

Daniele DOMINICI

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Personal data, Education

Born February 21, 1951, Firenze, Italy

Citizenship Italian

Education Master in Physics (Laurea in Fisica), *summa cum laude*, 21/7/1975, supervisor Giorgio Longhi, University of Firenze

Research/Academic positions and institutional responsibilities

- 1978-1981 INFN Fellow, Firenze
- 1981-1988 Researcher of Theoretical Physics of the University of Firenze
- 1988-1989 Associate Professor of Theoretical Physics, University of Salerno
- 1989-1992 Associate Professor of Theoretical Physics, University of Camerino
- 1992-2002 Associate Professor of Theoretical Physics, University of Firenze
- 2002-2021 Full Professor of Theoretical Physics, University of Firenze
- 2006-2009 Head of the Physics Department, University of Firenze
- 2009-2014 Delegate of the Rector of the University of Firenze for the International Ranking Systems
- 2010-2017 Deputy Coordinator of the Galileo Galilei International Center for Theoretical Physics
- 2017-2019 Director of the INFN National Center for Advanced Studies Galileo Galilei International Center for Theoretical Physics
- 2015-2020 President of the Steering and Self-evaluation Committee of the Physics and Astronomy Department, University of Firenze

Visiting positions

- Johns Hopkins University, Spring-Summer 1983
- University of Geneva, 1984-1986
- CERN Winter-Spring 2004

Scientific activity

- More than 150 publications in refereed journals and conference proceedings.
- Contributor to numerous workshops: LEP 200, LHC, Snowmass 2001, ECFA-DESY linear collider workshop, LCWS 2000 and 2002, CLIC physics study group, LHC/ILC study group, CP studies and non standard Higgs physics.
- Member of the organizing committee of 25th and 30th Johns Hopkins Workshop on Current Problems in Particle Theory and of the ILC meeting in Firenze (2007).
- Member of the Local Committee of the Galileo Galilei Institute from 2005 to 2010.
- Member of the Scientific Committee of the Galileo Galilei Institute from 2011 to 2019.
- Member of the Scientific Council of the Firenze University Museum System from 2018 to 2021.
- Local coordinator of PRIN contracts 2008, 2010 and 2015.
- Editor with L. Lusanna and I. Ciufolini of *2001: A RELATIVISTIC SPACETIME ODYSSEY, Experiments and Theoretical Viewpoints on General Relativity and Quantum Gravity*, World Scientific, 2001.
- Editor with G. Azuelos, J. Ellis, G. Grenier, J. Sik Lee, D. Miller, S. Kraml, A. Pilaftsis, W. Porod of *CPNSH report: the hitchhikers guide to non-standard Higgs physics*, CERN Yellow Report, 2006

Recent research interests

Phenomenology and model building of theories beyond the Standard Model of electroweak interactions. Theories in extra compactified dimensions. Carroll symmetries.

Teaching

Mathematical Methods for Physics. Quantum Mechanics. Special Relativity. Theoretical Physics. Quantum Field Theory 1. Advanced Quantum Field Theory.

Outreach

- Director of the journal *Il Colle di Galileo (Galileo's Hill)*, Firenze University Press, 2012-2023
- Curator of the exhibition *La Fisica ad Arcetri: Dalla nascita della Regia Università alle leggi razziali*, open from 25th of May until 30th of September 2016, at the Historic Archive of the Florence City Council.
- Curator of the exhibition *Astronomia e Fisica a Firenze: Dalla Specola ad Arcetri*, Museo La Specola, Firenze, 22nd December 2016 - 19th March 2017.
- Contributor to the exhibition *Tesori inesplorati. Le biblioteche dell'Università di Firenze in mostra*, Biblioteca Medicea Laurenziana, Firenze, 15th February - 23rd June 2017.
- 2016-2017 New museum setup of Villa Galileo, Arcetri.

References

Recent publications

- [1] R. Casalbuoni, D. Dominici and J. Gomis, Nonequivalence of Carroll limits in relativistic string theory, *Phys.Rev.D* 110 (2024) 066008 [arXiv:2403.02152 [hep-th]].
- [2] R. Casalbuoni, D. Dominici and J. Gomis, Superconformal interacting particles, *Phys.Rev.D* 109 (2024) 046009 [arXiv:2312.01743 [hep-th]].
- [3] Luigi Dei et al, (2024). L'Ateneo e il mondo della scienza. In: Fulvio Conti, Emanuela Ferretti, Donatella Lippi, Antonella Salvini, Bernardo Sordi, Andrea Zorzi. Firenze e l'Università: Passato, presente e futuro, pp. 323-338, Firenze: Firenze University Press.
- [4] R. Casalbuoni, D. Dominici and J. Gomis, Two interacting conformal Carroll particles, *Phys.Rev.D* 108 (2023) 086005 [arXiv:2306.02614 [hep-th]].
- [5] R. Casalbuoni, D. Dominici and M. Mazzoni, A brief history of Florentine physics from the 1920s to the end of the 1960s, *Eur. Phys. J. H* 47, 15 (2022) [arXiv:2207.05441 [physics.hist-ph]].
- [6] S. De Curtis, D. Dominici, Spin-1 resonances. *Eur. Phys. J. Spec. Top.* (2021) [arXiv:2110.01907 [hep-ph]].
- [7] R. Casalbuoni, D. Dominici e M. Mazzoni, *Lo spirito di Arcetri. A cento anni dalla nascita dell'Istituto di Fisica dell'Università di Firenze*, FUP, I libri de Il Colle di Galileo vol. 7, 2021.
- [8] R. Casalbuoni, D. Dominici e G. Pelosi, *Enrico Fermi a Firenze: Le Lezioni di Meccanica Razionale al biennio propedeutico agli studi di Ingegneria 1924-1926*, FUP, I libri de Il Colle di Galileo vol. 6, 2019.

- [9] Fausto Barbagli, Simone Bianchi, Roberto Casalbuoni, Daniele Dominici, Massimo Mazzoni, Giuseppe Pelosi, *Astronomia e Fisica a Firenze Dalla Specola ad Arcetri*, FUP, I libri de Il Colle di Galileo vol. 5, 2017.
- [10] Contribution in Donatella Lippi, Paolo Maria Mariano, Stefano Mazzoni, *Tesori inesplorati Le Biblioteche dell Università di Firenze in mostra* Mandragora, 2017, schede su G. Galilei, Dialogo...sopra i due massimi sistemi del mondo..., Opere di Galileo Linceo nobile fiorentino...e Ottavio Pisani, Astrologia seu motus, et loca sidereum...
- [11] Roberto Casalbuoni, Daniele Dominici, Massimo Mazzoni, Giuseppe Pelosi, *La Fisica ad Arcetri Dalla nascita della Regia Università alle leggi razziali*, FUP, I libri de Il Colle di Galileo vol. 3, 2016.
- [12] D. Dominici and I. Roditi, Variational approach to thermal masses in compactified models, JHEP **1508** (2015) 104 [arXiv:1507.01365 [hep-ph]].
- [13] D. Dominici, J. Gomis, K. Kamimura and G. Longhi, Dynamical sectors of a relativistic two particle model, Phys. Rev. D **89** (2014) 4, 045001 [arXiv:1312.1000 [hep-th]].