

CURRICULUM VITAE

Giuseppe Lodato

Informazioni generali

Giuseppe Lodato, nato a Palermo il 9 Luglio 1974.

Carriera Scientifica

- A partire dal 19 Dicembre 2008: *Professore Associato*, presso l'**Università di Milano**, settore scientifico-disciplinare FIS/05.
- Agosto-Ottobre 2009: *Research Fellow* presso lo **Isaac Newton Institute for Mathematical Sciences**, Università di Cambridge, UK.
- 1 Ottobre 2006 - 18 Dicembre 2008: *Lecturer in Theoretical Astrophysics*, presso l'**Università di Leicester**, Regno Unito
- 1 Ottobre 2002 - 30 Settembre 2006, *Post-Doctoral Research Associate* presso l'**Institute of Astronomy, Università di Cambridge**, Regno Unito.

Studi

- Diploma di Perfezionamento in Fisica (equivalente al Dottorato di Ricerca), conseguito presso la Scuola Normale Superiore di Pisa il 7 Ottobre 2002, con una votazione di 70/70 e lode, dopo aver discusso una tesi dal titolo "**Observational tests for self-gravitating accretion disks**", relatore Prof. G. Bertin.
- Laurea in Fisica presso l'Università di Pisa il 30 Settembre 1998, con una votazione di 110/110 e lode, dopo aver discusso una tesi dal titolo "**Dischi di accrescimento autogravitanti**", realizzata sotto la direzione del relatore Prof. G. Bertin.
- Diploma di Maturità Classica conseguito il 20 Luglio 1992 presso il Liceo Classico "G. Garibaldi" di Palermo, con votazione finale di 60/60.

Attività didattica

- **Insegnamento**
 - A partire dall'Anno Accademico 2009-2010: docente del Corso di "**Fisica Generale**", per il Corso di Laurea Triennale in Chimica Industriale e Chimica Ambientale, Università di Milano.
 - A partire dall'Anno Accademico 2008-2009: docente del Corso di "**Fisica Cosmica**", per il Corso di Laurea Magistrale in Fisica, Università di Milano.
 - Dal 2007 al 2008: *Lecturer* del corso "**Interaction of radiation and matter**", all'Università di Leicester.
 - Assistente ai corsi "**Astrophysical Fluid Dynamics**" e "**Stellar dynamics and Structure of Galaxies**" presso l'Università di Cambridge, negli anni accademici 2002-2003, 2003-2004, 2004-2005 e 2005-2006 (*Supervising for Undergraduate students*).

Interessi di ricerca

Principale interesse di ricerca: astrofisica dei fluidi, dinamica dei dischi di accrescimento.

- **Dischi autogravitanti.** Studio degli effetti dell'autogravità del disco nella dinamica del processo di accrescimento: modelli semi-analitici di dischi autoregolati, studio tramite simulazioni numeriche del trasporto indotto da modi gravitazionali globali.
- **Accrescimento su buchi neri.** Formazione di buchi neri supermassicci ad alto redshift. Effetto Bardeen-Petterson. Dischi su larga scala in AGN. Binarie di buchi neri supermassicci ed emissione di onde gravitazionali.
- **Formazione planetaria.** Studio della dinamica di dischi di accrescimento a due componenti, con l'obiettivo di descrivere l'accoppiamento tra gas e polvere in dischi protoplanetari e la sua influenza nella formazione dei pianeti. Formazione planetaria attorno a nane brune. Effetti della presenza di compagni sulla formazione planetaria.
- **Dischi "warped".** Studio della dinamica di dischi con inclinazione variabile. Studio tramite simulazioni numeriche della generazione e propagazione di perturbazioni nell'inclinazione.
- **Formazione di stelle di alta massa.** Studio della dinamica di dischi proto-stellari attorno a stelle massicce (O-B).
- **Dischi protostellari.** Studio delle Spectral Energy Distribution e dei profili di riga di oggetti di tipo FU Orionis. Studio dell'interazione disco-pianeta come possibile causa della fase di "outburst" in oggetti di tipo FU Orionis.
- **Eventi di distruzione mareale.** Studio della dinamica e delle curve di luce risultanti da eventi di distruzione mareale di stelle e oggetti minori da parte di oggetti compatti (stelle di neutroni e buchi neri supermassicci).
- **Fluidodinamica computazionale:** esperto di metodi Smoothed Particle Hydrodynamics (SPH).

Partecipazioni a workshop, congressi, ecc.

1. Dicembre 2014: *Swift: ten years of discoveries*, Roma, Italia. Invited talk: “Recent developments in TDE theory”.
2. Luglio 2014: *Gravitational waves and electromagnetic observations of dense stellar systems*, Roma, Italia. Invited talk; “Disc precession in tidal disruption events”.
3. Giugno 2014: *Unsolved Problems in Astrophysics and Cosmology*, Budapest, Ungheria. Invited talk: “Supermassive black hole binaries: the case for misaligned spins”.
4. Aprile 2014: *Herbig Ae/Be stars: the missing link in star formation*, Santiago, Chile. Invited talk: “Spiral structure and gravitational instabilities in protostellar discs”.
5. Dicembre 2013: *27th Texas Symposium on Relativistic Astrophysics*, Dallas, USA. Contributed talk: “On the Likelihood and Prompt Electromagnetic Emission of Black Hole Binary Mergers”.
6. Settembre 2013: *High Energy Tidal Disruption Events: Looking at the Future*, Favignana, Italy. Scientific organizer of the meeting.
7. Settembre 2013: *Explosive Transients: Lighthouses of the Universe*, Santorini, Greece. Invited talk: “Tidal disruption events”.
8. Luglio 2013: *Mind the gap: from microphysics to large scale structure of the universe*, Cambridge, UK. Contributed talk: “Warped accretion discs and spin alignment during SMBH mergers”.
9. Giugno 2013: *The Lin-Shu Symposium: 50 Years of Spiral Density Wave*, Beijing, China. Invited talk: “Spiral structure and gravitational instabilities in protostellar discs”.
10. Giugno 2012: *Tidal Disruption events and AGN outbursts*, Madrid, Spagna. Invited talk: “Challenges in the modeling tidal disruption events light curves”.
11. Settembre 2011: *IAU Symposium 285. New Horizons in Time Domain Astronomy*, Oxford, UK. Invited talk: “Modeling the lightcurve of tidal disruption events”.
12. Giugno 2011: *Advances of Computational Astrophysics: methods, tools and outcomes*, Cefalù, Italia. Contributed talk: “Simulations of electromagnetic signatures from coalescing black holes”.
13. Marzo 2011: *Bridging electromagnetic astrophysics and cosmology and gravitational waves*, Milano, Italia. Invited talk: “Simulations of electromagnetic emission from black hole mergers”.
14. Settembre 2010: *IAU Symposium 276. The Astrophysics of Planetary Systems: Formation, Structure, and Dynamical Evolution*, Torino, Italia.
15. Settembre 2010: *Gravitational-wave and electromagnetic signatures of massive black hole binaries and extreme mass-ratio inspirals*, Parigi, Francia. Invited talk: “The last 0.1 pc problem”.
16. Febbraio 2010: *Massive black hole binaries in the cosmic landscape*, Zurich, Svizzera. Contributed talk: “Evolution of circumbinary accretion discs around a SMBH binary”.
17. Dicembre 2009: *Plasmas in the laboratory and in the Universe: interactions, patterns and turbulence*, Como, Italia. Invited talk: “Characterising gravitational instabilities in protostellar discs”.

18. Novembre 2009: *From circumstellar disks to planetary systems*, Garching, Germany. Invited talk: “The dynamics of solids in self-gravitating protostellar discs”.
19. Settembre 2009: *Planetesimal formation*, Cambridge, UK. Invited talk: “Planetesimals formation in self-gravitating protostellar discs”.
20. Settembre 2009: *Angular Momentum Transport and Energy Release in Accretion Discs*, Cambridge, UK. Invited talk: “The evolution of circumbinary discs around a SMBH binary”.
21. Agosto 2009: *Dynamics of discs and planets*, Cambridge, UK.
22. Aprile 2009: *Intermediate-Mass Black Holes: from First Light to Galactic Nuclei*, Irvine, USA. Oral presentation: “Early growth of massive black hole seeds from gas collapse in pre-galactic discs”.
23. Marzo 2009: *Observational Signatures of Black hole mergers*, Baltimore, USA.
24. Settembre 2008: *Joint European and National Astronomy Meeting*, Vienna, Austria. Invited talk.
25. Luglio 2008: *Frontiers in Computational Astrophysics: the Origin of stars, planets and galaxies*, Ascona, Switzerland. Invited talk: “Simulating warped accretion discs with SPH”
26. Giugno 2008: *The central kiloparsec*, Crete, Greece. Contributed talk: “Formation and evolution of massive black hole seeds at high redshift”
27. Gennaio 2008: *AAS 211th Meeting*, Austin, USA. Invited talk.
28. Settembre 2007: *From protostellar cores to disk galaxies*, Zurich (Switzerland).
29. Maggio 2007: *Multiplicity in star formation*, Toronto (Canada). Contributed talk: “2MASS 1207 and the potential for planet formation around brown dwarfs”.
30. Dicembre 2006: *Collective phenomena in macroscopic systems*, Como (Italy). Invited talk: “Gravitational instabilities in gaseous discs”.
31. Luglio 2006: *The Planet-Disc Connection*, University of Cambridge (UK).
32. Maggio 2006: *From Protostellar disks to planetary systems*, University of Western Ontario (Canada). Invited talk.
33. Gennaio 2006: *207th Meeting of the American Astronomical Society*, Washington D.C. (USA). Poster contribution: On the dynamics of misaligned accretion discs and spinning black holes.
34. Ottobre 2005: *Protostars and Planets V*, Hawai’i, USA. Co-autore di un review talk e di due poster.
35. Aprile 2005: “*RAS National Astronomy Meeting*”, Birmingham (UK). Oral contribution “Planet formation in massive protostellar discs”.
36. Marzo 2005: “*From disks to planets: new observations, models, theories*”, Pasadena (USA). Oral contribution: “The photometric evolution of FU Orionis objects: disc, wind, envelope and their interactions”.
37. Ottobre 2004: “*Low mass stars and brown dwarfs: IMF, accretion and activity*”, Volterra (Italy). Oral contribution: “Planetesimal dynamics in self-gravitating protoplanetary discs”.

38. Giugno 2004: “*2nd Heidelberg-Tuebingen Workshop on Astrophysical Fluid Dynamics*”, Heidelberg (Germany). Oral presentation: “Accelerated planetesimal growth in self-gravitating protoplanetary discs”.
39. Aprile 2004: “*Modeling the structure, chemistry and appearance of protoplanetary disks*”, Munich (Germany). Oral contribution: “Massive planets in FU Ori disks: implications for thermal instability”.
40. Marzo 2004: “*Planet formation: terrestrial and extra-terrestrial*”, Santa Barbara (USA).
41. Settembre 2003: “*Plasmas in the Laboratory and in the Universe: new insight and new challenges*”, Como (Italy). Oral contribution: “Testing the locality of transport in self-gravitating accretion discs”.
42. Settembre 2003: “*UKAFF (UK Astrophysical Fluid Facility) Conference*”, Leicester (UK). Oral contribution: “Characterizing transport in self-gravitating accretion discs”.
43. Maggio 2003: “*Star formation near and far: the ALMA promise*”, Elba Island (Italy). Oral contribution: “Probing the outer disk in FU Orionis with long-wavelength spectroscopy”.
44. Maggio 2003: “*Dynamics and evolution of Galaxies*”, meeting of the Italian Accademia dei Lincei, Rome (Italy). Oral contribution: “A massive accretion disk in the nucleus of NGC 1068”.
45. Luglio 2002: “*AGN 2002: from central engine to host galaxy*”, Meudon, (France). Poster: “Non-Keplerian rotation in NGC 1068”.
46. Giugno 2002: *V Italian Meeting on AGNs*, Como (Italy). Poster: “Non-Keplerian rotation in AGNs”.
47. Gennaio 2002: *199th Meeting of the American Astronomical Society*, Washington, (USA). Poster: “Self-gravitating accretion disks in YSOs”.
48. Settembre 2001: *JENAM 2001 - Joint European and National Astronomy meeting*, Munich (Germany). Oral contribution: “Self-regulation in self-gravitating accretion disks”.
49. Aprile 2001: *The Origins of Stars and Planets: the VLT View*, Garching (Germany). Poster: “Self-gravitating protostellar disks”.
50. Febbraio 2001: Workshop on “*Dynamics of elliptical galaxies*”, Bologna (Italy). Oral contribution: “Accretion in self-regulated disks”.
51. Giugno 2000: Workshop on *High-mass star formation: an origin in Clusters?*, Volterra (Italy). Poster: “Self-gravitating accretion disks”.
52. Giugno 1999: Workshop on “*Dynamics of Galaxies*”, Pisa (Italy). Oral contribution.

Partecipazione a contratti di ricerca

- 2013 - 2015: Membro dell’Unità di Ricerca dell’Università degli Studi di Milano per il PRIN 2010 “Evoluzione chimica e dinamica della nostra Galassia e delle galassie del Gruppo Locale”.
- 2010 - 2011: Responsabile del progetto PUR 2009 (UniMI) “Astrofisica dei sistemi auto-gravitanti e cosmologia”.
- 2010 - 2011: Membro dell’Unità di Ricerca dell’Università degli Studi di Milano per il PRIN 2008 “Diagnostiche di massa per grandi sistemi autogravitanti”.

- 2002 - 2004: Post-Doctoral Fellow nell'ambito del Research Training Network "The formation and the evolution of Young Stellar Clusters", finanziato dall'Unione Europea.
- 2000-2001: Membro dell'Unità di Ricerca alla Scuola Normale Superiore del contratto cofinanziato dal MURST su "Galaxy halos and disks", in collaborazione con l'Osservatorio di Bologna e il Dipartimento di Astronomia dell'Università di Bologna.

Produzione scientifica

- **Informazioni bibliometriche (aggiornate al 9 Giugno 2015)**

- Articoli pubblicati su riviste internazionali con referee (dal 1999): 70 (incluse 4 invited reviews, e 3 articoli su Nature)
- Numero totale di citazioni (dall’Astronomy Data System della NASA): 2780
- indice h : 28
- indice h/N : 1.75
- indice riq : 0.24

- **Invited reviews**

1. **G. Lodato**, “*Black holes: star ripped to shreds*”, Nature, 485, 183 (2012).
2. **G. Lodato** & P. J. Cossins, “*Smoothed Particle Hydrodynamics for Astrophysical flows. The dynamics of protostellar discs.*”, European Physics Journal Plus, 126, 44 (2011).
3. **G. Lodato**, “*Classical disc physics*”, New Astronomy Reviews, 52, 21 (2008).
4. **G. Lodato**, “*Self-gravitating accretion discs*”, La Rivista del Nuovo Cimento, 30, 293 (2007).

- **Pubblicazioni con Referee**

1. Bonnerot, C., Rossi, E. M., **Lodato, G.**, and Price, D. J., “*Disc formation from stellar tidal disruptions*”, MNRAS, submitted (2015).
2. Campana, S., Mainetti, D., Colpi, M, **Lodato, G.**, D’Avanzo, P., Evans, P. and Moretti, A., “*Multiple tidal disruption flares in the active galaxy IC 3599*”, A&A, submitted (2015).
3. **Lodato, G.**, Franchini, A., Bonnerot, C. and Rossi, E. M. “*Recent developments in the theory of tidal disruption events*”, Journal of High Energy Astrophysics, in press (2015).
4. Gerosa, D., Veronesi, B., **Lodato, G.** and Rosotti, G. “*Spin alignment and differential accretion in merging black hole binaries*”, MNRAS, in press (2015).
5. Mancini, L. et al (including **Lodato, G.**), “*The GAPS programme with HARPS-N at TNG. VIII. Observations of the Rossiter-McLaughlin effect and characterisation of the transiting planetary systems HAT-P-36 and WASP-11/HAT-P-10*”, A&A, in press (2015).
6. Sozzetti, A., et al (including **Lodato, G.**), “*The GAPS programme with HARPS-N at TNG. VI. The curious case of TrES-4b*”, A&A, 575, L15 (2015).
7. Damasso, M. et al (including **Lodato, G.**), “*The GAPS programme with HARPS-N at TNG. V. A comprehensive analysis of the XO-2 stellar and planetary systems*”, A&A, 575, A111 (2015).
8. Tazzari, M. and **G. Lodato**, “*Estimating the fossil disc mass during supermassive black hole mergers: the importance of torque implementation*”, MNRAS, 449, 1118 (2015).
9. Dipierro, G., **Lodato, G.**, Testi, L. and De Gregorio Monsalvo, I., “*How to Detect the Signatures of Self-Gravitating Circumstellar Discs with ALMA*”, MNRAS, 444, 1919 (2014).
10. Facchini, S., Ricci, L. and **Lodato, G.**, “*Probing the presence of planets in transition discs cavities via warps: the case of TW Hya*”, MNRAS, 442, 3700 (2014).

11. Del Santo, M., Nucita, A.A., **Lodato, G.**, et al., “*The puzzling source IGR J17361–4441 in NGC 6388: a possible planetary tidal disruption event*”, MNRAS, 444, 93 (2014).
12. Desidera, S., et al (including **Lodato, G.**), “*The GAPS Programme with HARPS-N at TNG IV: A Planetary System around XO-2S*”, Astronomy & Astrophysics, 567, L6 (2014).
13. Audard, M., Abraham, P., Dunham, M., Green, J., Grosso, N., Hamaguchi, K., Kastner, J., Kospal, A., **Lodato, G.**, Romanova, M., Skinner, S., Vorobyov, E. and Zhu, Z., “*Episodic Accretion in young stars*”, Protostars & Planets VI, in press (2014).
14. Miotello, A., Testi, L., **Lodato, G.** and others, “*Grain growth in the envelopes and disks of Class I protostars*”, Astronomy & Astrophysics, 567, 32 (2014).
15. S. Mohanty, J. Greaves, D. Mortlock, A. Scholz, I. Pascucci, M. Thomson, D. Apai, **G. Lodato**, D. Looper, “*Protoplanetary disk masses from stars to brown dwarfs: a Bayesian analysis*”, ApJ, 773, 168 (2013).
16. **G. Lodato** and S. Facchini, “*Wave-like warp propagation in circumbinary discs II. Application to KH 15D*”, MNRAS, 433, 2157 (2013).
17. S. Facchini, **G. Lodato** and D. Price “*Wave-like warp propagation in circumbinary discs I. Analytical theory and numerical simulations*”, MNRAS, 433, 2142 (2013).
18. Covino, E. et al. (including **Lodato, G.**), “*The GAPS programme with HARPS-N at TNG. I: Observations of the Rossiter-McLaughlin effect and characterisation of the transiting system Qatar-1*”, A&A, 554, 28 (2013).
19. **G. Lodato** and D. Gerosa, “*Black hole mergers: do gas discs lead to spin alignment?*”, MNRAS, 429, L30 (2013)
20. Feroci, M. et al, “*LOFT: the Large Observatory For X-ray Timing*”, Proceedings of the SPIE, 8443, D2 (2012)
21. S. Nayakshin and **G. Lodato**, “*FU Orionis outbursts and the planet-disc mass exchange*”, MNRAS, 426, 70 (2012)
22. C. Manara, M. Robberto, N. Da Rio, **G. Lodato**, L. Hillenbrand, K. Stassun, “*HST measures of mass accretion rates in the Orion nebula cluster*”, ApJ, 755, 154 (2012).
23. G. Rosotti, **G. Lodato** & D. Price, “*Collisionless response of a circumbinary accretion disc to black hole mass loss*”, MNRAS, 425, 1958 (2012).
24. B. Riaz, D. Stamatellos, **G. Lodato**, J. Gizis, “*First sub-millimeter detection of the TWA brown dwarf disc 2MASSW J1207334-393254*”, MNRAS, 422, L6 (2012).
25. **G. Lodato**, “*The role of gravitational instabilities in the feeding of supermassive black holes*”, Advances in Astronomy, Vol. 2012, Article ID 846875 (2012)
26. S. Campana, **G. Lodato** et al, “*The unusual γ -ray burst GRB 101225A explained as a minor body falling onto a neutron star*”, Nature, 480, 69 (2011)
27. W. K. M. Rice, P. Armitage, G. Mamatsashvili, **G. Lodato** & C. J. Clarke, “*Stability of self-gravitating discs under irradiation*”, MNRAS, 418, 1356 (2011).
28. J. F. Cannizzo, E. Troja, and **G. Lodato**, “*GRB 110328A/SWIFT J164449.3+573451: the tidal obliteration of a deeply plunging star?*”, ApJ, 742, 32 (2011).
29. **G. Lodato** & C. J. Clarke, “*Resolution requirements for Smoothed Particle Hydrodynamics simulations of self-gravitating accretion discs*”, MNRAS, 413, 2735 (2011).
30. D. Forgan, W. K. M. Rice, P. Cossins & **G. Lodato**, “*The nature of angular momentum transport in radiative self-gravitating protostellar discs*”, MNRAS, 410, 994 (2011).

31. **G. Lodato** & E. M. Rossi, “*Multiband lightcurves of tidal disruption events*”, MNRAS, 410, 359 (2011)
32. P. Cossins, **G. Lodato** & L. Testi, “*Resolved images of self-gravitating protostellar discs using ALMA*”, MNRAS, 407, 181 (2010).
33. **G. Lodato** & D. Price, “*On the diffusive propagation of warps in thin accretion discs*”, MNRAS, 405, 1212 (2010).
34. P. J. Cossins, **G. Lodato**, C. J. Clarke “*The effects of opacity on Gravitational Stability in Protoplanetary Discs*”, MNRAS, 401, 2587 (2010).
35. E. M. Rossi, **G. Lodato**, P. J. Armitage, J. E. Pringle, A. R. King, “*Black hole mergers: the first light*”, MNRAS, 401, 2021 (2010).
36. M. J. Bate, **G. Lodato** & J. E. Pringle, “*Chaotic star formation and the alignment of stellar rotation with disc and planetary orbital axes*”, MNRAS, 401, 1505 (2010).
37. **G. Lodato**, S. Nayakshin, A. King, J. E. Pringle, “*Black hole mergers: can gas discs solve ‘final parsec’ problem?*”, MNRAS, 398, 1392 (2009).
38. C. J. Clarke and **G. Lodato** “*Limits on the location of planetesimal formation in self-gravitating protostellar discs*, MNRAS, 398, L6 (2009).
39. P. Cossins, **G. Lodato** & C. Clarke, “*Characterizing the gravitational instability in cooling accretion discs*”, MNRAS, 393, 1157 (2009).
40. **G. Lodato**, A. R. King & J. E. Pringle, “*Stellar disruption by supermassive black holes: is the light curve really proportional to $t^{-5/3}$?*”, MNRAS, 392, 332 (2009).
41. M. Britsch, C. J. Clarke, & **G. Lodato**, “*Eccentricity growth of planetesimals in a self-gravitating protoplanetary disc*”, MNRAS, 385, 1067 (2008).
42. M. Volonteri, **G. Lodato** & P. Natarajan, “*Evolution of massive black hole seeds*”, MNRAS, 383, 1079 (2008).
43. M. Payne & **G. Lodato**, “*The potential for Earth-mass planet formation around brown dwarfs*”, MNRAS, 381, 1597 (2007).
44. C. Clarke, H. Harper-Clark & **G. Lodato**, “*The response of self-gravitating protostellar discs to slow reduction in cooling timescale: the fragmentation boundary revisited*”, MNRAS, 381, 1543 (2007)
45. **G. Lodato** & J. E. Pringle, “*Warp diffusion in thin accretion discs: a numerical study*”, MNRAS, 381, 1287 (2007).
46. **G. Lodato** & P. Natarajan, “*The mass function of high redshift seed black holes*”, MNRAS, 377, L64 (2007).
47. R. Cesaroni, D. Galli, **G. Lodato**, M. Walmsley, Q. Zhang, “*Disks around young O-B (proto)-stars: observations and modeling*”, Protostars & Planets V, pag. 197-212, Arizona University Press, Tucson, Arizona. Eds: Reipurth, Jewitt and Keil (2007).
48. **G. Lodato**, F. Meru, C. Clarke, W. K. M. Rice, “*The role of the energy equation in the fragmentation of protostellar disc during stellar encounters*”, MNRAS, 374, 590 (2007).
49. W. K. M. Rice, K. Wood, P. J. Armitage and **G. Lodato**, “*Dust filtration at gap edges: implications for the spectral energy distribution of disks with embedded planets*”, MNRAS, 373, 1619 (2006).
50. R. Cesaroni, D. Galli, **G. Lodato**, M. Walmsley, Q. Zhang, “*The critical role of disks in the formation of high-mass stars*”, Nature, 444, 703 (2006).
51. W. K. M. Rice, **G. Lodato**, J.E. Pringle, I. Bonnell and P.J. Armitage, “*Planetesimal formation via fragmentation in self-gravitating protoplanetary discs*”, MNRAS, 372, L9 (2006).

52. **G. Lodato** & P. Natarajan, “*Supermassive black hole formation during the assembly of pre-galactic discs*”, MNRAS, 371, 1813 (2006).
53. **G. Lodato** & J. E. Pringle, “*The evolution of misaligned accretion discs around spinning black holes*”, MNRAS, 368, 1196 (2006).
54. **G. Lodato**, E. Delgado-Donate, C. J. Clarke, “*Constraints on the formation mechanism of the planetary mass companion of 2MASS 1207334-393254*”, MNRAS, 364, L91 (2005).
55. W. K. M. Rice, **G. Lodato** & P. J. Armitage, “*Investigating fragmentation conditions in self-gravitating accretion discs*”, MNRAS, 364, L56 (2005).
56. C. Clarke, **G. Lodato**, S. Y. Melnikov and M. Ibrahimov, “*The photometric evolution of FU Orionis objects: disc instability and wind-envelope interaction*”, MNRAS, 361, 942 (2005).
57. **G. Lodato** & W.K.M. Rice, “*Testing the locality of transport in self-gravitating accretion discs - II. The massive disc case*”, MNRAS, 358, 1489 (2005).
58. W.K.M. Rice, **G. Lodato**, J.E. Pringle, I. Bonnell and P.J. Armitage, “*Accelerated planetesimal growth in self-gravitating protoplanetary discs*”, MNRAS, 355, 543 (2004).
59. **G. Lodato** & C. J. Clarke, “*Massive planets in FU Orionis discs: implications for thermal instability models*”, MNRAS, 353, 841 (2004).
60. **G. Lodato** & W. K. M. Rice, “*Testing the locality of transport in self-gravitating accretion discs*”, MNRAS, 351, 630 (2004).
61. **G. Lodato** & G. Bertin, “*Probing the rotation curve of the outer accretion disk in FU Orionis objects with long-wavelength spectroscopy*”, Astronomy & Astrophysics, 408, 1015 (2003).
62. **G. Lodato** & G. Bertin, “*Non-Keplerian rotation in the nucleus of NGC 1068: evidence for a massive accretion disk?*”, Astronomy & Astrophysics, 398, 517 (2003).
63. **G. Lodato** & G. Bertin, “*The spectral energy distribution of self-gravitating protostellar disks*”, Astronomy & Astrophysics, 375, 455 (2001).
64. G. Bertin & **G. Lodato**, “*Thermal stability of self-gravitating, optically thin accretion disks*”, Astronomy & Astrophysics, 370, 342 (2001).
65. G. Bertin & **G. Lodato**, “*Self-gravitating accretion disks*”, Physica Scripta, Vol. T84, 143, (2000).
66. G. Bertin & **G. Lodato**, “*A class of self-gravitating accretion disks*”, Astronomy & Astrophysics, 350, 694, (1999).

- **Publicazioni in preparazione**

1. **Lodato, G.**, Franchini, A., Facchini, S. “*Lense-Thirring precession during tidal disruption events*”, in preparation (2014)

- **Altre pubblicazioni**

1. Jonker, P et al. “*The Hot and Energetic Universe: Luminous extragalactic transients*”, Supporting paper for the science theme The Hot and Energetic Universe to be implemented by the Athena+ X-ray observatory. eprint arXiv:1306.2336 (2013)
2. **G. Lodato**, “*Challenges in the modeling of tidal disruption events lightcurves*”, in “*Tidal Disruption Events and AGN Outbursts*”, Edited by R. Saxton; S. Komossa; EPJ Web of Conferences, Volume 39, id.01001 (2012)

3. Feroci, M. et al, "*LOFT: the Large Observatory For X-ray Timing*", Proceedings of SPIE, 8443, 8443 (2012).
4. **G. Lodato**, P. Cossins, C. J. Clarke, and L. Testi, "*Gravitational instabilities in protostellar discs and the formation of planetesimals*", AIP Conference Series, 1242, 243 (2010).
5. C. J. Clarke, E. Harper-Clark, F. Meru and **G. Lodato**, "*Star-disc encounters and their role in planet formation*", ASP Conference Series, 398, 341 (2008).
6. **G. Lodato**, "*Formation and evolution of massive black hole seeds at high redshift*", Memorie della Società Astronomica Italiana, 79, 1322 (2008).
7. **G. Lodato**, "*Gravitational instabilities in gaseous discs and the formation of super-massive black hole seeds at high redshifts*", in "Collective phenomena in macroscopic systems", pag 154-163, Eds. Bertin, Pozzoli, Romé, World Scientific (2007).
8. W. K. M. Rice, **Lodato, G.** and Armitage, P. J., "*Spiral shocks in astrophysical disks*", in "The physics of collisionless shocks", eds. G. Li, G. Zhang, C. T. Russell, AIP Conference Proceedings, 781, 325 (2005).
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1. **G. Lodato**, "*A getti rallentati*", L'Astronomia, 236, 12, 2002

Altre attività professionali

- Valutatore SIR 2014 per il MIUR.
- Valutatore ANVUR 2013 per il MIUR.
- Valutatore PRIN 2009 per il MIUR.
- Referee per le seguenti riviste: MNRAS, A&A, ApJ, Science, Nature, New Astronomy, Physics Letters A, Astrophysics and Space Sciences, European Physics Journal Plus.
- 2007-2009: Membro dello Steering Committee del Research Network “ASTROSIM”, finanziato dall’European Science Foundation.
- 2008-2009: Panel member dell’Observing Programmes Committee (OPC) per l’European Southern Observatory (ESO).
- Reviewer per progetti finanziati dalla European Science Foundation.
- Reviewer per progetti NASA.
- Organizzatore della Conferenza “High energy tidal disruption events: looking at the future”, Favignana, Italia, Settembre 2013.
- Membro del SOC della Conferenza “Black Hole (g)Astronomy: exploring the different flavours of accretion”, Brindisi, Italia, Settembre 2013.
- Membro del SOC della Conferenza “Advances in Computational Astrophysics”, Ascona, Svizzera, Luglio 2008.
- Membro del LOC della Conferenza “The Planet-Disc connection”, Cambridge, Luglio 2006.
- Organizzatore degli “Institute Seminars” all’Institute of Astronomy, Cambridge (dall’Ottobre 2004 all’Ottobre 2006).
- Organizzatore dei meeting del gruppo di Formazione Stellare all’Institute of Astronomy (Cambridge), dall’Ottobre 2002 all’Ottobre 2004.
- Organizzatore del Convegno “Young Brown Dwarves and the Substellar Initial Mass Function”, svoltosi a Cambridge dal 8 al 10 Settembre 2003.