

Curriculum Vitae - Veronica Roccatagliata

Personal Data

Name	Veronica Roccatagliata
Date, Place of Birth	June 14th 1979, Venice, Italy
Citizenship	Italian
Civil Status	Married; 4 children
Languages	Italian (native); English (fluent), French (moderate); Spanish (moderate), German (basic)
Current Address	Osservatorio Astrofisico di Arcetri Largo Fermi I-50125, Firenze, Italy
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Education

06.2014 - current	accepted for the Habilitation at the Faculty of Physics of the Ludwig-Maximilians-Universität München
04.2010	PhD in Natural Science, Max-Planck-Institute for Astronomy (MPIA) - University of Heidelberg, Germany; “ <i>Multi-wavelength studies of protoplanetary discs</i> ”. Advisors: Prof. Th. Henning & Prof. S. Wolf
06. 2004	Laurea (equivalent to Master of Science) in Astronomy, University of Padova, Italy

Positions Held

from 06.2018	co-founded Marie Skłodowska-Curie fellowship (H2020 AstroFIIt) at Observatory of Arcetri (INAF)
02.2017 - 05.2018	Post Doctoral Contract (<i>Assegno di Ricerca</i>) at Observatory of Arcetri (INAF)
08.2011 - 12.2016	Post Doctoral Contract at Ludwig-Maximilians-Universität München
05.2010 - 07.2011	Post Doctoral Researcher at Space Telescope Science Institute, Baltimore (USA)
08.2005 - 04.2010	PhD contract at MPIA, Heidelberg (Germany)
10.2006 - 07.2008	Doctoral fellowship (Promotioistipendium) at MPIA, Heidelberg (Germany)
08.2005 - 09.2006	PhD contract at MPIA, Heidelberg (Germany)
07.2005 - 08.2005	Collaboration at University of Ca' Foscari, Venezia (Italy)
03.2005 - 06.2005	Visiting student at ESO, Garching bei München
07.2004 - 08.2004	Visiting student at ESO, Garching bei München
07.2004 - 08.2004	Collaboration at the University of Padova (Italy)
11.2003 - 03.2004	Visiting student at ESO, Garching bei München

Parental leave

08.2016 - 12.2016	Part time Elternzeit (parental leave)
04.2016 - 06.2016	Elternzeit (parental leave)
01.2016 - 02.2016	Elternzeit (parental leave)
04.2015 - 09.2015	Maternity Leave & Elternzeit (parental leave)
02.2012 - 09.2012	Maternity Leave & Elternzeit (parental leave)
06.2009 - 12.2009	Maternity Leave & Elternzeit (parental leave)
06.2006 - 12.2006	Maternity Leave & Elternzeit (parental leave)

Awards and Fellowship

12.2017	Marie Sklodowska-Curie cofounded fellowship (H2020 AstroFIT)
07.2015	Bayerische Gleichstellungsförderung (BGF) Förderung der Chancengleichheit für Frauen in der Forschung for the Habilitation to become Professor at the university (declined)
10.2012	Bayerische Gleichstellungsförderung (BGF) Förderung der Chancengleichheit für Frauen in der Forschung @ Ludwig-Maximilians-Universität
06.2011	Fizeau Exchange Visitor program.
06.2005	PhD Studenship at ESO - declined

Visiting Positions

15.07.2017 - 30.07.2017	Excellence Cluster/LMU, München
30.06.2014 - 04.07.2014	Max-Planck-Institut für Astronomie (MPIA), Heidelberg
01.07.2011 - 31.07.2011	Max-Planck-Institut für Astronomie (MPIA), Heidelberg

Community Service

2013 - current	Referee for Astronomy & Astrophysics, The Astrophysical Journal & Monthly Notices of the Royal Astronomical Society
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Committees

02.2012 - 01.2016	IMPRS PhD Thesis Committee of Benjamin Gaczkowski.
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Participation in Research Projects

- I am member of the Gaia-ESO survey.
 - I am member of the TOCS (TESS Open Cluster Studies) working group on clusters of the TESS (Transiting Exoplanet Survey Satellite) space mission.
- I list here the most important observing programs in which I was involved in the last years as principal investigator (PI):
- **VLT/FLAMES** “*Dynamics of Stars and Cluster formation in Serpens Main.*” - 3 h
 - **APEX/LABOCA+APEX/SHFI** “*Resolving the structure and kinematics of the filamentary network feeding the Serpens core.*” - 31 h
 - **APEX/LABOCA** “*Millimeter Survey of Nearby Clusters: How do Protoplanetary Disks Disperse?*” - 80 h
 - **FEROS/2.2 MPG Telescope** “*Planet search around metal poor stars*” - Large program with FEROS at the 2.2m telescope (initiated and started during my PhD and still on-going) - 300 h
 - **VLT/MIDI** “*The young binary system SVS 20 at small spatial scales*” - 6 h

- VLT/NACO “Grain growth and mixing in the upper layer of protoplanetary disks” - 6 h
- VLT/NACO “High-resolution imaging of edge-on circumstellar disks” - 6 h
- VLT/VISIR “Signatures of planets and planet formation in transitional disks” - 6 h
- 30-m IRAM bolometer “Evolution of debris dust of disks around solar-type stars” - 20 h
- OMEGA2000+LAICA/CAHA “Star formation in intermediate-aged clusters” - 16 h
- FEROS/2.2 MPG Telescope “What’s in the inner hole of TOs” - 6 nights

I was co-investigator of a large **Spitzer** proposal: “Nature vs. Nurture: The influence of OB star environments on proto-planetary disk evolution”, ID #30726, PI: J. Bouwman

International Conferences and Talks

I summarise here the talks and conferences I attended and/or invited:

- “**Star formation around the Vela SNR traced by Gaia**” Hauskolloquium at the Universitäts-Sternwarte (LMU) *Invited*, to be done on 30.01.2018
- “**Star formation around the Vela SNR traced by Gaia**” contributed talk at the “*GES 2017 - Gaia-ESO Survey: Fourth Science Meeting*” at the Università di Catania (Catania - 04.09 - 08.09.2017)
- “**Protoplanetary disks and planet formation in nearby associations: the pilot case of eta Chamaleontis**” *Invited* talk at the Special Universe Talk at the Excellence Cluster Universe (Garching bei München - 21.07.2017)
- *Invited* talk at the “*Comparing Apples with Apples: Concordance Between Simulations and Observations of Star Formation*” at the Lorentz Center in Leiden (Aug 15 - 19 2016)
- “**European Grants for the network on Filaments**” *invited* talk at the “*Filaments 2016 workshop*” at USM in München (April 04 - 05 2016)
- “**The Serpens core: test of simulations of low-mass star-formation**” *invited* talk at the “*Filaments 2015 workshop*” at USM in München (March 23 - 25 2015)
- “**The Serpens core: A laboratory to test simulations of low-mass star-formation**” contributed talk at the “*USM+MPE workshop*” at MPE (Garching bei München - 25.11.2014)
- “**Filamentary structures in low-mass star forming regions: the case of the Serpens Core**” contributed talk at the Splinter Session on Interstellar Medium of the Astronomische Gesellschaft 2014 (“*The variable sky: From tiny variations to big explosions*”) in Bamberg (25.09.2014)
- “**From Filaments to Pillars: Serpens Core and Carina Nebula Complex**” MPIA Königstuhl Colloquium (04.07.2014 - *invited*)
- “**Filaments in Serpens**” Star and Planet Formation Seminar at ESO (March 2014)
- “**A multi-wavelength study of the Carina Nebula, the most nearby giant star factory in our Galaxy**” contributed talk at the “*The Universe Explored by Herschel*” (October 2013)
- “**Herschel far-infrared observations of the Carina Nebula Complex**” Star and Planet Formation Seminar at ESO (September 2013)
- “**Cloud Structure and Feedback effects in the Carina Nebula Complex**” poster at the “*Protostars & Protoplanets VI*” in Heidelberg (July 2013)
- “**Evolution and Dissipation of Protoplanetary Disks**” talk at the “*Visitor Seminar*” at the LMU (January 2011)
- “**Evolution and Dissipation of Protoplanetary Disks**” talk at the “*Star & Planet Formation Seminar*” at STScI (November 2010 - *invited*)
- “**Evolution of protoplanetary disks in OB associations: a deep Spitzer/IRAC survey of IC 1795**” contributed talk at the National Capital Area Disks Meeting III (NCAD3) at the Goddard Space Flight Center in Washington, D.C. (July 2010)

- **“Evolution and Dissipation of Protoplanetary Disks”** talk at the *“Astronomy Colloquium* at Carnegie Institution of Washington - Department of Terrestrial Magnetism in Washington D.C. (October 2010 - *invited*)
- **“Evolution of protoplanetary disks in OB associations: a deep Spitzer/IRAC survey of IC 1795”** Hauskolloquium at MPIA Heidelberg (January 2010 - *invited*)
- **“Disk evolution in OB associations: the case of IC1795”** poster at the meeting *“From circumstellar disks to planetary systems”* at ESO Garching (November 2009)
- **“Millimeter observations of debris disks around solar-type stars”** talk at the Instituto de Astrofísica de Andalucía in Granada (January 2008 - *invited*)
- **“Millimeter observations of circumstellar disks around Sun-like stars”** poster at the meeting *“Star-disk interaction in young stars ”* in Grenoble (May 2007)

Organization of Scientific Meetings

- I was the main organiser of a workshop to establish a network on filaments and apply for national and european (ITN) grants. The workshop took place in April 4-5 2016.
- I was the main organiser of the workshop *“Filaments 2015”* (München, March 23 - 25 2015) with 40 participants from Europe and US and I was part of the SOC of the workshop. I successfully applied as PI at the DFG Priority Program 1573: *“Physics of the Interstellar Medium”* for 8050 Euros as contribution for the organisation of the workshop.
- I was the main organiser of the *“USM+MPE workshop”* with 40 participants (MPE - Garching bei München, November 25 2014)
- I was the initiator and coordinator of the weekly USM Star Formation coffee (2014-2016).

Teaching Experience

- Winter Semester 2017/2018 - Guest lecture on “*Observations of protoplanetary discs: a new era with ALMA*” by the course of Prof. T. Birnstiel (“*The Formation and Evolution of Planets in Protoplanetary Discs*”) at master level at the Universitäts-Sternwarte (LMU).
- Summer Semester 2017 - Guest lecture on “*Observations of protoplanetary discs*” by the course of Prof. T. Birnstiel (“*The Formation and Evolution of Planets in Protoplanetary Discs*”) at master level at the Universitäts-Sternwarte (LMU).
- Winter Semester 2016/2017 - Guest lecture on “*Observations of protoplanetary discs*” by the course of Prof. B. Ercolano (“*The Formation and Evolution of Planets in Protoplanetary Discs*”) at master level at the Universitäts-Sternwarte (LMU).
- Summer Semester 2016 - Tutorials of the course of Prof. Preibisch on “*ISM & Star Formation*” at master level at the Universitäts-Sternwarte (LMU).
 - Guest lectures on “*Observations of protoplanetary disks*” and “*Observations of planets*” by the course of Prof. Preibisch on “*ISM & Star Formation*” at master level at the Universitäts-Sternwarte (LMU).
 - Guest lecture on “*Circumstellar disks*” by the course of Prof. A. Burkert and Dr. D. Hubber (“*Essentials of Advanced Astrophysics*”) at master level at the Universitäts-Sternwarte (LMU).
 - Guest lecture on “*The Milky Way*” by the course of Prof. A. Burkert and Dr. D. Hubber (“*Essentials of Advanced Astrophysics*”) at master level at the Universitäts-Sternwarte (LMU).
- Winter Semester 2015/2016 - Guest lecture on “*Observations of protoplanetary discs*” by the course of Prof. B. Ercolano (“*The Formation and Evolution of Planets in Protoplanetary Discs*”) at master level at the Universitäts-Sternwarte (LMU).
 - Tutorials of the course “*Essentials of Advanced Astrophysics*” at master level at the Universitäts-Sternwarte (LMU).
- 02.2015 - 06.2015 Main Advisor of the Bachelor Thesis of Dennis Frei at the Universitäts-Sternwarte (LMU).
- Winter Semester 2014/2015 Supervisor at the Astrophysical advanced seminar (for the Master of Science in Astrophysics/Physics at LMU); Topic: “*Observational Constraints on the Birth Environment of our Solar System*”
- 06.2014 - 09.2014 Supervisor of a student for a summer project at the Universitäts-Sternwarte (LMU).
- Summer Semester 2014 Supervisor at the Astrophysical advanced seminar (for the Master of Science in Astrophysics/Physics at LMU); Topic: “*Triggered Star Formation*”

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- 02.2012 - 05.2016 Co-Advisor of the PhD Thesis of Benjamin Gaczkowski at the Universitäts-Sternwarte (LMU).
- 09.2011 - 01.2012 Co-Advisor of the Diploma Thesis (equivalent to a Master Thesis) of Benjamin Gaczkowski at the Universitäts-Sternwarte (LMU).
- 02.2008 Tutoring of about 20 undergraduate students at the *F30 Advanced Lab Course in Physics* of the University of Heidelberg. This advanced course included a lecture on the basic of astronomical observations. For each group of students we performed observations with the MPIA 70-cm telescope, carrying out the data reduction and analysis of the data, and preparing a report on the results obtained.

Publications - Veronica Roccatagliata

At the date of writing I have in total 31 referred papers (2 of them under referee process). I have 5 papers as first author, and 7 as second author (2 of them had a PhD student as first author which I supervised). Almost all my publications are the results of small collaborations that I built up during my carrier, using new data acquired by my group on highly requests facilities. 3 publications are part of a large survey. The total number of citations is 479 (updated on ADS at 08.06.2018). My h-index is 14. It is important to highlight that the number of papers, citations and h-index have to be re-computed taking into account the maternity leave taken for the birth of my kids. This is a possibility already settled in the ANVUR website to apply for the habilitation. For this reason the given numbers represent a lower limit.

A) Publications with peer review process

31. A. Sicilia-Aguilar, N. Patel, M. Fang, **V. Roccatagliata**, K. Getman, P. Goldsmith, et al., 2018, A&A, submitted
"The origin and dynamics of the Class 0 protostar in IC 1396 A: Multi-episodic star formation at the edge of an HII region."
30. M.G.H. Krause, A. Burkert, R. Diehl, K. Fierlinger, B. Gaczkowski, D. Kroell, **V. Roccatagliata**, T. Siegert, T. Preibisch, 2018, A&A, submitted
"Surround & Squash: the Interstellar Medium in Scorpius Centaurus"
29. L. Magrini et al. including **V. Roccatagliata**, 2018, A&A, in press
"The Gaia-ESO Survey: the origin and evolution of s-process elements"
28. L. Bravi, et al. including **V. Roccatagliata**, 2018, A&A, in press
"The Gaia-ESO Survey: kinematical and dynamical study of four open clusters"
27. S. Randich, et al. including **V. Roccatagliata**, 2018, A&A, 612, 99
"The Gaia-ESO Survey: open clusters in Gaia-DR1 - a way forward to stellar age calibration"
26. B. Gaczkowski, **V. Roccatagliata**, S. Flaischlen, A. Burkert, R. Diehl, K. Fierlinger, M.G.H. Krause, D. Kroell, J. Ngoumou, T. Preibisch, 2017, A&A, 608A, 102G
"Squeezed between shells? On the origin of the Lupus I molecular cloud II. APEX CO and GASS HI observations"
25. M. Fang, A. Sicilia-Aguilar, D. Wilner, Y. Wang, **V. Roccatagliata**, D. Fedele, and J. Z. Wang, 2017, A&A, 603, 132
"Millimeter Observations of the disk around GW Ori"
24. P. Zeidler, T. Preibisch, T. Ratzka, **V. Roccatagliata**, M.G. Petr-Gotzens 2016, A&A, 585, A49
"The VISTA Carina Nebula Survey. II. Spatial distribution of the infrared excess-selected young stellar population."
23. B. Gaczkowski, T. Preibisch, T. Stanke, M.G.H. Krause, A. Burkert, R. Diehl, K. Fierlinger, D. Kroell, J. Ngoumou, **V. Roccatagliata** 2015, A&A 584, 36
"Squeezed between shells: On the origin of the Lupus I molecular cloud. APEX/LABOCA, Herschel, and Planck observations"
22. **V. Roccatagliata**, J. E. Dale, T. Ratzka, L. Testi, A. Burkert, C. Koepferl, A. Sicilia-Aguilar, C. Eiroa, B. Gaczkowski 2015, A&A, 584, A119

“A network of filaments detected by Herschel in the Serpens core: A laboratory to test simulations of low-mass star-formation.”

21. A. Sicilia-Aguilar, M. Fang, **V. Roccatagliata**, et al. 2015, A&A 580, 82
“Accretion dynamics of EX Lupi in quiescence. The star, the spot, and the accretion column.”
20. A. Sicilia-Aguilar, **V. Roccatagliata**, K. Getman, P. Rivière-Marichalar, T. Birnstiel, B. Merín, M. Fang, Th. Henning, C. Eiroa, T. Currie 2015, A&A, 573, 19
“The Herschel/PACS view of the Cep OB2 region: Global protoplanetary disk evolution and clumpy star formation”
19. T. Preibisch, P. Zeidler, T. Ratzka, **V. Roccatagliata**, M.G. Petr-Gotzens 2014, A&A 572, 116
“The VISTA Carina Nebula Survey. I: Introduction and source catalog”
18. M. Fang, A. Sicilia-Aguilar, **V. Roccatagliata**, et al. 2014, A&A 570, 118
“GW Orionis: Inner disk readjustments in a triple system.”
17. A. Sicilia-Aguilar, **V. Roccatagliata**, Th. Henning, et al. 2014, A&A 562, 131
“A Herschel/PACS view of IC 1396 A: Unveiling the star formation process.”
16. A. Müller, **V. Roccatagliata**, Th. Henning, D. Fedele, A. Pasquali, E. Caffau, M. V. Rodríguez-Ledesma, M. Mohler, U. Seemann and R. J. Klement 2013 A&A 556, A3
“A reanalysis of the FEROS observations of HIP 11952 (Research Note)”
15. **V. Roccatagliata**, T. Preibisch, T. Ratzka, B. Gaczkowski 2013 A&A, 554, A6
“Herschel far-infrared observations of the Carina Nebula Complex. III: Detailed cloud structure and feedback effects.”
14. H. Ohlendorf, T. Preibisch, B. Gaczkowski, T. Ratzka, J. Ngoumou, **V. Roccatagliata**, and R. Grellmann 2013 A&A, 552A, 14
“Young stars in the Gum31 region identified from infrared observations.”
13. B. Gaczkowski, T. Preibisch, T. Ratzka, **V. Roccatagliata**, H. Ohlendorf, and H. Zinnecker 2013 A&A, 549A, 67
“Herschel far-infrared observations of the Carina Nebula complex.II: The embedded young stellar and protostellar population.”
12. T. Preibisch, **V. Roccatagliata**, B. Gaczkowski, T. Ratzka 2012 A&A, 541, 132
“Herschel far-infrared observations of the Carina nebula complex. I. Introduction and global cloud structure.”
11. Setiawan J., **Roccatagliata V.**, Fedele D., Henning Th., Pasquali A., Rodríguez-Ledesma V., E. Caffau, Christlieb N., Seemann U., and Klement R. 2012 A&A, 540, 141
“Planetary companions around the metal-poor star HIP 11952.”
10. Fang M., van Boekel R., King R.R., Henning Th., Bouwman J., Doi Y., Okamoto Y.K., **Roccatagliata V.**, Sicilia-Aguilar A. 2012 A&A, 539, 119
“Star formation and disk properties in Pismis 24”
9. **Roccatagliata V.**, Ratzka T., Henning Th., Wolf S., Leinert Ch., Bouwman J., 2011 A&A, 534, A33
“Multi-wavelength high resolution observations of the binary system Haro 6-10”

8. Sicilia-Aguilar A., Henning Th., Kainulainen J., **Roccatagliata V.**, 2011 ApJ, 736, 137S
“*Protostars and stars in the Coronet cluster: Age, evolution, and cluster structure*”
7. Gräfe Ch., Wolf S., **Roccatagliata V.**, Sauter J., Ertel, S., 2011 A&A, 533A, 89G
“*Mid-infrared observations of the transitional disks around DHTau, DMTau and GMAur*”
6. **Roccatagliata V.**, Bouwman J., Henning Th., Gennaro M., Feigelson E., Kim J. S., Sicilia-Aguilar A., Lawson W. A., 2011, ApJ 733,113R
“*Disk evolution in OB Associations - Deep IRAC/Spitzer survey of the IC 1795*”
5. **Roccatagliata V.**, Henning Th., Wolf S., Rodmann J., Corder S., Carpenter J.M., Meyer M., Dowell D. 2009, A&A 497, 409R
“*Long wavelength observations of debris disks around solar-like stars*”
4. Sicilia-Aguilar A., Bouwman J., Juhász A., Henning Th., **Roccatagliata V.**, Lawson W. A., Acke B., Feigelson E. D., Tielens A.G.G.M., Decin L., Meeus G. 2009, ApJ 701, 1188
“*The Long-Lived Disks in the Eta Chamaeleontis Cluster*”
3. Wittkowski, M.; Aufdenberg, J. P., Driebe, T., **Roccatagliata, V.**, Szeifert, T., Wolff, B. 2006 A&A 460, 843
“*Tests of stellar model atmospheres by optical interferometry. III. NPOI and VINCI interferometry of the M0 giant γ Sagittae covering 0.5 - 2.2 μm* ”
2. Wittkowski, M., Hummel, C. A., Aufdenberg, J. P., **Roccatagliata, V.**, 2006 A&A 460, 855
“*Tests of stellar model atmospheres by optical interferometry. IV. VINCI interferometry and UVES spectroscopy of Menkar*”
1. Richichi A. & **Roccatagliata V.** 2005, A&A 433, 305
“*Aldebaran’s angular diameter: how well do we know it?*”

B) Publications without peer review process

1. **Roccatagliata V.**, Wittkowski M., Aufdenberg J.P., Driebe Th., and Paresce F. 2008, *The Power of Optical/IR Interferometry: Recent Scientific Results and 2nd Generation Instrumentation*, Eso Astrophysics Symposia, Volume . ISBN 978-3-540-74253-1. Springer, 2008, p. 489
“*Spectroscopic and interferometric test of stellar atmosphere models: VLTI/VINCI and UVES observations of α Cet*”
2. **Roccatagliata V.**, Henning Th., Wolf S., Carpenter J., Grenoble April 2007
“*Millimeter observations of circumstellar disks*” in the electronic proceeding of IAU Symposia on *Stars and disks interactions*
3. Davies, R., Rabien, S., Lidman, Ch., Le Louarn, M., Kasper, M., Förster Schreiber, N. M., **Roccatagliata, V.**, Ageorges, N., Amico, P., Dumas, Ch., Mannucci, F. 2008. The Messenger, vol. 131, p. 7.
“*Laser Guide Star Adaptive Optics without Tip-tilt*”

C) Contribution to books

1. in the book 'Planetary Sciences 2nd edition', Authors: Imke de Pater , Jack J. Lissauer, Editor: Cambridge Press: Figure 13.6 Pag. 520, adapted from Fig.1 of the paper A&A 497, 409R, 2009, **Roccatagliata V.** et al.

Abstract PhD thesis:

“Multi-wavelength studies of protoplanetary discs”

Advisors: Prof. Th. Henning & Prof. S. Wolf

The early evolutionary stages of a pre-main sequence star are characterised by the formation of a dense accretion disc. These discs provide the environment and material in and from which planets are expected to form. At this epoch circumstellar material is accreting onto the central star, while small dust grains in the disc interior coagulate into larger objects and gravitationally settle into the mid-plane. These are the first steps of planet formation. The study of the dust properties (e.g. grain size distribution, dissipation timescale) in protoplanetary discs is then fundamental to understand how planets form.

In this thesis I present three works aimed at studying the formation, dissipation and long term evolution of protoplanetary discs, respectively. The first project investigates the properties of the young binary system Haro 6-10. I present the results of multi-wavelength high spatial resolution observations of Haro 6-10 aimed at characterising the large- and small-scale structures of the binary system.

The second project is a combined infrared (Spitzer/IRAC) and X-ray (Chandra/ACIS) survey of the OB association IC 1795. This program is aimed at studying the evolution of protoplanetary discs in regions of massive star formation.

The last project is the deepest single dish millimetre survey of debris discs around solar-type stars to date. The aim of this work is to study the evolution of the debris dust mass with time and to characterise the structure of these discs.