numbers”). in *Conferenze e seminari dell’Associazione Subalpina Mathesis, 2001-2002*, edited by E. Gallo, L. Giacardi and O. Robutti, Turin: Associazione Subalpina Mathesis, 2002, p. 141-153.
- “La Relatività,” (= “Theory of Relativity”) ch. 4 of “Fisica Matematica e Meccanica razionale”, in *La Matematica italiana dopo l’Unità. Gli anni tra le due guerre mondiali* (edited by S. di Sieno, A. Guerraggio, P. Nastasi), Milano: Marcos y Marcos, 1998, p. 453-483.
- “I labirinti e la matematica,” (= “Labyrinths and mathematics”), appendix to: M. L. Reviglio della Veneria, *Il labirinto: la paura del Minotauro e il piacere del giardino* (Firenze: Polistampa, 1998), p. 128-131.

### Reviews & essay reviews

- Review of *Il valore della fisica: Enrico Persico nella cultura italiana del Novecento*. edited by Vincenzo Barone and Giovanni Battimelli (Torino: Accademia delle Scienze, 2020), to appear in *Studi Piemontesi*.
- Review of *I Diari Berlinesi (1857-1859) di Giovanni Virginio Schiaparelli*. edited by C. S. Roero and P. Tucci (Torino: Deputazione Subalpina di Storia Patria e Centro di Studi per la Storia dell’Università di Torino, Studi e Fonti XXI, 2018), *Studi Piemontesi* **48** (2019), p. 689-90.
- Review of *La via delle acque (1500-1700). Appropriazione delle arti e trasformazione delle matematiche acque* by C. Maffioli (Olschki, 2010), *Historia Mathematica* **40** (2013), p. 89-91.
- Review of *Euler as Physicist* by D. Suisy (Springer, 2009), *Isis* **101** (2010), p. 432-433
- “Un libro di Edoardo Benvenuto sulla storia della meccanica”, (= “A book by Edoardo Benvenuto on the history of mechanics”), *Lettera Matematica PRISTEM* **73**, September 2009, p. 40-42.
- Review of *Die Werke von Johann I und Nicolaus II Bernoulli. Band 6. Mechanik.*, v. I. Edited and with commentary by Piero Villaggio, with historical notes by Bruna Gaino and a foreword by Patricia Radelet-de Grave. Birkhäuser Verlag, Basel, 2008. xxii+697 pp. In *MathSciNet* (<http://www.ams.org/mathscinet/>)

### Miscellanea

- 15 short historical chapters for a high-school textbook: *Matematica con ...*, by Gabriella Cariani and Mariapia Fico (4 vols., Torino: Loescher, 2002).
- “La macchina analitica,” in *Utopie della macchina: scritti meta-scientifici*, edited by Vittorio Marchis and Marco Pozzi, Udine: Mimesis, 2021, p. 35-40.
- 5 videos for the "MathUp" online course on the history of mathematics (2021/22): *Mathematics and mathematical physics in the 18th century: the Bernoullis*; *Mathematics and mathematical physics in the 18th century: Calculus* (2 units); *Mathematics and mathematical physics in the 18th century: Mechanics* (2 units).

### Editing of research publications

- *Lettera Matematica PRISTEM* **88-89** (December 2013), special double issue for the bicentenary of Lagrange’s death, edited by S. Caparrini and G. Jouve (contributions by B. Belhoste, J. Boucard, F. Brechenmacher, B. Bru, S. Caparrini, P. Crepel, L. Giacardi, G. Jouve, F. Pastrone, L. Pepe, P. Serfaty).

- *Discovering the Principles of Mechanics 1600-1800: Essays by David Speiser*, edited by S. Caparrini and K. Williams, Basel-Boston-Berlin: Birkhäuser, 2008.
- *Lettera Matematica PRISTEM 66-67* (January 2008), special double issue for the tercentenary of Euler's birth, edited by R. Betti and S. Caparrini (contributions by R. Calinger, G. Mikhailov, U. Bottazzini, J. Suzuki, C. Ciliberto, E. Sandifer, G. Bagni, E. Betti, R. Bradley).
- Mirella Macera, Paolo Napoli, and Fernando Delmastro, "Guarino Guarini, Mathematics and Architecture: The Restoration of the Chapel of the Shroud in Turin". Interview by Kim Williams. Edited by Sandro Caparrini. *Nexus Network Journal*, vol. 6 no. 2 (Autumn 2004), 73-90; Internet: [<http://www.nexusjournal.com/Shroud.html>]

### Organization of International Conferences

- 8th annual meeting of the *Società Italiana di Storia delle Matematiche*, Ferrara, 20-22 November 2008.
- Turin, Archivio di Stato, international conference *La Scuola di Giuseppe Peano fra matematica, logica e interlingua*, October 6-7, 2008.
- Turin, Accademia delle Scienze di Torino, international conference *Giuseppe Peano fra matematica e logica*, October 2-3, 2008.
- (with P. Radelet-de-Grave and P. Freguglia) *Calcolo geometrico e sue applicazioni tra Ottocento e Novecento*, PISA, Domus Galilæana, 8 October 2004.
- 2nd annual meeting of the *Società Italiana di Storia delle Matematiche*, Alba, 7-9 November 2002

### Main lectures and presentations

- Catania, *Ad limina: Frontiere e contaminazioni transdisciplinari nella storia delle scienze. Convegno nazionale della Società Italiana di Storia della Scienza, 30 maggio-1 giugno 2022*, November 16, 2022. "Between Science and Engineering: S.D. Poisson's Theory of Machines (1833)."
- Rome, Villa Torlonia, Accademia dei XL *Paolo Ruffini, matematico e presidente della Società dei XL*, November 16, 2022. "La matematica al tempo di Ruffini."
- Seville (Spain), Dept. of Mathematics, *Conceptual Innovation in Classical Mechanics*, September 28, 2022: "Remarks on Lagrange's *Mécanique Analytique*."
- Washington D.C., *Joint Mathematics Meetings of the AMS and the MAA*, January 9, 2021: "An abstract definition of the delta function from the 1830s."
- Catania, *CONVEGNO NAZIONALE DELLA SOCIETÀ ITALIANA DI STORIA DELLA SCIENZA (SISS)*, November 20, 2020: "Le scienze esatte secondo C.A. Truesdell (1919-2000): una valutazione generale."
- Politecnico di Torino, January 31, 2019. "Clifford Truesdell, o della *Filosofia naturale*."
- Duke University (Durham, NC), *Mechanics and matter theory in the Enlightenment*, November 18, 2018. "Remarks on Lagrange's *Mécanique Analytique* (1788)."
- Turin, Dept. of Mathematics, *Conferenze Mathesis*, November 30, 2017: "Euler e la meccanica dei fluidi: una rivoluzione scientifica?"
- Turin, Dept. of Mathematics, *Conferenze Mathesis*, November 17, 2016: "La Relatività in Italia (1905-1940)."
- Vienna, *ERNST MACH CENTENARY CONFERENCE 2016: Ernst Mach (1838–1916) – Life, Work, and Influence*, June 16, 2016: "Mach in Italy: Giovanni Vailati (1863–1909) as Reader and Interpreter of Ernst Mach."

- Torino (Italy), Accademia delle Scienze, *Le meraviglie del paese di Alice: Nel 150° anniversario della pubblicazione di Alice in Wonderland (1865-2015)*, November 24, 2015: “Gli aspetti logico-matematici di «Alice in Wonderland».”
- Siena, *XX Congresso dell’Unione Matematica Italiana*, September 10, 2015: “Clifford Truesdell (1919-2000), storico della filosofia naturale.”
- Lecce, *86th Annual Meeting of the International Association of Applied Mathematics and Mechanics*, March 25, 2015: “The discovery of the vector representation of moments and angular velocity (1750 - 1830).”
- Bilbao (Spain), *First Joint International Meeting RSME-SCM-SEMA-SIMAI-UMI - Special session History of Mathematics in Italy and Spain*, July 3, 2014: “Surprises in Italian mathematics (1800-1840).”
- Torino (Italy), Accademia delle Scienze, *Omaggio a Giovanni Plana*, May 28, 2014: “Le carte inedite di Giovanni Plana nell’Archivio storico dell’Accademia delle Scienze di Torino.”
- Torino (Italy), Accademia delle Scienze, *Lagrange, un europeo a Torino*, October 25, 2013: “La storia della *Méchanique analytique*.”
- Manchester (UK) *24th International Congress of History of Science, Technology and Medicine*, July 25, 2013: “Maxima and minima in Italian mathematics (1770-1820).”
- Padova (Italy), Palazzo del Bo, *Pura o applicata? La Matematica tra teoria e problemi*, April 13, 2013: “Joseph Fourier (1768-1830) tra Fisica matematica e Fisica teorica”
- San Diego (California), *Joint Mathematics Meetings of the AMS and the MAA*, January 9, 2010: “Who discovered vector calculus? The case of Domenico Chelini (1802-1878)”
- Dept. Of Mathematics, University of Mainz, June 19, 2012. “Vectors in mechanics: 1750-1830.”
- Lille, UFR Mathématiques, April 5, 2012. “Les vecteurs en mécanique : 1750-1830.”
- Lille, Centre d’histoire des sciences, February 20, 2012. “Les vecteurs en mécanique : 1750-1830.”
- Carthage College (Kenosha, IL), *Annual Meeting of the Euler Society*, July 25, 2011. “A Few Words About Clifford Ambrose Truesdell (1919-2000).”
- Adelphi University (Garden City, NY), *Annual Meeting of the Euler Society*, July 20, 2010. “Rigid bodies in the eighteenth century.”
- (in collaboration with Rossana Tazzioli), Montréal (Canada), annual meeting of the *Canadian Society for the History and Philosophy of Mathematics*, May 28, 2010: “Relativity and Electromagnetism in the Correspondence Between T. Levi-Civita and A. Righi.”
- San Francisco (California), *Joint Mathematics Meetings of the AMS and the MAA*, January 16, 2010: “Italian Mathematics and Mechanics Between the 18th and the 19th Centuries.”
- Pasadena, CA, Caltech, History of Science Seminars, October 30, 2009: “The Origin of Vector Calculus in Geometry and Mechanics.”
- Portsmouth, RI, Roger Williams University, *Annual Meeting of the Euler Society*, July 14, 2009. The Euler Lecture: “The Influence of Euler on the Birth of Vector Calculus.”
- Toronto, Institute for the History and Philosophy of Science and Technology, HPS Colloquium Series, April 15, 2009: “Changes in our visualization of Nature: the birth of the concept of vector in physics and in mathematics (1750-1850).”
- Rimini, XXVI Seminario Nazionale di Didattica della Matematica, February 20, 2009: “Remarks on G. T. Bagni’s *Interpretazione e didattica della matematica: una prospettiva ermeneutica*.”
- Turin, Dept. of Mathematics, *Conferenze Mathesis*, January 15, 2009: “Augustin-Louis Cauchy nel suo tempo.”



- Ferrara, 8th annual meeting of the *Società Italiana di Storia delle Matematiche*, November 20, 2008: “La conservazione dell’energia da Galileo a Lagrange.”
- Idro (Brescia, Italy), *Matematica, la storia in classe*, September 13, 2008: “La vita di Leonhard Euler.”
- Pisa, Centro di ricerca matematica “Ennio de Giorgi”, international conference *Mechanics, Mathematical Physics and Foundations of Mathematics in the 18th and 19th Centuries*, July 8, 2008: “On the Origin of Vector Calculus in Geometry and Mechanics.”
- Turin, Dept. of Mathematics, *Conferenze Mathesis*, November 15, 2007: “Leonhard Euler (1707-1783).”
- Paris (France), Institut Poincaré, 7th annual meeting of the *Società Italiana di Storia delle Matematiche*, October 26, 2007: “La correspondance entre T. Levi-Civita et A. Righi : électromagnétisme et relativité.”
- Jerusalem (Israel), Hebrew University, annual meeting of the *Israeli Society for the History and Philosophy of Science*, March 18, 2007: “On the Common Origin of Some of the Works on the Geometrical Interpretation of Complex Numbers.”
- Ivrea, *Conferenze Mathesis*, December 13, 2006: “La semplice storia dei numeri complessi.”
- Naples, 6th annual meeting of the *Società Italiana di Storia delle Matematiche*, November 17, 2006: “Sull’origine comune di alcuni lavori sull’interpretazione geometrica dei numeri complessi.”
- Albany, NY, annual meeting of the *Euler Society*, July 31, 2006: “Euler’s Influence on the Birth of Vector Mechanics.”
- Toronto (Canada), annual meeting of the *Canadian Society for the History and Philosophy of Mathematics*, May 30, 2006: “On the Common Origin of Some of the Works on the Geometrical Interpretation of Complex Numbers.”
- Cambridge, MA, *Dibner Institute for the history of science and technology*, April 25, 2006: “The origin of vector calculus in geometry and mechanics.”
- Adelphi University (Garden City, NY), Dept. of Mathematics, *Pohle Colloquium*, February 1, 2006: “The discovery of the vector properties of moments and angular velocity.”
- San Antonio (Texas), *Joint Mathematics Meetings of the AMS and the MAA*, January 14, 2006: “Early Theories of Vectors.”
- Cambridge, MA, *Dibner Institute for the history of science and technology*, November 8, 2005: “The discovery of the vector properties of moments and angular velocity.”
- Turin, *Relativity from 1905 to 2005: past, present and future*, June 1, 2005: “La Relatività nella corrispondenza fra T. Levi-Civita e A. Righi.”
- La Orotava (Tenerife), *Seventh International Conference on the History of General Relativity*, March 14, 2005: “Episodes from the History of Relativity in Italy.”
- Pisa, *Domus Galilaeana*, October 8, 2004: “La preistoria del calcolo vettoriale.”
- Padua, 4th annual meeting of the *Società Italiana di Storia delle Matematiche*, September 10, 2004: “Le origini del calcolo vettoriale nella geometria.”
- Liverpool, June 26, 2004, annual meeting of the *British Society for the History of Science*: “Early Theories of Vectors.”
- Milan, 3rd annual meeting of the *Società Italiana di Storia delle Matematiche*, September 26, 2003: “Le prime teorie dei vettori.”
- Milan, *XVII Congresso dell’Unione Matematica Italiana*, September 12, 2003: “Il calcolo vettoriale di Domenico Chelini (1802-1878).”
- Barcellona, Dept. of Physics, March 26, 2003: “The Origin of Vector Calculus in Geometry and Mechanics.”

- Alba (CN), 2nd annual meeting of the *Società Italiana di Storia delle Matematiche*, November 8, 2002: “La scoperta delle proprietà vettoriali dei momenti e della velocità angolare.”
- Fano, Sala Verdi del Teatro della Fortuna, October 11, 2002: “Momenti nella storia dell'infinito matematico.”
- Pisa, Domus Galilaeana, February 22, 2002: “L’influenza della meccanica e della geometria sulla nascita del calcolo vettoriale.”
- Turin, Dept. of Mathematics, *Conferenze Mathesis*, January 31, 2002: “La semplice storia dei numeri complessi.”
- Genoa, conference *Between Mechanics and Architecture: The work of Clifford Ambrose Truesdell and Edoardo Benvenuto*, Facoltà di Architettura, December 1, 2001: “The origin of vector calculus in geometry and mechanics.”
- Modena, 1st annual meeting of the *Società Italiana di Storia delle Matematiche*, November 9, 2001: “Un manoscritto inedito di Guido Fubini.”
- Palermo, Dept. of Mathematics, 15 June 2001: “La scoperta della rappresentazione vettoriale dei momenti e della velocità angolare.”
- Palermo, Dept. of Mathematics, 14 June 2001: “L’opera di Giovanni Plana.”
- Los Angeles, Dept. of Physics of the University of South California, February 28, 2001: “The history of the discovery of moments.”
- Patzcuaro (Mexico), international conference *Variar para encontrar: el pensamiento de la variación en la historia de las matemáticas y de la física*, September 3, 2000: “The discovery of the vector representation of moments of forces and angular velocity.”
- Pisa, Domus Galilaeana, February 18, 2000: “I manoscritti inediti di Giovanni Plana.”
- Turin, Dept. of Mathematics, March 14, 1992: “La termodinamica dei processi non ciclici.”
- Turin, Dept. of Mathematics, March 7, 1992: “Problemi di stabilità in gusci elastici.”
- Turin, Dept. of Mathematics, March 1, 1992: “Principi variazionali in gusci elastici”
- Turin, Istituto Nutrizione Piante, 4 March 1991: “Modelli matematici relativi alle piogge acide in relazione alla fertilità del terreno.”

Torino, August 10, 2023

DICHIARAZIONE SOSTITUTIVA DELL’ATTO DI NOTORIETA’ (art. 47 D.P.R. n. 445/00)

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Che le dichiarazioni sopra riportate corrispondono a verità.

Torino, 22/10/2023

il dichiarante

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