

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO

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Stefano Facchini CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	FACCHINI
NOME	STEFANO
DATA DI NASCITA	16/04/1987

Stefano Facchini

Curriculum Vitae

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Education

- 2012 - 2015 **Ph.D., Astronomy**, *University of Cambridge*, Cambridge, UK
Thesis: The impact of environment on the evolution of protoplanetary discs
Supervisor: Prof. Cathie Clarke.
- 2010 - 2012 **M.S., Astrophysics**, *University of Milan*, Italy, 110/110 cum laude
Thesis: Protostellar disc dynamics in non-coplanar binary systems
Supervisor: Prof. Giuseppe Lodato.
- 2006 - 2009 **B.S., Physics**, *University of Milan*, Italy, 110/110 cum laude
Thesis: Galaxy clusters in the ELAIS-S1 field
Supervisor: Dr. Fabio Gastaldello.

Professional Experience

- Sep 2018 - present **Research Fellow**, *European Southern Observatory (ESO)*, Garching, Germany.
- Oct 2015 - Aug 2018 **Postdoctoral Researcher**, *MPE*, Garching, Germany.
- Oct 2012 - Sep 2015 **IoA Graduate Student**, *University of Cambridge*, Cambridge, UK.
- Oct 2012 - Sep 2015 **Teaching Assistant**, *University of Cambridge*, Cambridge, UK.

User Support and Operations at ALMA Reduction Center, ESO

25% of ESO Fellowship dedicated to support of Atacama Large Millimeter/submillimeter Array (ALMA)

- 2018 - present Quality Assurance (QA) of 7m and 12m PI data.
Astronomer on Duty at the ALMA observatory (2 shifts).
Development studies on interferometric image reconstruction and array operations (published in "New methods for ALMA angular-scale based observation scheduling, quality assessment, and beam shaping", Petry, D., Díaz Trigo, M., Kneissl, R., Toledo, I., Facchini, S. 2020, SPIE 11449).

Journal Publications

h-index: 28, total citations: 1945, number of refereed accepted papers: 65 (+4 submitted)
Source: NASA Astrophysics Data System (March 13, 2021)

First author publications	9
Second and third author publications (9 from direct supervision of projects)	21
Other publications	35
Total	65

Honors and awards

- 2018 **ESO Fellowship**, *ESO Headquarters*, Garching, Germany.
- 2012 - 2015 **Isaac Newton Studentship**, *IoA*, Cambridge, UK.
- 2012 - 2015 **STFC PhD Studentship**, *IoA*, Cambridge, UK.
- 2007 & 2008 **Merit based incentives for top 5% students enrolled in Physics degree courses**, *UNIMI*.

Observational programs awarded

- ALMA **6 programs (50.7h)** as PI, **39 programs (347.5h)** as Col.
ESO/VLT **5 programs (6.8h)** as PI (X-Shooter, SPHERE), **22 programs (490.4h)** as Col (SPHERE, UVES, X-Shooter, FLAMES, MUSE, GRAVITY, MATISSE, ESPRESSO), Col of **2 Large Programs**.
Other (Col) **8 programs (137.4h)** including VLA, APEX, HST (**Large Program**), ISIS/WHT, MagAOX.

Grants and funding

- 2020 **Funding for ESO Internship Program (PI)**, ~ 1.2 k€.
2020 **Funding for ESO Studentship Program (PI)**, ~ 8 k€.
2019 **Funding for ESO Studentship Program (PI)**, ~ 9 k€.
2019 **Funding for ESO Studentship Program (PI)**, ~ 8 k€.
2018 **NASA Award for Emerging Worlds Program (Col)**, ~ 269 k\$.
2018 - 2020 **Funding for ESO Summer Research Program (Col)**, ~ 18 k€ per year.

Teaching

- 2016 - 2018 **Code teaching**, MPE, Garching, Germany
Course: DALI (Dust And Lines).
2013 - 2015 **Teaching assistant**, University of Cambridge, Cambridge, UK
Course: Astrophysical Fluid Dynamics.
2013 **Teaching assistant**, University of Cambridge, Cambridge, UK
Course: Topics in Astrophysics.

Supervision and Mentoring

- 2015 - present **Ph.D. students co-promoter:** A. Izquierdo Cartagena (ESO), M. Leemker (Leiden), L. Wölfer (MPE), S. van Terwisga (Leiden), P. Cazzoletti (MPE).
2016 - present **Ph.D. thesis panel member:** A. Miotello (2018), P. Cazzoletti, S. van Terwisga (2019) (Leiden).
2014 - present **Student project co-supervisor (BSc, MSc, PhD):** E. Sanchis (ESO), P. Curone (UNIMI), M. Koutoulaki (Dublin), L. Trapman (Leiden), M. Ubeira Gabellini (UNIMI), A. Miotello (Leiden), D. Boneberg (IoA), A. Franchini (UNIMI), F. Dai (IoA), F. Zagaria (Pavia), C. Minarini (UNIMI).

Community Service

Reviewing activity

- 2019 - present Panel member of the ALMA Time Allocation Committee.
since 2014 Referee for ApJ, AJ, MNRAS, A&A, Nature.

Seminar and meeting organization

- 2020 **Co-Chair & SOC**, Planet formation session of EAS Conference, Leiden (130 people).
2019 **SOC & LOC**, Workshop: Planet forming disks, Como, Italy (60 people).
2019 **LOC**, ALMA Conference, Cagliari, Italy (300 people).
2018 **LOC**, ESO workshop: Take a closer look, ESO, Garching, Germany (200 people).
2018 - 2019 **Organizer of Star Planet Formation Coffee**, MPE/ESO, Germany.
2016 - 2018 **Organizer of DALI development meetings**, MPE, Garching, Germany.
2015 - 2018 **Organizer of Star Planet Formation Seminar**, MPE/ESO, Germany.

Abilitazione Scientifica Nazionale (ASN)

Application submitted with the ASN2018 program (VI quadrimestre) on 11/10/2020 for "Professore di Seconda Fascia" for "Settore Concorsuale" 02/C1, awaiting for evaluation.

Thresholds required on three indicators (number of publications, number of citations, h-index) are:
22; 602; 16

My results at time of submission as recorded in the ASN application are well above the thresholds:
53; 1282; 22

Expertise

Observational skills

(Sub)-mm interferometry	Program preparation, data reduction, data calibration, image reconstruction, data analysis of both continuum and lines (ALMA)
IR imaging	Program preparation, data reduction, ADI and RDI techniques (SPHERE)
Spectroscopy	Program preparation, data reduction, data analysis (X-Shooter, UVES)
IFUs	Program preparation, data analysis (MUSE)

Theoretical skills

Thermo-chemistry	Developer and advanced user of thermo-chemical DALI
Hydrodynamics	- Advanced user of SPH code PHANTOM - Advanced user of semi-analytical methods

Public outreach

2018	Main organizer of public exhibition on exo-planets in Italy, visited by >15000 people in one week
2018 - present	More than 10 public talks about general astronomy and exo-planets
2017 - present	Astronomy lectures to elementary schools in Italy
2014 - present	Astronomy lectures to more than 20 secondary schools in Italy and Germany

Major international collaborations

- **Protoplanetary disk surveys:** statistical characterization of protoplanetary disks in star-forming regions with mm and UV-IR spectroscopic surveys: ~ 15 researchers
- **Planet detection via kinematics, co-leader:** detection and characterization of protoplanets still embedded in disks through their kinematical signature in hosting disk (theory and observations): ~ 40 researchers
- **PDS 70:** analysis of the physical and chemical conditions of the only protoplanetary disk hosting detected protoplanets with multi-wavelength datasets and numerical simulations: ~ 10 researchers
- **DESTINYS Large Program:** VLT/SPHERE Large Program targeting ~ 90 protoplanetary disks in close-by star forming region to characterize disk properties and hunt for massive young planets: ~ 40 researchers
- **ODYSSEUS and PENELLOPE Large Programs:** spectroscopic characterization of disk-bearing young stars in the UV-NIR range with an HST Archival Large Program and an ESO/VLT Large Program: ~ 60 researchers
- **Planet formation witnesses and probes: transition disks:** official collaborator of DFG Research Unit: FOR 2634 across several German institutes, aiming at understanding the origin of transition disks: ~ 30 researchers
- **Dustbusters:** member of the Dustbusters "Dust and gas in planet forming discs" team funded by the Marie Skłodowska-Curie grant agreement No 823823, consisting of an international team in several institutes across the world to study different aspects of the planet formation mechanisms: ~ 30 researchers

Main scientific achievements

- [12] High angular resolution of massive transition disks strongly suggesting yet-unseen massive planets sculpting the disks' density structure. First hydrodynamical studies compared to observations of the effects of thermo-dynamics in affecting disk substructure
Facchini et al. 2020, A&A, 639, A12
- [11] First detection of a circumplanetary disk at sub-millimeter wavelengths. My contribution has been significant in the interpretation of the data, and within the data-calibration team
Isella et al. 2019, ApJ, 879, L2
- [10] High angular resolution ALMA observations of the first disk showing evidence of radial drift in the extreme ratio of gas and dust radii
Facchini et al. 2019, A&A, 626, L2
- [9] First statistical study of gas radii as observed by CO in the Lupus star forming region, where I significantly contributed in the interpretation within the viscous evolution framework and thermo-chemical predictions of gas and dust radii
Ansdell et al. (incl Facchini) 2018, ApJ, 859, 21
- [8] Observational predictions of misaligned disks in their IR, mm and molecular emission, robustly confirmed by numerous follow-up observations
Facchini et al. 2018, MNRAS, 473, 4459
- [7] First thermo-chemical models showing the significant effects of sub-structures caused by embedded planets in the chemistry and molecular line emission in disks
Facchini et al. 2018, A&A, 612, A104
- [6] Thermo-chemical modelling of protoplanetary disks showing the effects of grain growth and dust opacities in determining different sizes in CO and continuum intensity profiles in ALMA observations
Facchini et al. 2017, A&A, 605, A16
- [5] Spectroscopic study revealing the connection between the inner and outer disk in a highly perturbed system
Facchini et al. 2016, A&A, 596, A38
- [4] Pioneering theoretical prediction of relevance of external photoevaporation in low mass star forming regions, now widely used to interpret observational data of surveys of star forming regions
Facchini et al. 2016, MNRAS, 457, 3593
- [3] First hydrodynamical model of sub-millimeter observations of a system undergoing a star-disk encounter with my first MSc student
Dai, Facchini et al. 2015, MNRAS, 449, 1996
- [2] Development of analytical models inferring planet masses from disk misalignments
Facchini et al. 2014, MNRAS, 442, 3700
- [1] First 3D hydrodynamical study predicting disk breaking in binary protostellar disks
Facchini et al. 2013, MNRAS, 433, 2142

54 Conference Contributions and Institute Seminars/Colloquia

Invited seminars and colloquia (17)

- March 2021 *Colloquium*, virtual meeting, Rice University, Houston, USA (**invited talk**)
- January 2021 *Star and Planet Formation Seminar*, virtual meeting, MPIA, Heidelberg (**invited talk**)
- October 2020 *Colloquium*, virtual meeting, DAS, Santiago, Chile (**invited talk**)
- September 2020 *Department Seminar*, virtual meeting, Rice University, Houston, USA (**invited talk**)
- June 2020 *Origins Seminar*, virtual meeting, Tucson, USA (**invited talk**)
- March 2020 *Colloquium*, JAO, Santiago, Chile (**invited talk**)
- December 2018 *IASF Seminar*, IASF, Milan, Italy (**invited talk**)
- November 2018 *CSH Seminar*, CSH, Bern, Switzerland (**invited talk**)
- June 2018 *Colloquium*, DIAS, Dublin, Ireland (**invited talk**)
- November 2017 *Colloquium*, IfA, Honolulu, USA (**invited talk**)
- July 2017 *Planet and Star Formation Seminar*, MPIA, Heidelberg, Germany (**invited talk**)
- May 2017 *Colloquium*, USM, Munich, Germany (**invited talk**)
- February 2017 *Colloquium*, INAF, Florence, Italy (**invited talk**)
- March 2016 *SPF Seminar*, ESO, Garching, Germany (**invited talk**)
- January 2015 *SPF Seminar*, MPE, Garching, Germany (**invited talk**)
- November 2014 *The Hunt for Exoplanets in Italy*, Rome, Italy (**invited talk**)
- November 2013 *Astrophysical Fluids Lunch Seminar*, DAMTP, Cambridge, UK (**invited talk**)

Invited talks at conferences (8)

- September 2020 *Europlanet Science Congress*, virtual conference (**invited talk**)
- September 2019 *The UX Ori type stars and related topics*, St Petersburg, Russia (**invited review talk**)
- July 2019 *Great Barriers in Planet Formation*, Palm Cove, Australia (**invited talk**)
- March 2019 *Planet-Forming disks*, Como, Italy (**invited talk**)
- October 2018 *ESO Workshop: Take a Closer Look*, Garching, Germany (**invited review talk**)
- June 2018 *Protoplanetary disks*, Rome, Italy (**invited review talk**)
- February 2018 *RUTD kick-off meeting*, Munich, Germany (**invited review talk**)
- December 2017 *Milan Christmas Workshop*, University of Milan, Milan, Italy (**invited review talk**)

Contributed talks and seminars (29)

- November 2020 *ESO Workshop: Threats from the Surroundings*, Garching, Germany (**leader of discussion section**)
- October 2020 *Planet Formation Witnesses and Probes: Transition Disks*, virtual conference (**contributed talk**)
- June 2020 *Astrochemical Frontiers*, virtual conference (400 participants), (**contributed talk**)
- February 2020 *SMA Seminar*, CfA, Cambridge, USA (**talk**)
- December 2019 *Milan Christmas Workshop*, University of Milan, Milan, Italy (**talk**)
- September 2019 *SPF Seminar*, Nice Observatory, Nice, France (**talk**)
- July 2019 *Informal Discussion*, ESO, Garching, Germany (**talk**)
- February 2019 *Informal Discussion*, ESO, Garching, Germany (**talk**)
- January 2019 *SPLAT lunch talk*, IfA, Honolulu, USA (**talk**)
- December 2018 *Universe Cluster Science Week*, Seeon, Germany (**contributed talk**)
- October 2018 *ESO Workshop: Take a Closer Look*, Garching, Germany (**leader of discussion section**)
- July 2018 *Astrochemistry: Past, Present & Future*, Pasadena, USA (**contributed talk**)

May 2018 *Friday Tea Talk*, MPE, Garching, Germany (**talk**)
 March 2018 *SPF2: Star and Planet Formation in the Southwest*, Oracle, USA (**contributed talk**)
 November 2017 *SF Seminar*, CfA, Harvard, Cambridge, USA (**talk**)
 November 2017 *SF Journal Club*, Rice University, Houston, USA (**talk**)
 November 2017 *SF Seminar*, University of Michigan, Ann Arbor, USA (**talk**)
 September 2017 *Planet Formation and Evolution*, Jena, Germany (**contributed talk**)
 June 2017 *Protoplanetary Disks and Planet Formation and Evolution*, Garching, Germany (**contributed talk**)
 March 2017 *IAU Astrochemistry Symposium*, Puerto Varas, Chile (**contributed talk**)
 February 2017 *Friday Tea Talk*, MPE, Garching, Germany (**talk**)
 March 2016 *Protoplanetary Discussions*, Edinburgh, UK (**leader of discussion session**)
 November 2015 *Friday Tea Talk*, MPE, Garching, Germany (**talk**)
 May 2015 *IoA Wednesday Seminar*, IoA, Cambridge, UK (**talk**)
 December 2014 *Milan Christmas Workshop*, University of Milan, Milan, Italy (**contributed talk**)
 December 2014 *Planetary Lunch Talk*, Department of Astrophysical Sciences, Princeton, USA (**talk**)
 December 2014 *Astrophysics Lunch Seminar*, JILA, Boulder, USA (**talk**)
 December 2014 *LPL Wednesday talk*, LPL, Tucson, USA (**talk**)
 November 2013 *IoA Wednesday Seminar*, IoA, Cambridge, UK (**talk**)

Awarded telescope time

ALMA PI proposals (total time awarded: 50.7h)

- [6] *"Tracing Volatile Delivery onto Forming Giant Planets PDS 70 b and c"*
ID: 2019.1.01619.S, requested time: **15.7h**
- [5] *"Resolving dust substructures in mm-faint protoplanetary disks"*
ID: 2019.1.00738.S, requested time: **19.6h**
- [4] *"A CI pilot study in Lupus: a key diagnostic to pin down volatile carbon depletion in protoplanetary disks"*
ID: 2019.1.01390.S, requested time: **1.5h**
- [3] *"Probing the effects of a tidal encounter on the sub-structure of a protoplanetary disk"*
ID: 2018.1.00973.S, requested time: **2.0h**
- [2] *"Probing the effects of a tidal encounter on the sub-structure of a protoplanetary disk"*
ID: 2017.1.01631.S, requested time: **7.0h**
- [1] *"Origin of transitional disks with small dust cavities"*
ID: 2016.1.00715.S, requested time: **4.9h**

ESO PI proposals (total time awarded: 6.8h)

- [5] *"Dynamic structures due to a tidal encounter in the circumstellar disks of RW Aur"*
ID: 0106.C-1035, requested time: **2.5h**, Instrument: SPHERE
- [4] *"Dynamic structures due to a tidal encounter in the circumstellar disks of RW Aur"*
ID: 0102.C-0656, requested time: **2.5h**, Instrument: SPHERE
- [3] *"Probing dust grain growth in protoplanetary discs: absorption properties in the spectrum of RW Aurigae A"*
ID: 098.C-0922, requested time: **0.5h**, Instrument: X-Shooter
- [2] *"Probing the correlation between accretion properties and inner disc perturbations in RW Aur A"*
ID: 096.C-0384, requested time: **0.5h**, Instrument: X-Shooter
- [1] *"Probing dust grain growth in protoplanetary discs: absorption properties in the spectrum of RW Aurigae A"*
ID: 294.C-5047, requested time: **0.8h**, Instrument: X-Shooter

ALMA Col proposals (total time awarded: 347.5h)

- [39] *"No disk is an island: exploring possible late stage infall on disks in the Lupus clouds"*
ID: 2019.2.00157.S, requested time: **16.2h**, PI: C. Manara
- [38] *"Measuring CO freeze out, depletion, and gas mass loss with N₂H⁺"*
ID: 2019.1.01379.S, requested time: **9.0h**, PI: L. Trapman
- [37] *"How massive are the proto-planetary discs in Cygnus OB2?"*
ID: 2019.1.01291.S, requested time: **14.5h**, PI: G. Rosotti
- [36] *"First characterisation of a multi-planetary system at the stage of formation"*
ID: 2019.1.01138.S, requested time: **11.6h**, PI: M. Benisty
- [35] *"Mapping the 3D Kinematic Structure of Planet Formation"*
ID: 2019.1.00419.S, requested time: **33.2h**, PI: R. Teague
- [34] *"Tracing environmental photoevaporation of planet-forming discs with CI"*
ID: 2019.1.00250.S, requested time: **3.2h**, PI: T. Haworth
- [33] *"Measuring the grain size radial profile in the planet-bearing CI Tau system"*
ID: 2019.1.00022.S, requested time: **6.6h**, PI: M. Tazzari

- [32] *"First characterisation of a multi-planetary system at the stage of formation"*
ID: 2018.A.00030.S, requested time: **12.7h**, PI: M. Benisty
- [31] *"Direct Measurement of Inner and Outer Disk Misalignment"*
ID: 2018.1.01829.S, requested time: **3.9h**, PI: R. Loomis
- [30] *"Surveying CO freeze out, depletion, and gas mass loss with N₂H⁺"*
ID: 2018.1.01597.S, requested time: **9.1h**, PI: L. Trapman
- [29] *"How massive are the proto-planetary discs in Cygnus OB2?"*
ID: 2018.1.01558.S, requested time: **10.2h**, PI: G. Rosotti
- [28] *"Planet Formation in Binary Systems"*
ID: 2018.1.01355.S, requested time: **17.1h**, PI: M. Ansdell
- [27] *"Unveiling the origin of dust gaps in HD143006 via CO observations"*
ID: 2018.1.01330.S, requested time: **13.6h**, PI: J. Huang
- [26] *"Misaligned Inner and Outer Disks in Dipper Stars"*
ID: 2018.1.01255.S, requested time: **13.3h**, PI: M. Benisty
- [25] *"Unveiling the nature of azimuthal asymmetries and their connection to spiral arms"*
ID: 2018.1.01092.S, requested time: **4.6h**, PI: P. Cazzoletti
- [24] *"Calibrating the CO snowline measuring stick"*
ID: 2018.1.01062.S, requested time: **3.5h**, PI: M. van 't Hoff
- [23] *"Zooming in onto the smallest dust cavities in Lupus disks: are they similar to the large-scale equivalents?"*
ID: 2018.1.01054.S, requested time: **9.2h**, PI: N. van der Marel
- [22] *"Measuring the radial profile of the maximum grain size in the 4-planet CI Tau system"*
ID: 2018.1.00900.S, requested time: **6.3h**, PI: M. Tazzari
- [21] *"How compact are dust disks around low-mass stars?"*
ID: 2018.1.00822.S, requested time: **11.8h**, PI: I. Pascucci
- [20] *"Born with siblings: will I ever get my own space?"*
ID: 2018.1.00771.S, requested time: **14.9h**, PI: C. Manara
- [19] *"Comparing planet formation and alignment in TWA circumbinary disks"*
ID: 2018.1.00175.S, requested time: **2.9h**, PI: G. Kennedy
- [18] *"Measuring the elusive magnetic field strength in the disk of TW Hya"*
ID: 2018.1.00167.S, requested time: **8.2h**, PI: W. Vlemmings
- [17] *"Where do the spirals come from? A multi-wavelength, high-resolution study of the HD 135344B transition disk"*
ID: 2017.A.00025.S, requested time: **1.2h**, PI: P. Cazzoletti
- [16] *"Is there a planet in the dust gap around CI Tau?"*
ID: 2017.A.00014.S, requested time: **3.3h**, PI: G. Rosotti
- [15] *"Witnessing the transition from protoplanetary to debris disk in the archetype hybrid disk HD21997"*
ID: 2017.1.01575.S, requested time: **1.3h**, PI: L. Matra
- [14] *"Disk-planet interaction in a nearby young system"*
ID: 2017.1.01404.S, requested time: **5.4h**, PI: L. Testi
- [13] *"Non accreting proto-planetary discs: a new evolutionary class?"*
ID: 2017.1.01334.S, requested time: **2.6h**, PI: G. Rosotti
- [12] *"Volatile locking in protoplanetary disks: linking carbon abundances from 0.1 to 100 AU"*
ID: 2017.1.00857.S, requested time: **7.6h**, PI: M. McClure

- [11] *"How massive are the proto-planetary discs in Cygnus OB2?"*
ID: 2017.1.00650.S, requested time: **5.8h**, PI: G. Rosotti
- [10] *"ALMA survey of lambda Orionis disks: understanding the influence of OB stars on planet formation"*
ID: 2017.1.00466.S, requested time: **15.0h**, PI: M. Ansdell
- [9] *"A unique window on circumbinary planet formation at only 45pc"*
ID: 2017.1.00350.S, requested time: **2.8h**, PI: G. Kennedy
- [8] *"Legacy disk surveys with ALMA: leveling the playing field in sigma Orionis"*
ID: 2017.1.00299.S, requested time: **14.4h**, PI: M. Ansdell
- [7] *"The new radial velocity planet in CI Tau: an ALMA search for sibling planets at radii > 4 A.U."*
ID: 2016.1.01286.S, requested time: **2.9h**, PI: C. Clarke
- [6] *"Resolving multiple ring structures in protoplanetary disks"*
ID: 2016.1.01286.S, requested time: **1.9h**, PI: M. Benisty
- [5] *"RW Aurigae: Probing the Aftermath of an Eccentric Star-Disk Fly-By"*
ID: 2016.1.00877.S, requested time: **4.6h**, PI: J. Rodriguez
- [4] *"Non accreting proto-planetary discs: a new evolutionary class?"*
ID: 2016.1.00583.S, requested time: **3.3h**, PI: G. Rosotti
- [3] *"Disks with faint CO: low gas/dust or large carbon depletion?"*
ID: 2016.1.00459.S, requested time: **6.0h**, PI: A. Miotello
- [2] *"Pinpointing the origin of the astonishing structures seen in the HD 135344B disk"*
ID: 2016.1.00340.S, requested time: **2.2h**, PI: P. Cazzoletti
- [1] *"RW Aurigae: Probing the Aftermath of an Eccentric Star-Disk Fly-By"*
ID: 2015.1.01506.S, requested time: **4.6h**, PI: J. Rodriguez

ESO Col proposals (total time awarded: 490.4h)

- [22] *"PENELLOPE: the ESO data legacy program to complete the Hubble UV Legacy Library of Young Stars (ULLYSES)"*
ID: 1106.C-1047, requested time: **250h**, PI: C. Manara, Instruments: X-Shooter, UVES, ESPRESSO
- [21] *"How many protoplanetary disks are still accreting at 10 Myr?"*
ID: 0106.C-0984, requested time: **13h**, PI: C. Manara, Instrument: X-Shooter
- [20] *"Probing protoplanetary disk survivability in the harsh environment of the Orion Nebula Cluster with MUSE NFM"*
ID: 0106.C-1035, requested time: **4.8h**, PI: C. Manara, Instrument: MUSE
- [19] *"A high contrast search for planets and substructures in transition disks"*
ID: 0106.C-0192, requested time: **24h**, PI: M. Benisty, Instrument: SPHERE
- [18] *"Are the inner and outer regions of transition disks coplanar?"*
ID: 0106.C-0177, requested time: **16h**, PI: M. Benisty, Instrument: GRAVITY
- [17] *"Unveiling the inner disk properties in PDS70, a disk hosting multiple planets"*
ID: 0105.C-0334, requested time: **0.5h**, PI: M. Benisty, Instrument: X-Shooter
- [16] *"Search for small separation stellar and brown dwarf companions in protoplanetary disks with shadows"*
ID: 0105.C-0335, requested time: **10.5h**, PI: M. Benisty, Instrument: SPHERE
- [15] *"How many protoplanetary disks are still accreting at 10 Myr?"*
ID: 0105.C-0514, requested time: **13h**, PI: C. Manara, Instrument: X-Shooter

- [14] *"Are the inner and outer regions of protoplanetary disks coplanar?"*
ID: 0105.C-0336, requested time: **8h**, PI: M. Benisty, Instrument: SPHERE
- [13] *"A high contrast search for planets and substructures in transition disks"*
ID: 0105.C-0337, requested time: **25.5h**, PI: M. Benisty, Instrument: SPHERE
- [12] *"Feeling the Heat: Planet Formation in Cluster Environments"*
ID: 0104.C-0454, requested time: **22.5h**, PI: M. Ansdell, Instrument: X-Shooter
- [11] *"Probing protoplanetary disk survivability in the harsh environment of the Orion Nebula Cluster with MUSE"*
ID: 0104.C-0963, requested time: **1.8h**, PI: C. Manara, Instrument: MUSE
- [10] *"Inner and outer disk misalignments in transition disks: the key to their origin?"*
ID: 0103.C-0435, requested time: **8h**, PI: M. Benisty, Instrument: GRAVITY
- [9] *"Search for small separation stellar and brown dwarf companions in protoplanetary disks with radial shadows"*
ID: 0103.C-0443, requested time: **7h**, PI: A. Juhasz, Instrument: SPHERE
- [8] *"Are the inner and outer regions of protoplanetary disks coplanar?"*
ID: 0103.C-0470, requested time: **10h**, PI: M. Benisty, Instrument: SPHERE
- [7] *"Determining the origin of dipper disk behavior with multi-epoch X-Shooter spectra"*
ID: 0103.C-0887, requested time: **23.5h**, PI: M. Benisty, Instrument: X-Shooter
- [6] *"Inner and outer disk misalignments in transition disks: the key to their origin?"*
ID: 0102.C-0210, requested time: **9h**, PI: M. Benisty, Instrument: GRAVITY
- [5] *"Inner and outer disk misalignments in transition disks: the key to their origin?"*
ID: 0101.C-0281, requested time: **10h**, PI: M. Benisty, Instrument: GRAVITY
- [4] *"Search for small separation stellar and brown dwarf companions in protoplanetary disks with radial shadows"*
ID: 0101.C-0880, requested time: **7h**, PI: A. Juhasz, Instrument: SPHERE
- [3] *"Gas and dust in inner protoplanetary disks: A pilot study of the AA Tau-like variable Mon 660 using differential absorption spectroscopy"*
ID: 0100.C-0880, requested time: **8h**, PI: C. Schneider, Instrument: UVES
- [2] *"Disk structure and warping in the quadruple HD 98800 system"*
ID: 097.C-0344, requested time: **1.3h**, PI: G. Kennedy, Instrument: SPHERE
- [1] *"The Lupus V-VI young stellar objects: rapidly evolving disks or an older Lupus population?"*
ID: 096.C-0879, requested time: **30h**, PI: C. Manara, Instrument: FLAMES

Additional Col proposals (total time awarded: 137.4h)

- [7] *"CX Tau: the first test of dust properties in compact protoplanetary discs"*
ID: VLA/20B-299, requested time: **8h**, PI: M. Tazzari, Facility: VLA
- [6] *"A conclusive test of grain growth and radial drift in young circumstellar disks"*
ID: VLA/20A-373, requested time: **59h**, PI: M. Tazzari, Facility: VLA
- [5] *"Measuring the grain size radial profile in the 4-planet CI Tau system"*
ID: VLA/19A-440, requested time: **44.5h**, PI: M. Tazzari, Facility: VLA
- [4] *"The migration of small solids in a young brown dwarf disks"*
ID: VLA/18A-208, requested time: **11.3h**, PI: L. Ricci, Facility: VLA
- [3] *"Outflows and Disks around Young Stars: Synergies for the Exploration of Ulysses Spectra (ODYSSEUS)"*
ID: 28-16129, archival program, PI: G. Herczeg, Facility: HST

[2] *"Direct Detection of Embedded Planets in the CQ Tau Circumstellar Disk"*

Requested time: **1 night**, PI: M. Meyer, Facility: MagAO-X

[1] *"Understanding the gas-phase C/O ratio as a chronicler of planet formation"*

ID: 102.F-9312, requested time: **2.6h**, PI: M. Kama, Facility: APEX

Publication list

Upcoming reviews

- [2] *"Protoplanetary Disk Chemistry: Observations and Models of the Chemistry of Planet Formation"*
Öberg, K., et al. (incl. **Facchini, S.**), ARA&A
- [1] *"Kinematic Structures in Planet-Forming Discs"*
Pinte, C., **Facchini, S.**, et al., PPVII Chapter

First author publications

- [10] *"The chemical inventory of the planet-hosting disk PDS 70"*
Facchini, S., Teague, R., Bae, J., Benisty, M., Keppler, M., Isella, A., **2021, submitted to ApJ, arXiv:2101.08369**
- [9] *"Annular substructures in the transition disks around LkCa 15 and J1610"*
Facchini, S., Benisty, M., Bae, J., Loomis, R., Perez, L., Ansdell, M., Mayama, S., Pinilla, P., Teague, R., Isella, A., Mann, A., **2020, A&A, 639, A12**
- [8] *"High gas/dust size ratio indicating efficient radial drift in the mm-faint CX Tau disk"*
Facchini, S., van Dishoeck, E. F., Manara, C. F., Tazzari, M., Maud, L., Cazzoletti, P., Rosotti, G., van der Marel, N., Pinilla, P., Clarke, C. J., **2019, A&A, 626, L2**
- [7] *"Inferring giant planets from ALMA millimeter continuum and line observations in (transition) disks"*
Facchini, S., Pinilla, P., van Dishoeck, E. F., de Juan Ovelar, M., **2018, A&A, 612, A104**
- [6] *"Signatures of broken protoplanetary discs in scattered light and in sub-millimetre observations"*
Facchini, S., Juhász, A., Lodato, G., **2018, MNRAS, 473, 4459**
- [5] *"Different dust and gas radial extents in protoplanetary disks: consistent models of grain growth and gas emission"*
Facchini, S., Birnstiel, T., Bruderer, S., van Dishoeck, E. F., **2017, A&A, 605, A16**
- [4] *"Violent environment of the inner disk of RW Aur A probed by the 2010 and 2015 dimming events"*
Facchini, S., Manara, C. F., Schneider, C. J., Clarke, C. J., Bouvier, J., Rosotti, G., Booth, R., Haworth, T. J., **2016, A&A, 596, A38**
- [3] *"External photoevaporation of protoplanetary discs in sparse stellar groups: the impact of dust growth"*
Facchini, S., Clarke, C. J., Bisbas, T., **2016, MNRAS, 457, 3593**
- [2] *"Probing the presence of planets in transition discs' cavities via warps: the case of TW Hya"*
Facchini, S., Ricci, L., Lodato, G., **2014, MNRAS, 442, 3700**
- [1] *"Wave-like warp propagation in circumbinary discs - I. Analytic theory and numerical simulations"*
Facchini, S., Lodato, G., Price, D. J., **2013, MNRAS, 433, 2142**

Second and third author publications

* Student supervision

- [21] *"Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYs): Late infall causing disk misalignment and dynamic structures in SU Aur"*
Ginski, C., **Facchini, S.**, Huang, J., Benisty, M., Vaendel, D., Stapper, L., Dominik, C., Bae, J., Menard, F., Muro-Arena, G., Hogerheijde, M., McClure, M., van Holstein, R., Birnstiel, T., Boehler, Y., Bonn, A., Flock, M., Mamajek, E., Manara, C., Pinilla, P., Pinte, C., Ribas, A., **2021, ApJ, 908, L25**

- [20] *"High resolution observations of molecular emission lines toward the CI Tau proto-planetary disc: planet-carved gaps or shadowing?"*
Rosotti, G. P., Ilee, J. D., **Facchini, S.**; Tazzari, M., Booth, R., Clarke, C., Kama, M., **2021, MNRAS, 501, 3427**
- [19] *"A highly non-Keplerian protoplanetary disc: Spiral structure in the gas disc of CQ Tau"*
*Wölfer, L., **Facchini, S.**, Kurtovic, N. T., Teague, R., van Dishoeck, E. F., Benisty, M., Ercolano, B., Lodato, G., Miotello, A., Rosotti, G., Testi, L., Ubeira Gabellini, M., **2020, accepted in A&A, arXiv:2012.04680**
- [18] *"Bright C₂H emission in protoplanetary disks in Lupus: high volatile C/O>1 ratios"*
*Miotello, A., **Facchini, S.**, van Dishoeck, E. F., Cazzoletti, P., Testi, L., Williams, J. P., Ansdell, M., van Terwisga, S., van der Marel, N., **2019, A&A, 631, A69**
- [17] *"A dust and gas cavity in the disc around CQ Tau revealed by ALMA"*
*Ubeira Gabellini, M. G., Miotello, A., **Facchini, S.**, Ragusa, E., Lodato, G., Testi, L., Benisty, M., Bruderer, S., Kurtovic, N. T., Andrews, S., Carpenter, J., Corder, S. A., Dipierro, G., Ercolano, B., Fedele, D., Guidi, G., Henning, T., Isella, A., Kwon, W., Linz, H., McClure, M., Perez, L., Ricci, L., Rosotti, G., Tazzari, M., Wilner, D., **2019, MNRAS, 486, 4638**
- [16] *"Gas vs dust sizes of protoplanetary disks: effects of dust evolution"*
*Trapman, L., **Facchini, S.**, Hogerheijde, M. R., van Dishoeck, E. F., Bruderer, S. **2019, A&A, 629, A79**
- [15] *"Exploring the dimming event of RW Aur A through multi-epoch VLT/X-Shooter spectroscopy"*
*Koutoulaki, M., **Facchini, S.**, Manara, C. F., Natta, A., Garcia Lopez, R., Fedriani, R., Caratti o Garatti, A., Coffey, D., Ray, T. P., **2019, A&A, 625, A49**
- [14] *"A planet-forming circumbinary disc in a polar configuration"*
Kennedy, G. M., Matrá, L., **Facchini, S.**, Milli, J., Panić, O., Price, D., Wilner, D., Wyatt, M. C., Yelverton, B. M., **2019, Nature Astronomy, 3, 230**
- [13] *"Shadows and asymmetries in the T Tauri disk HD 143006: evidence for a misaligned inner disk"*
Benisty, M., Juhász, A., **Facchini, S.**, Pinilla, P., de Boer, J., Perez, L. M., Keppler, M., Muro-Arena, G., Villenave, M., Andrews, S., Dominik, C., Dullemond, C. P., Gallenne, A., Garufi, A., Ginski, C., Isella, A., **2018, A&A, 619, A171**
- [12] *"Probing the protoplanetary disk gas surface density distribution with ¹³CO emission"*
*Miotello, A., **Facchini, S.**, van Dishoeck, E. F., Bruderer, S., **2018, A&A, 619, A113**
- [11] *"Multi-epoch monitoring of the AA Tau like star V 354 Mon. Indications for a low gas-to-dust ratio disk warp"*
Schneider, C. J., Manara, C. F., **Facchini, S.**, Günther, H. M., Herzeg, G. J., Fedele, D., Teixeira, P. S., **2018, A&A, 614, A108**
- [10] *"The extremely truncated circumstellar disc of V410 X-ray 1: a precursor to TRAPPIST-1?"*
*Boneberg, D., **Facchini, S.**, Clarke, C. J., Ilee, J. D., Booth, R. A., Bruderer, S. **2018, MNRAS, 477, 325**
- [9] *"Where can a Trappist-1 planetary system be produced?"*
Haworth, T. J., **Facchini, S.**, Clarke, C. J., Mohanty, S., **2018, MNRAS, 475, 5460**
- [8] *"CO emission tracing a warp or radial flow within 100 au in the HD 100546 protoplanetary disk"*
Walsh, C., Daley, C., **Facchini, S.**, Juhász, A., **2017, A&A, 607, A114**
- [7] *"First evidence of external disc photoevaporation in a low mass star forming region: the case of IM Lup"*
Haworth, T. J., **Facchini, S.**, Clarke, C. J., Cleeves, L. I., **2017, MNRAS, 468, L108**
- [6] *"Observational signatures of linear warps in circumbinary discs"*
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- [5] *"Photochemical-dynamical models of externally FUV irradiated protoplanetary discs"*
Haworth, T., Boubert, D., **Facchini, S.**, Bisbas, T., Clarke, C. J., **2016, MNRAS, 643, 3616**
- [4] *"Lense-Thirring precession around supermassive black holes during tidal disruption events"*
*Franchini, A., Lodato, G., **Facchini, S.**, **2016, MNRAS, 455, 1946**
- [3] *"A tidal encounter caught in the act: modelling a star-disc fly-by in the young RW Aurigae system"*
*Dai, F., **Facchini, S.**, Clarke, C. J., Haworth, T. J., **2015, MNRAS, 449, 1996**
- [2] *"The theory of globulettes: candidate precursors of brown dwarfs and free floating planets in H II regions"*
Haworth, T., **Facchini, S.**, Clarke, C. J., **2015, MNRAS, 446, 1098**
- [1] *"Wave-like warp propagation in circumbinary discs - II. Application to KH 15D"*
Lodato, G., **Facchini, S.**, **2013, MNRAS, 433, 2157**

Other publications

- [38] *"Multi-wavelength continuum sizes of protoplanetary discs: scaling relations and implications for grain growth and radial drift"*
Tazzari, M.; Clarke, C. J.; Testi, L.; Williams, J. P.; **Facchini, S.**; Manara, C. F.; Natta, A.; Rosotti, G., **2020, submitted to MNRAS, arXiv:2010.02249**
- [37] *"The first ALMA survey of protoplanetary discs at 3 mm: demographics of grain growth in the Lupus region"*
Tazzari, M.; Testi, L.; Natta, A.; Williams, J. P.; Ansdell, M.; Carpenter, J. M.; **Facchini, S.**; Guidi, G.; Hogherheijde, M.; Manara, C. F.; Miotello, A.; van der Marel, N., **2020, submitted to MNRAS, arXiv:2010.02248**
- [36] *"Visualizing the Kinematics of Planet Formation"*
Disk Dynamics Collaboration; Armitage, P. J.; Bae, J.; Benisty, M.; Bergin, E. A.; Casassus, S.; Czekala, I.; **Facchini, S.**; Fung, J.; Hall, C.; Ilee, J. D.; Keppler, M.; Kuznetsova, A.; Le Gal, R.; Loomis, R. A.; Lyra, W.; Manger, N.; Perez, S.; Pinte, C.; Price, D. J.; Rosotti, G.; Szulagyi, J.; Schwarz, K.; Simon, J. B.; Teague, R.; Zhang, K., **2020, submitted to PASA, arXiv:2009.04345**
- [35] *"Exploring HNC and HCN line emission as probes of the protoplanetary disk temperature"*
Long, F.; Bosman, A.; Cazzoletti, P.; van Dishoeck, E. F.; Oberg, K. I.; **Facchini, S.**; Tazzari, M.; Guzman, V.; Testi, L., **2021, accepted in A&A, arXiv:2102.06338**
- [34] *"Measuring the ratio of the gas and dust emission radii of protoplanetary disks in the Lupus star-forming region"*
Sanchis, E.; Testi, L.; Natta, A., **Facchini, S.**, Manara, C. F., Miotello, A., Ercolano, B., Henning, T., Preibisch, T., Carpenter, J. M., de Gregorio-Monsalvo, I., Jayawardhana, R., Lopez, C., Muzic, K., Pascucci, I., Santamaría-Miranda, A., van Terwisga, S., Williams, J. P., **2021, accepted in A&A, arXiv:2101.11307**
- [33] *"Constraining the nature of the PDS 70 protoplanets with VLTI/GRAVITY"*
Wang, J., Vigan, A., et al. (including **Facchini, S.**), **2021, AJ, 161, 148**
- [32] *"An ALMA survey of λ Orionis disks: from supernovae to planet formation"*
Ansdell, M.; Haworth, T. J.; Williams, J. P.; **Facchini, S.**; Winter, A.; Manara, C. F.; Hacar, A.; Chiang, E.; van Terwisga, S.; van der Marel, N.; van Dishoeck, E. F., **2020, AJ, 160, 248**

- [31] *“Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYs): A close low mass companion to ET Cha”*
Ginski, C.; Ménard, F.; Rab, Ch.; Mamajek, E. E.; van Holstein, R. G.; Benisty, M.; Manara, C. F.; Asensio Torres, R.; Bohn, A.; Birnstiel, T.; Delorme, P.; **Facchini, S.**; Garufi, A.; Gratton, R.; Hogerheijde, M.; Huang, J.; Kenworthy, M.; Langlois, M.; Pinilla, P.; Pinte, C.; Ribas, Á.; Rosotti, G.; Schmidt, T. O. B.; van den Ancker, M.; Wahhaj, Z.; Waters, L. B. F. M.; Williams, J.; Zurlo, A., **2020, A&A, 642, A119**
- [30] *“Constraining radial drift of mm-sized grains in protoplanetary disks in Lupus”*
Trapman, L., Ansdell, M., Hogerheijde, M. R., **Facchini, S.**, Manara, C. F., Miotello, A., van Terwisga, S. E., Williams, J. P., Bruderer, S., **2020, A&A, 638, A38**
- [29] *“ALMA chemical survey of disk-outflow sources in Taurus (ALMA-DOT). I. CO, CS, CN, and H₂CO around DG Tau B”*
Garufi, A., Podio, L., Codella, C., Rygl, K., Bacciotti, F., **Facchini, S.**, Fedele, D., Miotello, A., Teague, R., Testi, L., **2020, A&A, 636, A65**
- [28] *“Demographics of disks around young very low-mass stars and brown dwarfs in Lupus”*
Sanchis, E., Testi, L., Natta, A., Manara, C. F., Ercolano, B., Preibisch, T., Henning, T., **Facchini, S.**, Miotello, A., de Gregorio-Monsalvo, I., Lopez, C., Mužić, K., Pascucci, I., Santamaría-Miranda, A., Scholz, A., Tazzari, M., van Terwisga, S., Williams, J. P. , **2020, A&A, 633, A114**
- [27] *“Shadowing and multiple rings in the protoplanetary disk of HD 139614”*
Muro-Arena, G. A., Benisty, M., Ginski, C., Dominik, C., **Facchini, S.**, Villenave, M., van Boekel, R., Chauvin, G., Garufi, A., Henning, T., Janson, M., Keppler, M., Matter, A., Menard, F., Zurlo, A., **2020, A&A, 635, A121**
- [26] *“An ideal testbed for planet-disk interaction: two giant protoplanets in resonance shaping the PDS 70 protoplanetary disk”*
Bae, J., Zhu, Z., Baruteau, C., Benisty, M., Dullemond, C., **Facchini, S.**, Isella, A., Keppler, M., Perez, L., Teague, R., **2019, ApJ, 884, L41**
- [25] *“Detection of continuum submillimeter emission associated with candidate protoplanets”*
Isella, A., Benisty, M., Teague, R., Bae, J., Keppler, M., **Facchini, S.**, Perez, L., **2019, ApJ, 879, L2**
- [24] *“Stringent limits on the magnetic field strength in the disk of TW Hya. ALMA observations of CN polarisation”*
Vlemmings, W. H. T., Lankharr, B., Cazzoletti, P., Ceccobello, C., Dall’Olio, D., van Dishoeck, E. F., **Facchini, S.**, Humphreys, E. M. L., Persson, M. V., Testi, L., Williams, J. P. **2019, A&A, 624, L7**
- [23] *“ALMA survey of Class II protoplanetary disks in Corona Australis: a young region with low disk masses”*
Cazzoletti, P., Manana, C. F., Liu Haoyu Baobab, van Dishoeck, E. F., **Facchini, S.**, Alcalá, J. M., Ansdell, M., Testi, L., Williams, J. P., Carrasco-Gonzales, C., Dong, R., Forbrich, J., Fukagawa, M., Galvan-Madrid, R., Hirano, N., Hasegawa, Y., Muto, T., Pinilla, P., Takami, M., Tamura, M., Tazzari, M., Wisniewski, J. P. **2019, A&A, 626, A11**
- [22] *“Highly structured disk around the planet host PDS 70 revealed by high-angular resolution observations with ALMA”*
Keppler, M., Teague, R., Bae, J., Benisty, M., Henning, T., van Boekel, R., Bertrang, G. H., Chapillon, E., **Facchini, S.**, Flock, M., Ginski, C., Juhasz, A., Klahr, H., Liu, Y., Müller, A., Perez, L., Pinilla, P., Pohl, A., Rosotti, G., Samland, M., Semenov, D., Williams, J. P., **2019, A&A, 625, A118**

- [21] *"The ALMA Lupus protoplanetary disk survey: evidence for compact gas disks and molecular rings from CN"*
van Terwisga, S., van Dishoeck, E. F., Cazzoletti, P., **Facchini, S.**, Trapman, L., Williams, J. P., Manara, C. F., Miotello, A., van der Marel, N., Ansdell, M., Hogerheijde, M. R., Tazzari, M., Testi, L., **2019, A&A, 623, A150**
- [20] *"High resolution millimetre imaging of the CI Tau protoplanetary disc - A massive ensemble of protoplanets from 0.1 - 100 AU"*
Clarke, C. J., Tazzari, M., Juhász, A., Rosotti, G., Booth, R., **Facchini, S.**, Ilee, J. D., Johns-Krull, C. M., Kama, M., Meru, F., Prato, L., **2018, ApJ, 866, 6**
- [19] *"Evidence for a massive dust-trapping vortex connected to spirals. A multi-wavelength analysis of the HD 135344B protoplanetary disk"*
Cazzoletti, P., van Dishoeck, E. F., Pinilla, P., Tazzari, M., **Facchini, S.**, van der Marel, N., Benisty, M., Garufi, A., Perez, L., **2018, A&A, 619, A161**
- [18] *"The FRIED grid of mass loss rates for externally irradiated protoplanetary discs"*
Haworth, T. J., Clarke, C. J., Rahman, W., Winter, A., **Facchini, S.**, **2018, MNRAS, 481, 452**
- [17] *"Gaia DR2 view of the Lupus V-VI clouds: the candidate disk-less young stellar objects are mainly background contaminants"*
Manara C. F., Prusti, T., Comeron, F., Mor, R., Alcalá, J. M., Antoja, T., **Facchini, S.**, Fedele, D., Frasca, A., Jerabkova, T., Rosotti, G., Spezzi, L., Spina, L., **2018, A&A, 615, L1**
- [16] *"Multiple stellar fly-bys sculpting the circumstellar architecture in RW Aurigae"*
Rodriguez, J. E., Loomis, R., Cabrit, S., Haworth, T. J., **Facchini, S.**, Booth, R. A., Dougados, C., Jensen, E., Stassun, K. G., Clarke, C. J., Dent, W., **2018, ApJ, 859, 150**
- [15] *"Protoplanetary disc truncation mechanisms in stellar clusters: comparing external photoevaporation and tidal encounters"*
Winter, A. J., Clarke, C. J., Rosotti, G., Ih, J., **Facchini, S.**, Haworth, T., **2018, MNRAS, 478, 2700**
- [14] *"V1094 Sco: a rare giant multi-ringed disk"*
van Terwisga, S., van Dishoeck, E. F., Ansdell, M., van der Marel, N., Testi, L., Williams, J. P., **Facchini, S.**, Tazzari, M., Hogerheijde, M., Trapman, L., Manara, C. F., Miotello, A., **2018, A&A, 616, A88**
- [13] *"Nitrogen isotope fractionation in protoplanetary disks"*
Visser, R., Bruderer, S., Cazzoletti, P., **Facchini, S.**, Heays, A. N., van Dishoeck, E. F., **2018, A&A, 615, A75**
- [12] *"ALMA survey of Lupus protoplanetary disks II: gas disk radii"*
Ansdell, M., Williams, J. P., Trapman, L., van Terwisga, S., **Facchini, S.**, Manara, C. F., van der Marel, N., Miotello, A., Tazzari, M., Hogerheijde, M., Testi, L., van Dishoeck, E. F., **2018, ApJ, 859, 21**
- [11] *"CN rings in full protoplanetary disks around young stars as probe of disk structure"*
Cazzoletti, P., van Dishoeck, E. F., Visser, R., **Facchini, S.**, Bruderer, S., **2018, A&A, 609, A49**
- [10] *"The circumstellar disk HD 169142: gas, dust and planets acting in concert?"*
Pohl, A., Benisty, M., Pinilla, P. et al. (including **Facchini, S.**), **2017, ApJ, 850, 52**
- [9] *"VLA observations of the disk around the young brown dwarf 2M0444"*
Ricci, L., Home, R., Pinilla, P., **Facchini, S.**, Birnstiel, T., Testi, L., **2017, ApJ, 846, 19**
- [8] *"An ALMA survey of protoplanetary disks in σ Orionis"*
Ansdell, M., Williams, J. P., Manara, C. F., Miotello, A., **Facchini, S.**, van der Marel, N., Testi, L., van Dishoeck, E. F., **2017, AJ, 153, 240**

- [7] *"Constraining proto-planetary disc evolution using accretion rate and disc mass measurements: the usefulness of the dimensionless accretion parameter"*
Rosotti, G., Clarke, C. J., Manara, C. F., **Facchini, S.**, 2017, **MNRAS**, **468**, **1631**
- [6] *"The origin of the eccentricity of the hot Jupiter in CI Tau"*
Rosotti, G., Booth, R., Clarke, C. J., Teyssandier, J., **Facchini, S.**, Mustill, A. J., 2017, **MNRAS**, **464**, **L114**
- [5] *"Robustness of N_2H^+ as tracer of the CO snowline"*
van't Hoff M. L. R., Walsh, C., Kama, M., **Facchini, S.**, van Dishoeck, E. F., 2017, **A&A**, **599**, **A101**
- [4] *"Shadows and spirals in the protoplanetary disk HD 100453"*
Benisty, M., Stolker, T., Pohl, A. et al. (including **Facchini, S.**), 2017, **A&A**, **597**, **A42**
- [3] *"Grand challenges in protoplanetary disc modelling"*
Haworth, T. J., Ilee, J. D., Forgan, D. H., **Facchini, S.**, Price, D. J., and community authors, 2016, **PASA**, **33**, **53**
- [2] *"Proplyds around a B1 star - 42 Orionis in NGC 1977"*
Kim, J. S., Clarke, C. J., Fang, M., **Facchini, S.**, 2016, **ApJ**, **826**, **L15**
- [1] *"The nature of the 2014-2015 dim state of RW Aur revealed by X-ray, optical, and NIR observations"*
Schneider, C. J., Günther, H. M., Robrade, J., **Facchini, S.**, Hodapp, K. W., Manara, C. F., Perdelwitz, V., Schmitt, J. H., Wolk, S. J., 2015, **A&A**, **584**, **L9**

Proceedings

- [3] *"New methods for ALMA angular-scale based observation scheduling, quality assessment, and beam shaping"*
Petry, D., Díaz Trigo, M., Kneissl, R., Toledo, I., **Facchini, S.**, 2020, **SPIE** **11449**
- [2] *"Report on the ESO Workshop Take a Closer Look: The Innermost Region of Protoplanetary Discs and its Connection to the Origin of Planets"*
Manara, C. F., Schneider, C., Hussain, G., **Facchini, S.**, Miotello, A., 2018, **ESO Messenger**, **174**, **44**
- [1] *"Gas vs dust radial extent in disks: the importance of their thermal interplay"*
Facchini, S., 2018, "Proceedings IAU Symposium No. 332", 129 (refereed proceeding)

References

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Data

13/03/2021

Luogo

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