

PERSONAL INFORMATION

Massimo Dotti

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🆔 ORCID [0000-0002-1683-5198](https://orcid.org/0000-0002-1683-5198)

Gender Male | Date of birth 18th of March 1979 | Nationality Italian

EPR University Associate Professor

WORK EXPERIENCE

2010 – Present Assistant Professor and Associate Professor

Dipartimento di Fisica G. Occhialini, Università degli Studi di Milano-Bicocca; Piazza della Scienza 3, 20126 Milan (ITALY). <https://www.unimib.it/>

- Theoretical (both analytical and numerical) research in galactic dynamics, with a focus on the design, deployment and analysis of large hydrodynamical simulations of galaxy evolution and galaxy mergers on high performance computing systems
- Theoretical (both analytical and numerical) research in massive black hole cosmic growth, with a focus on the evolution of their spins
- Search and verification of massive black hole binaries in large spectroscopical samples
- Routinely teaching at bachelor and master level
- Member and active collaborator of the LISA Consortium and of the Astrophysical working group
- Management/Services: acted as Director of the Master in Astrophysics and Space Physics (2018-2021) and as Vice-Director of the Department of Physics (2018-present)

2009-2010 Postdoctoral Fellow at Max-Planck-Institut für Astrophysik

Research in Massive black holes in AGN and in the formation and evolution of massive black hole binaries

2008-2009 Postdoctoral Researcher at University of Michigan

Research in the evolution of massive black hole spin, accretion feedback and in the formation of massive black hole binaries

EDUCATION AND TRAINING

2004 – 2008 PhD in Physics and Astrophysics

Università degli Studi dell'Insubria, Como (ITALY). Thesis: Massive Black Hole Binaries in Circumnuclear Discs: Orbital Dynamics and Gas Accretion. Supervisor: Prof. Francesco Haardt

1998 – 2004 Master in Physics

Università degli Studi dell'Insubria, Como (ITALY). 110/110 cum Laude. Thesis: The Accretion Problem in the Galactic Center. Supervisor: Prof. Francesco Haardt

PERSONAL SKILLS

Mother tongue Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

- Digital skills**
- Expert in programming techniques (C, fortran, python, scripts)
 - Expert in cosmological and isolated hydrodynamical simulations with different simulation codes (Gadget 2-3-4, Gasoline, Gizmo)
 - Expert in the analysis of large simulations and large observational datasets
 - Daily user of major HPC facilities worldwide
 - Developer of semi-analytical models and of their implementations in simulation codes
 - – Lead responsible for a MSc class in "Galaxies and Dynamics". The students initialize and analyze their own test simulations writing python on jupyter. The simulations are run by the students on distributed machines using public codes.

- Job-related skills**
- Management of large and heterogeneous groups
 - Referee for most journals in the field including Science and Nature
 - supervisor of junior post-docs, PhD students, master and bachelor students (about 100 in total)

Job-related keywords black holes, galaxies, hydrodynamics

- Evaluation metrics**
- H-index (Scopus): 37
 - Citations (Scopus): 3933
 - Indexed products in the last 10 years (Scopus): 75

SELECTED PUBLICATIONS

- 1 Supermassive black hole binaries in gaseous and stellar circumnuclear discs: orbital dynamics and gas accretion, Published in: MNRAS 379 (2007) 956-962, e-Print: 0612505 [astro-ph]
- 2 Dual black holes in merger remnants - II. Spin evolution and gravitational recoil, Published in: MNRAS 402 (2010) 682-690, e-Print: 0910.5729 [astro-ph]
- 3 A Systematic Search for Massive Black Hole Binaries in the Sloan Digital Sky Survey Spectroscopic Sample, Published in: ApJ 738 (2011), 9 pp, e-Print: 1106.1180 [astro-ph]
- 4 Bar-driven evolution and quenching of spiral galaxies in cosmological simulations, MNRAS 465 (2017) 3729-3740, e-Print: 1607.02141 [astro-ph]
- 5 The buildup of strongly barred galaxies in the TNG100 simulation, MNRAS 491 (2020) 2547-2564, e-Print: 1908.00547 [astro-ph]