

# CURRICULUM VITAE

*Massimo Dotti*

**Current address** Dipartimento di Fisica G. Occhialini  
Università degli Studi di Milano Bicocca  
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## Research Interests

- **Black hole binaries**

dynamical evolution

observational evidence of massive black hole binaries

electromagnetic counterparts to gravitational waves detections

massive black hole spins

recoiling massive black holes

- **Black holes in AGN:**

massive black hole fueling and accretion processes during mergers

massive black hole spin and its correlation with the galactic morphology

radio loudness/morphology relation

broad line region dynamics and geometry

narrow-line Seyfert 1 / broad-line Seyfert 1 dichotomy

- **Galactic dynamics and evolution:**

Physical processes quenching the star formation in galaxies

Formation of stellar bars and impact on the host galaxy

Formation and evolution of isolated galaxies in cosmological simulations

**Education** PhD in Astrophysics, University of Como 2008

Thesis: *Massive Black Hole Binaries in Circumnuclear Discs:  
Orbital Dynamics and Gas Accretion*

MS *cum Laude*, in physics University of Como 2004

Thesis: *The Accretion Problem in the Galactic Center*

<b>Positions</b>	Associate professor at Università di Milano Bicocca	2017-now
	Assistant professor at Università di Milano Bicocca	2010-2017
	Postdoctoral fellow at Max-Planck-Institut für Astrophysik	2009-2010
	Postdoctoral researcher at University of Michigan	2008-2009
	Research associate at University of Como	2007-2008
	Research assistant at University of Como	2004-2007

### Teaching:

Massive Black Holes (PhD course at the University of Birmingham)	2016
Extragalactic astronomy (Graduate level - University of Milano-Bicocca)	2017-now
Introduction to Astronomy (Undergraduate level - University of Milano-Bicocca)	2014-2018
Cosmology (Graduate level - University of Milano-Bicocca)	2010-now

### Management/Services:

Vice-Director of the Department of Physics 'G. Occhialini'	2018-now
Responsible for the Master in Astrophysics and Space Physics	2018-now
Member of the 'Commissione Paritetica Docenti Studenti'	2015-2018

### Postdoctoral supervision:

Matteo Bonetti, University of Milano Bicocca	2019-now
Tullia Sbarrato, University of Milano Bicocca	2014-2019

### PhD students supervision:

Rossella Fanali, University of Milano Bicocca	2013-2015
Alessandro Lupi, University of Como	2013-2015
Tommaso Zana, University of Como	2015-2019
Ludovica Varisco, University of Milano Bicocca	2015-2019

### Graduate students supervision:

Ludovica Varisco, University of Milano Bicocca	2019-2020
Fabio Rigamonti, University of Milano Bicocca	2019-2020
Elia Cenci, University of Milano Bicocca	2017-2019
Luca Sala, University of Milano Bicocca	2018-2019
Andrea Incatasciato, University of Milano Bicocca	2017-2018
Daniele Spinoso, University of Milano Bicocca	2015-2016
Elisa Bortolas, University of Milano Bicocca	2014-2015
Tommaso Zana, University of Milano Bicocca	2014-2015
Chiara Mazzucchelli, University of Milano Bicocca	2012-2013
Laura Paganini, University of Milano Bicocca	2012-2013

Rachele Ferrone, University of Milano Bicocca	2012-2013
Rossella Fanali, University of Milano Bicocca	2011-2012
Simone Pallini, University of Milano Bicocca	2010-2011
Carmen Montuori, University of Milano Bicocca	2008-2009
Albino Perego, University of Milano Statale	2008-2009
Massimo Cavadini, University of Como	2007-2008
Luca Stucchi, University of Milano Bicocca	2006-2007

### **Undergraduate students supervision:**

Riccardo Spinelli, University of Milano Bicocca	2016
Ludovica Varisco, University of Milano Bicocca	2016
Chiara Salvaggio, University of Milano Bicocca	2016
Matteo Zoccolan, University of Milano Bicocca	2015
Andrea Incatasciato, University of Milano Bicocca	2015
Andrea Puggioli, University of Milano Bicocca	2014
Elisa Bortolas, University of Milano Bicocca	2013
Maria Cristina Fortuna, University of Milano Bicocca	2013
Patrizia Merlotti, University of Milano Bicocca	2011
Giorgio Bambozzi, University of Milano Bicocca	2011
Duncan Campbell, University of Michigan	2009
Michael Eugene Katolik, University of Michigan	2008

### **Schools and meeting organizations:**

**6<sup>th</sup> YAGN rendezvous** (SOC), October 2020

(Co-organizer Pedro R. Capelo - University of Zurich, Michaela Hirschmann - Niels Bohr Institutet, Hugo Pfister - Niels Bohr Institutet, Sandra Raimundo - Niels Bohr Institutet)

<https://indico.nbi.ku.dk/event/1305/>

**5<sup>th</sup> YAGN rendezvous** (SOC), September 2019

(Co-organizer Pedro R. Capelo - University of Zurich, Andrea Negri - Instituto de Astrofísica de Canarias)

<https://www.galnuc.elte.hu/yagn18/yagn18.html>

**4<sup>th</sup> YAGN rendezvous** (SOC), October 2018

(Co-organizer Pedro R. Capelo - University of Zurich, Bence Kocsis - Eotvos University)

<https://www.galnuc.elte.hu/yagn18/yagn18.html>

**Waves on the lake: the astrophysics behind gravitational waves** (SOC), May 2018

<http://abgw.lakecomoschool.org>

**3<sup>rd</sup> YAGN rendezvous** (SOC), October 2017

(Co-organizer Pedro R. Capelo - University of Zurich, Silvia Bonoli - CEFCA)

<https://www.cefca.es/research/yagn17>

**2<sup>nd</sup> YAGN rendezvous** (SOC), October 2016

(Co-organizer Pedro R. Capelo - University of Zurich, Alessandro Lupi - Institut d'Astrophysique de Paris)

[http://www.iap.fr/vie\\_scientifique/ateliers/yagn/2016/yagn16\\_program.html](http://www.iap.fr/vie_scientifique/ateliers/yagn/2016/yagn16_program.html)

**Astro-GR@Benasque** (SOC), June 2016

(Co-organizer Pau Amaro Seoane - Albert Einstein Institute)

<https://members.aei.mpg.de/amaro-seoane/astro-gr-benasque/>

**1<sup>st</sup> YAGN rendezvous** (SOC), October 2015

(Co-organizer Pedro R. Capelo, University of Zurich)

<http://fisica.mib.infn.it/media/homepages/astrofisica/yagn/yagn15.html>

### **Other Professional Activities:**

Reviewer for Nature, the Astrophysical Journal (ApJ), the Monthly Notices of the Royal Astronomical Society (MNRAS), Advances in Astronomy

### **Outreach:**

Speaker at the GR100 event held at the University November 2015

<http://fisica.mib.infn.it/media/homepages/astrofisica/GR100/GR100.html>

*Video of the talk (Italian):*

<https://www.youtube.com/watch?v=aRWvBZSVlmg>

Lectures on introduction to general relativity for high schools (2016–now)

### **Memberships:**

Istituto Nazionale di Astrofisica (INAF, Italian institute for astrophysics) 2011-now

Istituto Nazionale di Fisica Nucleare (INFN, Italian institute for nuclear physics) 2011-now

American Physical Society (APS) 2011

American Astronomical Society (AAS) 2009

## PUBLICATION LIST

*Massimo Dotti*

### Accepted publications

1. *Dynamical evolution of massive perturbers in realistic multi-component galaxy models I: implementation and validation*, Bonetti M., Bortolas E., Lupi A., **Dotti M.**, 2021, MNRAS, accepted
2. *Non-isotropic feedback from accreting spinning black holes*, Sala L., Cenci E., Capelo P.R., Lupi A., **Dotti M.**, 2021, MNRAS, 500, 4788
3. *Black hole spin evolution in warped accretion discs*, Cenci E., Sala L., Lupi A., Capelo P.R., **Dotti M.**, 2021, MNRAS, 500, 3719
4. *A possible sub-kpc dual AGN buried behind the galaxy curtain*, Severgnini P., Braitto B., Cicone C., Saracco P., Vignali C., Serafinelli R., Della Ceca R., **Dotti M.**, Cusano F., Paris D., Pruto G., Zaino A., Ballo L., Landoni M., 2020, A&A, accepted
5. *Unveiling sub-parsec supermassive black hole binary candidates in active galactic nuclei*, Serafinelli R., Severgnini P., Braitto B., Della Ceca R., Vignali C., Ambrosino F., Cicone C., Zaino A., **Dotti M.**, Sesana A., Gianolli V.E., Ballo L., La Parola V., Matzeu G.A., 2020, ApJ, 902, 10
6. *Global torques and stochasticity as the drivers of massive black hole pairing in the young Universe*, Bortolas E., Capelo P.R., Zana T., Mayer L., Bonetti M., **Dotti M.**, Davies M.B., Madau P., 2020, MNRAS, 498, 3601
7. *Black hole mergers from dwarf to massive galaxies with the NewHorizon and Horizon-AGN simulations*, Volonteri M., Pfister H., Beckman R.S. Dubois Y., Colpi M., Conselice C.J., **Dotti M.**, Martin G., Jackson R., Kraljic K., Pichon C., Trebitsch M., Sukyoung K., Devriendt J., Peirani S., 2020, MNRAS, 498, 2219
8. *From galactic nuclei to the halo outskirts: tracing supermassive black holes across cosmic history and environments*, Izquierdo-Villalba D., Bonoli S., **Dotti M.**, Sesana A., Rosas-Guevara Y., Spinoso D., 2020, MNRAS, 495, 4681
9. *Dynamical friction-driven orbital circularisation in rotating discs: a semi-analytical description*, Bonetti M., Bortolas E., Lupi A., **Dotti M.**, Raimundo S.I., 2020, MNRAS, 494, 3053

10. *On the eccentricity evolution of massive black hole binaries in stellar backgrounds*, Bonetti M., Rasskazov A., Sesana A., **Dotti M.**, Haardt F., Leigh N.W.C., Arca Sedda M., Fragione G., Rossi E. 2020, MNRAS Letters, 493, L114
11. *Real galaxy mergers from galaxy pair catalogs*, Pfister H, **Dotti M.**, Laigle C., Dubois Y., Volonteri M., 2020, MNRAS, 493, 922
12. *The buildup of strongly-barred galaxies in the TNG100 simulation*, Rosas-Guevara Y., Bonoli S., **Dotti M.**, Zana T., Nelson D., Pillepich A., Ho L.C., Izquierdo-Villalba D., Hernquist L., Pakmor R., 2020, MNRAS, 491, 2547
13. *The Quest for Dual and Binary Supermassive Black Holes: A Multi-Messenger View*, De Rosa A. et al., 2019, New Astronomy Reviews, 8601525D
14. *Neutron star binary orbits in their host potential: effect on early r-process enrichment*, Bonetti M., Perego A., **Dotti M.**, & Cresciutti G., 2019, MNRAS, 490, 296
15. *Testing the blast-wave AGN feedback scenario in MCG-03-58-007*, Sirressi M., Ciccone C., Severgnini P., Braito V., **Dotti M.**, Della Ceca R., Reeves J.N., Matzeu G.A., Vignali C., Ballo L., 2019, MNRAS, 489, 1927
16. *Multi-Messenger Astrophysics with Pulsar Timing Arrays*, Kelley L.Z., et al., 2019, submitted to the Astro2020 decadal survey
17. *ALMA and HST kiloparsec-scale imaging of a quasar-galaxy merger at  $z \approx 6.2$* , Decarli R., **Dotti M.**, et al., 2019, ApJ, 880, 157
18. *Barred galaxies in cosmological zoom-in simulations: the importance of feedback*, Zana T., Capelo P., **Dotti M.**, Mayer L., Lupi A., Haardt F., Bonoli S., Shen S., 2019, MNRAS, 488, 1864
19. *Black holes, gravitational waves and fundamental physics: a roadmap*, Barack L., et al., White paper for the COST action "Gravitational Waves, Black Holes, and Fundamental Physics", 2019, CQG, 36, 3001
20. *The erratic dynamical life of black hole seeds in high-redshift galaxies*, Pfister H., Volonteri M., **Dotti M.**, Colpi M., 2019, MNRAS, 486, 101
21. *Bar resilience to flybys in a cosmological framework*, Zana T., **Dotti M.**, Capelo P., Mayer L., Haardt F., Shen S., Bonoli S., 2018, MNRAS, 479, 521

22. *On the orientation of Narrow Line Seyfert I*, Sbarrato T., **Dotti M.**, Ghirlanda G., Tavecchio F., 2018, A&A, 616, A43
23. *AGN mass estimates in large spectroscopic surveys: the effect of host galaxy light.*, Varisco L., Sbarrato T., Calderone G., **Dotti M.**, 2018, A&A, 618, 127
24. *r-process nucleosynthesis in the early Universe through fast mergers of compact binaries in triple systems*, Bonetti M., Perego A., Capelo P., **Dotti M.**, & Coleman M.M., 2018, PASA, 35, 17
25. *The influence of Massive Black Hole Binaries on the morphology of Merger Remnants*, Bortolas E., Gualandris A., **Dotti M.**, & Reed J.I., 2018, MNRAS, 477, 2310
26. *Probing black hole accretion in quasar pairs at high redshift*, Vignali C., Piconcelli E, Perna M., Hennawi J., Gilli R., Comastri A., Zamorani G., **Dotti M.**, Mathur S., 2018, MNRAS, 477, 780
27. *External versus internal triggers of bar formation in cosmological simulations*, Zana T., **Dotti M.**, Bonoli S., Capelo P., Haardt F., Mayer L., Spinoso D., 2018, MNRAS, 473, 2608
28. *Probing the formation history of the nuclear star cluster at the Galactic Centre with millisecond pulsars*, Abbate F., Mastrobuono-Battisti A., Colpi M., Possenti A., Sippel A.C., & **Dotti M.**, 2018, MNRAS, 473, 927
29. *QSFIT: Automatic analysis of optical/UV AGN spectra*, Calderone G., Nicastro L., Ghisellini G., **Dotti M.**, Sbarrato T., Colpi M., Shankar F., 2017, MNRAS, 472, 4051
30. *The birth of supermassive black hole binary*, Pfister H., Lupi A., Capelo P., Volonteri M., Bellovary J., **Dotti M.**, 2017, MNRAS, 471, 3646
31. *A survey of dual active galactic nuclei in simulations of galaxy mergers: frequency and properties*, Capelo P., **Dotti M.**, Volonteri M., Mayer L., Bellovary J.M., Shen S., 2017, MNRAS, 469, 4437
32. *Young and turbulent: the early life of massive galaxy progenitors*, Fiacconi D., Mayer L., Madau P., Lupi A., **Dotti M.**, Haardt F., 2017, MNRAS, 467, 4080
33. *Bars as seen by Hershel and Sloan*, Consolandi G., **Dotti M.**, Gargiulo F., Gavazzi G., Boselli A. 2017, A&A, 598, 114

34. *The effects of ram pressure stripping and supernova winds on the tidal stirring of disk dwarves: enhanced transformation into dwarf spheroidal*, Kazantzidis S., Mayer L., Callegari S., **Dotti M.**, Moustakas L.A., 2017, ApJ, 836, Letter 13
35. *Bar-driven evolution and nuclear quenching of spiral galaxies in cosmological simulations*, Spinoso D., Bonoli S., **Dotti M.**, Mayer L., Madau P., Bellovary J., 2017, MNRAS, 465, 3729
36. *Shocks and angular momentum flips: a different path to feeding the nuclear regions of merging galaxies*, Capelo P., **Dotti M.**, 2017, MNRAS, 465, 2643
37. *Brownian Motion of Massive Black Hole Binaries and the Final Parsec Problem*, Bertolas E., Gualandris A., **Dotti M.**, Spera M. & Mapelli M., 2016, MNRAS, 461, 1023
38. *Retrograde binaries of massive black holes in circum-binary accretion discs*, Amaro-Seoane P., Maureira-Fredes C., **Dotti M.** & Colpi M., 2016, A&A, 591, 114
39. *Robust automatic photometry of local galaxies from SDSS Dissecting the color magnitude relation with color profiles*, Consolandi G., Gavazzi G., Fumagalli M., **Dotti M.** & Fossati M., 2016, A&A, 591, 38
40. *Nuclear discs as clocks for the assembly history of early-type galaxies: the case of NGC 4458*, Sarzi M., Ledo H., Coccato L., Corsini E.M., **Dotti M.**, Khochfar S., Maraston C., Morelli L., Pizzella A., 2016, MNRAS, 457, 1804
41. *Quasi-periodicities at year-like timescales in Blazars*, Sandrinelli A., Covino S., **Dotti M.**, Treves A., 2016, AJ, 151, 54
42. *Growing massive black holes through super-critical accretion of stellar-mass seeds*, Lupi A., Haardt F., **Dotti M.**, Fiacconi D., Mayer L., Madau P., 2016, MNRAS, 456, 2993
43. *Massive black hole and gas dynamics in galaxy nuclei mergers. II. Black hole sinking in starforming nuclear discs*, Lupi A., Haardt F., **Dotti M.**, Colpi M., 2015, MNRAS, 453, 3437
44. *Bar-formation as driver of gas inflows in isolated disc galaxies*, Fanali R., **Dotti M.**, Fiacconi D., Haardt F., 2015, MNRAS, 454, 3641
45. *Overlapping inflows as catalysts of AGN activity - II: Relative importance of turbulence and inflow-disc interaction*, Carmona-Loaiza J.M., Colpi M., **Dotti M.**, Valdarnini R., 2015, MNRAS, 453, 1608



46. *On the fragility of nuclear stellar discs against galaxy mergers*, Ledo H., Sarzi M., **Dotti M.**, 2015, MNRAS, 453, 1070
47. *H $\alpha$ 3: an H $\alpha$  imaging survey of HI selected galaxies from ALFALFA. VI. The role of bars in quenching star formation from  $z=3$  to the present epoch*, Gavazzi G., Consolandi G., **Dotti M.**, Fanali R., Fossati M., Fumagalli M., Viscardi E., Savorgnan G., Boselli A., Gutierrez L., Hernandez Toledo H., Giovanelli R., Haynes M.P., 2015, A&A, 580, 116
48. *Black hole accretion versus star formation rate: theory confronts observations*, Volonteri M., Capelo P., Netzer H., Bellovary J.M., **Dotti M.**, Governato F., 2015, MNRAS, 452, Letter 6
49. *Growing black holes and galaxies: black hole accretion versus star formation rate*, Volonteri M., Capelo P., Netzer H., Bellovary J.M., **Dotti M.**, Governato F., 2015, MNRAS, 449, 1470
50. *Linking the fate of massive black hole binaries to the active galactic nuclei luminosity function*, **Dotti M.**, Merloni A., Montuori C., 2015, MNRAS, 448, 3603
51. *Growth and activity of black holes in galaxy mergers with varying mass ratios*, Capelo P., Volonteri M., **Dotti M.**, Bellovary J.M., Mayer L., Governato F., 2015, MNRAS, 447, 2123
52. *Massive black hole and gas dynamics in galaxy nuclei mergers. I. Numerical implementation*, Lupi A., Haardt F., **Dotti M.**, 2015, MNRAS, 446, 1765
53. *New insights on the recoiling/binary black hole candidate J0927+2943 via molecular gas observations*, Decarli R., **Dotti M.**, Mazzucchelli C., Montuori C., Volonteri M., 2014, MNRAS, 445, 1558
54. *Linking the spin evolution of massive black holes to galaxy kinematics*, Sesana A., Barausse E., **Dotti M.**, Rossi E., 2014, ApJ, 794, 104
55. *The nature of massive black hole binary candidates: II. Spectral energy distribution atlas*, Lusso E., Decarli R., **Dotti M.**, Montuori C., Hogg D.W., Tsalmantza P., Fumagalli M., Prochaska J.X., 2014, MNRAS, 441, 316
56. *Super-Critical Growth of Massive Black Holes from Stellar-Mass Seeds*, Madau P., Haardt F., **Dotti M.**, 2014, ApJ, 784, Letter 38

57. *Nuclear coups: dynamics of black holes in galaxy mergers*, Van Wassenhove S., Capelo P.R., Volonteri M., **Dotti M.**, Bellovary J., Mayer L., Governato F., 2014, MNRAS, 439, 474
58. *Overlapping Inflow Events as Catalysts for Supermassive Black Hole Growth*, Carmona-Loaiza J.M., Colpi M., **Dotti M.**, Valdarnini R., 2014, MNRAS, 438, 1698
59. Red-channel (6000-8000 Å) nuclear spectra of 376 local galaxies, Gavazzi G., Consolandi G., **Dotti M.**, Fossati M., Savorgnan G., Gualandi R., Bruni I., 2013, A&A, 558, 68
60. *The Gravitational Universe*, the eLISA consortium arXiv:1305.5720
61. *The nature of massive black hole binary candidates: I. Spectral properties and evolution*, Decarli R., **Dotti M.**, Fumagalli M., Tsalmantza P., Montuori C., Lusso E., Hogg D.W., Prochaska J.X., 2013, MNRAS, 433, 1492
62. *H $\alpha$ 3: an H $\alpha$ ; imaging survey of HI selected galaxies from ALFALFA. III: Nurture shapes up the Hubble sequence in the Great Wall*, Gavazzi G., Savorgnan G., Fossati M., **Dotti M.**, Fumagalli M., Boselli A., Gutierrez L., Hernandez Toledo H., Giovanelli R., Haynes M.P., 2013, A&A, 553, 90
63. *Effects of circum-nuclear disk gas evolution and the spin of central black holes*, Maio U., **Dotti M.**, Petkova M., Perego A., Volonteri M., 2013, ApJ, 767, 37
64. *Black hole mass estimate for a sample of radio-loud narrow-line Seyfert 1 galaxies*, Calderone G., Ghisellini G., Colpi M., **Dotti M.**, 2013, MNRAS, 431, 210
65. *On the orientation and magnitude of the black hole spin in galactic nuclei*, **Dotti M.**, Pallini S., Perego A., Colpi M., Volonteri M., 2013, ApJ, 762, 68
66. *Evolution of binary black holes in self gravitating discs: dissecting the torques*, Roedig C., Sesana A., **Dotti M.**, Cuadra J., Amaro-Seoane P., Haardt F., 2012, A&A, 545, 127
67. *Search of sub-parsec massive binary black hole through line diagnosis II* Montuori C., **Dotti M.**, Haardt F., M. Colpi, Decarli R., 2012, MNRAS, 425, 1633
68. *B2 0954+25A: a typical Fermi blazar or a gamma-loud Narrow Line Seyfert 1*, Calderone G., Ghisellini G., Colpi M., **Dotti M.**, 2012, MNRAS, 424, 3081

69. *Gravitational Recoil From Accretion-Aligned Black-Hole Binaries*, Lousto C.O., Zlochower Y., **Dotti M.**, Volonteri M., 2012, Phys. Rev. D, 85, 4015
70. *Observability of Dual AGN in Merging Galaxies*, Van Wassenhove S., Volonteri M., Mayer L., **Dotti M.**, Bellovary J., Callegari S., 2012, ApJ, 748, Letter 7
71. *Massive black hole binary plane reorientation in rotating stellar systems*, Gualandris A., **Dotti M.**, Sesana A., 2012, MNRAS, 420, Letter 38
72. *Multimessenger astronomy with pulsar timing and X-ray observations of massive black hole binaries*, Sesana A., Roedig C., Reynolds M.T., **Dotti M.**, 2012, MNRAS, 420, 860
73. *Massive black hole binaries: dynamical evolution and observational signatures*, **Dotti M.**, Sesana A., Decarli R., 2012, Advances in Astronomy, id. 940568
74. *Limiting eccentricity of sub-parsec massive black hole binaries surrounded by self-gravitating gas discs*, Roedig C., **Dotti M.**, Sesana A., Cuadra J., Colpi M., 2011, MNRAS, 415, 3033
75. *A Systematic Search for Massive Black Hole Binaries in SDSS Spectroscopic Sample*, Tsalmantza P., Decarli R., **Dotti M.**, Hogg D., 2011, ApJ, 738, 20
76. *Massive binary black holes in the cosmic landscape*, Colpi M., **Dotti M.**, 2011, Advanced Science Letters, 4, 181
77. *Massive black hole binary eccentricity in rotating stellar systems*, Sesana A., Gualandris A., **Dotti M.**, 2011, MNRAS, 415, Letter 35
78. *Massive Black Holes in Stellar Systems: 'Quiescent' Accretion and Luminosity*, Volonteri M., **Dotti M.**, Campbell D., Mateo M., 2011, ApJ, 730, 145
79. *Geometry and inclination of the broad line region in blazars*, Decarli R., **Dotti M.**, Treves A., 2011, MNRAS, 413, 39
80. *Search of sub-parsec massive binary black holes through line diagnosis*, Montuori C., **Dotti M.**, Colpi M., Decarli R., Haardt F., 2011, MNRAS, 412, 26
81. *The peculiar optical spectrum of 4C+22.25: imprint of a massive black hole binary?*, Decarli R., **Dotti M.**, Montuori C., Liimets T., Ederoclite A., 2010, ApJ, 720, Letter 93

82. *A census of nuclear stellar disks in early-type galaxies*, Ledo H.R., Sarzi M., **Dotti M.**, Khochfar S., Morelli L., 2010, MNRAS, 407, 969
83. *AGN pairs: chance superpositions or black hole binaries?*, **Dotti M.**, Ruszkowski M., 2010, ApJ, 713, Letter 37
84. *Gravitational recoil: effects on massive black hole occupation fraction over cosmic time*, Volonteri M., Gultekin K., **Dotti M.**, 2010, MNRAS, 404, 2143
85. *Dual black holes in merger remnants. II: spin evolution and implications for the recoil velocity*, **Dotti M.**, Volonteri M., Perego A., Colpi M., Ruszkowski M., Haardt F., 2010, MNRAS, 402, 682
86. *Massive black hole spin evolution in warped accretion discs*, Perego A., **Dotti M.**, Colpi M., Volonteri M., 2009, MNRAS, 399, 2249
87. *Sub-parsec supermassive Binary Quasars: expectations at  $z < 1$* , Volonteri M., Miller J., **Dotti M.**, 2009, ApJ, 703, Letter 86
88. *Probing the nature of the massive black hole binary candidate SDSS J1536+0441*, Decarli R., **Dotti M.**, Falomo R., Treves A., Colpi M., Kotilainen J.K., Montuori C., Uslenghi M., 2009, ApJ, 703, Letter 76
89. *SDSSJ092712.65+294344.0: a candidate massive black hole binary* **Dotti M.**, Montuori C., Decarli R., Volonteri M., Colpi M., Haardt F., 2009, MNRAS, 398, Letter 73
90. *A photometric study of the field around the candidate recoiling/binary black hole SDSS J092712.65+294344.0*, Decarli R., Reynolds M., **Dotti M.**, 2009, MNRAS, 397, 458
91. *Dual black holes in merger remnants. I: linking accretion to dynamics.*, **Dotti M.**, Ruszkowski M., Paredi L., Colpi M., Volonteri M., Haardt F., MNRAS, 2009, 396, 1640
92. *Massive black hole binary evolution in gas-rich mergers*, Colpi M., Callegari S., **Dotti M.**, Mayer L., 2009, Classical and Quantum Gravity, 26, 094029
93. *Imprints of recoiling massive black holes on the hot gas of early-type galaxies*, Devecchi B., Rasia E., **Dotti M.**, Volonteri M., Colpi M., 2009, MNRAS, 394, 633
94. *Double quasars: probes of black hole scaling relationships and merger scenarios*, Foreman G., Volonteri M., **Dotti M.**, 2009, ApJ, 693, 1554

95. *Are the Black Hole masses in Narrow Line Seyfert 1 galaxies actually small?*, Decarli R., **Dotti M.**, Fontana M., Haardt F., 2008, MNRAS, L386, 15
96. *Supermassive black hole binaries in gaseous and stellar circumnuclear discs: orbital dynamics and gas accretion*, **Dotti M.**, Colpi M., Haardt F., Mayer L., 2007, MNRAS, 379, 956
97. *On the search of electromagnetic cosmological counterparts to coalescences of massive black hole binaries*, **Dotti M.**, Salvaterra R., Sesana A., Colpi M., Haardt F., 2006, MNRAS, 372, 869
98. *Laser Interferometer Space Antenna double black holes: dynamics in gaseous nuclear discs*, **Dotti M.**, Colpi M., Haardt F., 2006, MNRAS, 367, 103

## Proceedings

- *A path to radio-loudness through gas-poor galaxy mergers and the role of retrograde accretion*, **M. Dotti**, M. Colpi, L. Maraschi, A. Perego, M. Volonteri To be published in the proceedings of the conference "Accretion and Ejection in AGN: A global view, June 22-26 2009 - Como, Italy" (arXiv:1004.2843)
- *SDSSJ092712.65+294344.0: A Candidate Massive Black Hole Binary*, **M. Dotti**, M. Volonteri bulletin of the American Astronomical Society, 41, 385
- *Massive black hole binaries in gaseous nuclear discs*, **M. Dotti**, M. Colpi, F. Haardt, L. Mayer to appear in the proceedings of the Conference "The Central Kiloparsec: Active Galactic Nuclei and Their Hosts", Ierapetra 4-6 June 2008, Greece, Memorie della Societa Astronomica Italiana
- *Inspiral of double black holes in gaseous nuclear disks*, **Dotti M.**, Colpi M., Haardt F. 2008, "Relativistic Astrophysics and Cosmology – Einstein's Legacy".
- *Simulating the dynamics of binary black holes in nuclear gaseous discs* **M. Dotti**, M. Colpi, F. Haardt, L. Mayer Formation and Evolution of Galaxy Bulges, Proceedings of the International Astronomical Union, IAU Symposium, 2007, 245, 241
- *Birth of massive black hole binaries*, Colpi M., **Dotti M.**, Mayer L., Kazantzidis S., to appear in "2007 STScI Spring Symposium: Black Holes"
- *On the inspiral of Massive Black Holes in gas-rich galaxy mergers*, Colpi M., S. Callegari, **Dotti M.**, S. Kazantzidis, L. Mayer 2007, "The Multicoloured Landscape of Compact Objects and their Explosive Origins".

## SCHOOLS, MEETINGS & CONFERENCES

†: SOC; \*: invited talk; \*\*: contributed talk

† *YAGN20*

Location: Copenhagen, date: 28-30 October 2020

\* *Getting ready to descend the slippery slope of multimessenger cosmological black holes data*

Location: Sexten, date: 10-14 February 2020

\* *Astroblack-Italy*

Location: Milan, date: 28-29 October 2019

† *YAGN19*

Location: San Cristóbal de La Laguna, date: 23-25 September 2019

† *YAGN18*

Location: Budapest, date: 29-31 October 2018

\*\* *Massive black holes in evolving galaxies: from quasars to quiescence*

Location: Paris, date: 25-29 June 2018

† *Waves in the lake: the astrophysics behind gravitational waves*

Location: Como, date: 28 May-1 June 2018

\* *The Quest for Multiple Supermassive Black Holes: A Multi-Messenger View*

Location: Leiden, date: 20-24 November 2017

† *YAGN17*

Location: Teruel, date: 23-25 October 2017

\* *New Frontiers in Gravitational-Wave Astrophysics*

Location: Rome, date: 19-22 June 2017

\* *The disc migration issue: from protoplanets to supermassive black holes*

Location: Cambridge, date: 22-24 May 2017

†*YAGN16*

Location: Paris, date: 24-25 November 2016

†*Astro-GR@Benasque*

Location: Benasque, date: 5-18 June 2016

†*YAGN15*

Location: Milano, date: 29-30 October 2015

\**Unveiling the AGN-Galaxy evolution connection*

Location: Puerto Varas, date: 9-13 March 2015

\**Compact Objects as Astrophysical and Gravitational Probes*

Location: Leiden, date: 2-6 February 2015

\**Colorful Galaxies*

Location: Menaggio, date: 27-30 April 2014

\**Teongrav meeting*

Location: Rome, date: 4-5 February 2014

\**Anillo Team Meeting*

Location: Santa Cruz (Chile), date: 15-16 November 2013

*The Alajar meeting 2013*

Location: Alajar, date: 16-27 September 2013

\**Massive Black Holes: Birth, Growth and Impact*

Location: Santa Barbara, date: 5-9 August 2013

\**Astro-GR@Beijing*

Location: Beijing, date: 3-7 September 2012

\*\**Black holes by the black sea*

Location: Istanbul, date: 25-29 June 2012

\*\**Interacting Galaxies and Binary Quasars:  
A Cosmic Rendezvous*



Location: Trieste, date: 2-5 April 2012

*\*Astro-GR@Mallorca*

Location: Palma de Mallorca, date: 5-9 September 2011

*\*Single and Double Black Holes in Galaxies*

Location: Ann Arbor, date: 22-25 August 2011

*\*American Physical Society Meeting*

Location: Anaheim, date: 30 April- 3 May 2011

*\*Bridging Electromagnetic Astrophysics and Cosmology with Gravitational Waves*

Location: Milan, date: 28-30 March 2011

*\*IPMU Workshop on Black Holes*

Location: Kashiwa, date: 21-25 February 2011

*\*LISA Astro-GR@Paris*

Location: Paris, date: 13-17 September 2010

*\*\*What drives the growth of black holes?*

Location: Durham, date: 26-29 July 2010

*\*\*WE-Heraeus Seminar: Black Holes*

Location: Bad Honnef, date: 7-11 June 2010

*\*\*LISA massive black hole binaries in the cosmic landscape*

Location: Zurich, date: 10-12 February 2010

*\*\*Intermediate-Mass Black Holes: from First Light to Galactic Nuclei*

Location: Irvine, date: 1-3 April 2009

*\*Observational Signatures of Black Hole Mergers*

Location: Baltimore, date: 30 March - 1 April 2009

*\*\*213th AAS Meeting*

Location: Long Beach, date: 4-8 January 2009

*\*Black Hole Astrophysics with Radio and Gravitational Wave Observations*

Location: Charlottesville, date: 7-8 November 2008

*\*\*The Central Kiloparsec: Active Galactic Nuclei and Their Hosts*

Location: Ierapetra, date: 4-6 June 2008

*\*LISA Astro-GR@ComoMilano*

Location: Como, date: 6-8 February 2008

*\*JENAM 2007: Our non-stable Universe*

Location: Yerevan, date: 20-25 August 2007

*\*\*National school in astrophysics: galaxy dynamic – active galactic nuclei*

Location: Bertinoro, date: 7/12 May 2006

## INVITED SEMINARS

University of Southampton, Southampton, February 2021  
Astronomical Observatory, Bologna, October 2019  
Institute for Computational Science, Zurich, March 2016  
Astronomical Observatory, Rome, February 2016  
Brera Observatory, Merate, December 2014  
Max-Planck-Institut für Astronomie, Heidelberg, January 2014  
Pontificia Universidad Catolica de Chile, November 2013  
University of California, Santa Cruz, July 2013  
Astronomical Observatory, Arcetri, March 2013  
Technion, Haifa, February 2013  
Institut d'Astrophysique de Paris (IAP), Paris, October 2012  
Brera Observatory, Milan, February 2012  
Astronomical Observatory, Bologna, January 2011  
Albert Einstein Institut, Potsdam, November 2010  
Albert Einstein Institut, Potsdam, May 2010  
Max-Planck-Institut für Astronomie, Heidelberg, May 2010  
Max-Planck-Institut für Astrophysik, Munich, February 2010  
Università degli Studi dell'Insubria, Como, October 2009  
The Pennsylvania State University, State College, September 2009  
Brera Observatory, Milan, June 2009  
University of Maryland, Washington, April 2009  
Canadian Institute for Theoretical Astrophysics (CITA), Toronto, December 2008  
Instituto Astrofisica Andalucia (CSIC), Granada, June 2008  
Leiden Observatory, Leiden, September 2007  
Brera Observatory, Merate, June 2007

Milano, 16th of February 2021

Massimo Dotti  
Associate Professor in Astrophysics  
Department of Physics G. Occhialini

