

# Sebastián Pérez | CV

Dr./Prof. at U. de Santiago de Chile – Astrophysicist, Musician and Author

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## Summary

Sebastián Pérez is an Assistant Professor at the Faculty of Sciences of University of Santiago de Chile and **director of the Millennium Nucleus on Young Exoplanets and their Moons (YEMS)** as well as **interim director of the Center for Interdisciplinary Research in Astrophysics and Science Exploration (CIRAS)**. He holds a Ph.D. in astrophysics from Oxford University and a B.Sc. in Science from Universidad de Chile. He has authored more than 70 publications in peer-reviewed international journals with more than 2600 citations. He works in astrophysics, art-science interplay, with incursions into music and literature. His research focuses on the question of planetary origins. His recent papers present a novel method for detecting and characterizing young forming planets using predictions from 3D hydrodynamics, as well as the discovery of signatures of a migrating mini-Neptune planet via the footprints it left in the outer disk of a transitional protoplanetary disk.

Prof. Pérez wrote an engaging children's novel that promotes women in science by sharing the essentials of scientific exploration and discovery. More than seven thousand copies are read by children in public schools today. In the interplay between art-science, outreach and education, I have led and participated in projects on embodied learning applied to astrophysics (Recreo), directed the Skies Concert project (Concierto Cielos), and worked on the Charango concerto *From the Big Bang, through the fundamental laws*.

## Employment

**Assistant Professor, Physics Department**

*Director of YEMS Millennium Nucleus, interim director of CIRAS*

**Universidad de Santiago de Chile**

2019–current

## Research experience and funding

**Gemini-CONICYT research fellowship**

*Main line of research: Hydrodynamics and observations of planet formation*

**Universidad de Chile**

2011–2019

**FONDECYT Postdoc, young researcher at MAD**

*Main line of research: Modelling and observing on-going planet formation*

**Universidad de Chile**

2014–2017

**Millennium Nucleus on Protoplanetary Disks Postdoc**

*Main line of research: Protoplanetary disks research with ALMA*

**MAD, U. Chile**

2011–2014

**Postdoctoral fellow (STFC PDRA)**

*Main line of research: accretion disks around black holes with jets (microquasars)*

**University of Oxford**

2009–2011

## Education

**Doctor of Philosophy, PhD**

*Inflow and outflow in stellar mass black holes. Supervisor: Prof. K. M. Blundell*

**University of Oxford**

2006–2009

**Licenciatura en Ciencias mención Astronomía, BSc**

*Graduated with distinction equivalent to a First-class honour (1st).*

**Universidad de Chile**

2002–2005

## Publications (WoS/ISI indexing, peer-reviewed)

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70 publications in peer-reviewed international journals (WoS/ISI), 10 as first author, 36 as either 1st, 2nd or 3rd author, with a total of >2600 citations (Jan 2022). *h-index*: 31 (Google Scholar), 28 (ADS). See publication list at the end or click on: [Smithsonian/NASA ADS](#), [ORCID](#), [Google Scholar](#).

## Synergetic projects on art, education, outreach and science

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- Director of Potenciando el diálogo entre saberes científicos y Mapuche en astrofísica. Ciencia Pública 2022.
- Director of Concierto Cielos project on convergence between music and astronomy. [www.conciertocielos.cl](http://www.conciertocielos.cl).
- Director of Recreo Espacial an embodied learning project for education and motivation into science through experiential activities related to astrophysical concepts (2016–2019). [recreo.das.uchile.cl](http://recreo.das.uchile.cl).
- Author of the children's astronomy novel *Bitácora Planetaria: Cazadores de Eclipses*, 2016, LOM Ediciones, funded via Milenio PME. 2nd edition. About 5.000 copies distributed at schools and general public so far.

**AATS 2014:** Director of the Art, Astronomy, Technology and Society initiative. In which I produced:

- Art+Astronomy Day at Contemporary Arts Museum (MAC, Santiago) for artists, educators and the public.
- Art+Astronomy Incubator initiative. Coordination of 4 projects led by pairs of artists and astronomers.

**Immersive installation AATS 2013 “El Origen del Sistema Solar”:** Scientist in residency at National Contemporary Arts museum (lead by artist Olaf Peña).

## Teaching experience, as supervisor and lecturer

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**U. de Santiago (2020-2021):** Supervision of engineering student B. Monsalvez.

**U. de Chile (2016-2018):** Co-supervision of MSc students M. Barraza and F. Alarcón.

**U. de Chile (2016-2017):** Supervisor of undergraduate research projects: M. Araya (hydrodynamics of multiple planets), A. Dumas (radiation hydrodynamics) and M. Briceño (FU Ori ALMA observations).

**U. de Chile (2015-2016):** Supervisor of undergraduate research projects: C. Flores, M. Barraza and F. Alarcón.

**U. of Oxford (2007-2010):** Lecturer Stellar Evolution and Cosmology (Astro B3, 3rd year Physics undergrads).

**U. de Chile (2002-2006):** Teaching assistant for Electromagnetism and Statistical Physics.

## Grants

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### Science grants and awards.....

**2022–2025:** Millennium Nucleus grant (as director). Three years, ~USD700k in total.

**2019–2022:** FONDECYT Regular grant (as PI). Four years, ~USD270k in total.

**2018:** ESO-Chile comité mixto grant for funding astrophysics professorship at USACH. Two years. ~90k USD.

**2017:** FONDECYT Regular grant (as co-investigator).

**2015:** FONDECYT grant (100k USD) for GPU Cluster for hydro 3D simulations (PI-ed along with S. Casassus).

**2014:** FONDECYT Postdoctoral fellowship (120k USD).

**2008:** Oxford University's St John's College special grant for research excellence.

**2006:** PPARC (STFC) PhD Studentship – Particle Physics and Astronomy Research Council (PPARC UK). I was awarded the only such studentship available for South American students.

**2005:** Outstanding Undergraduate Student at Universidad de Chile (top 10% students of Physics and Math).

### Art grants and residencies.....

**2022:** Concurso Nacional Ciencia Pública for “Potenciando el diálogo entre saberes científicos y Mapuche en astrofísica”. USD35k.

**2018:** Fondo de la Música (Fondos de Cultura, Chile) to make a record of the charango concerto based on the fundamental laws of astronomy (composer A. Yermakova in collaboration with S. Perez). 15k USD.

**2018:** Djerassi Artist Residency for the Scientific Delirium Madness art+science program, to explore and expand how the creativity of scientists and artists are connected. San Francisco, CA, USA. June 2018.

**2016-2017:** Research grant on embodied learning applied to astronomy (20k USD) via Iniciativa Milenio (PME MAD program, along with S. Casassus, A. Yermakova).

**2015:** Grant to create, illustrate, publish and distribute a children's book about astronomy to encourage Women in Science (20k USD) via Iniciativa Milenio (PME MAD program).

**2014:** Outreach grant to fund art+astronomy initiatives "AATS 2014" (20k USD), along with S. Casassus, via Iniciativa Milenio (PME MAD program).

## Review panel invitations and other services

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- ALMA Science Assessor (2017–2019), Category 4 Circumstellar disks, exoplanets and the solar system. Reviewing ~100 proposals per year.
- Referee on major (WoS) astronomy journals ApJ, ApJ Letters, A&A and MNRAS.
- Science Assessor and evaluator for graduate travel scholarships/funding at U. de Chile.
- Science Assessor and evaluator for XXI Concurso de Proyectos Explora, Conicyt.

## Recent telescope time allocated as PI (2014–2021)

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**ALMA Cycle 7 rank A:** (long baselines) Revealing planet migration with ALMA, 7h

**ALMA Cycle 7 rank B:** (long baselines) Resolving the kinematics of FU Orionis, 8h

**ALMA Cycle 6 rank A:** (long baselines) Follow up observation on circumplanetary disk discovery, 16h

**VLT/SPHERE DDT P101:** SAM observations of a candidate protoplanet, 5h

**ALMA Cycle 5 rank A:** (long baselines) Survey of TTauri disks (DARTTS-A). 10h

**SPHERE/VLT P101:** Solar asteroid belt analogue. 0.5h

**ALMA Cycle 4 rank A:** (long baselines) CPD detection. 11h

**ALMA Cycle 4 rank A:** (long baselines) Kinematics of FU Ori. 3h

**ALMA Cycle 4 rank B:** Protolunar disks II. 3h

**VLA A-config 2017:** V883 Ori's snowline. 6h

**SPHERE/VLT P98 and P99:** Interacting protoplanetary disks Survey II. 0.9h

**SPHERE/VLT P97:** Interacting protoplanetary disks Survey I. 0.3h

**ALMA Cycle 3 rank B:** Protolunar disks. 3h

**ALMA Cycle 2 rank B:** Planet formation at a critical age. 5h

**NACO/VLT P96:** Circumstellar environ of ZCMa in high contrast polarimetry. 4h

**NACO/VLT P96:** Ionised nebula around black hole SS433. 2h in service + 4h visitor AGPM

**MagAO/Baade 2014:** Twin disks SR24, diffraction-limited imaging in Z' and K band. 2h

## Invited seminars, conferences and workshops (selected)

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- Invited talk at "Circumplanetary Disks and Satellite Formation", Online (Nagoya/ETH Zurich). Mar 2020
- Invited talk at "Kinematics of Planet formation", Flatiron Institute, NYC. Oct 2019
- Contributed talk at 2nd workshop "The UX Ori type stars and related topics", St Petersburg. Oct 2019
- Invited talk at the "Great Barriers in Planet Formation", Palm Cove, Australia. July 2019

- Contributed talk at “New Horizons in Planetary Systems”, Victoria, Canada. May 2019
- Invited seminar, “The Poladian Project: A festival of interdisciplinary research and surprising connections”, Sydney, Australia. Feb 2019
- Colloquium, Department of Physics, U. de Santiago, Chile. Jan 2019
- Colloquium, Department of Astronomy, U. de Chile. Dec 2018
- Invited seminar, Niels Bohr Institute, Copenhagen, Denmark. Oct 2018
- Invited seminar, Institute of Astronomy, Cambridge, UK. Oct 2018
- Contributed talk at “Circumplanetary Disks and Satellite Formation”, Nagoya, Japan. March 2018
- Contributed talk at “ESO Planet Formation 2016”, Santiago. March 2016
- Contributed talk at “Disc Dynamics & Planets”, Larnaka, Cyprus. June 2015
- Contributed talk at “Transition Disks and Planet Formation”, Leiden, Netherlands. March 2015
- Chair and coordinator for “Protoplanetary disks and the planets they form”, U. Chile. Nov 2014
- Contributed talk at “Characterising planetary systems across the HR diagram”, Cambridge, UK. July 2014
- Poster at “Transformational Science with ALMA: From Dust to Rocks to Planets”, Hawaii, USA. May 2014
- Contributed talk at “Herbig Ae/Be stars: the missing link in star formation”, ESO, Chile. March 2014
- Contributed talk at “ALMA Early Science conference”, Puerto Varas, Chile. Dec 2013

## Tools and technical expertise

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**Numerical Simulations:** 3D/2D hydrodynamic simulations (FARGO, FARGO2D-ADSG, FARGO3D, GADGET-2).

**Radiative Transfer:** Continuum and line emission calculations with RADMC3D. Listed as developer in RADMC3D website. Also have experience with MCFOST and LIME.

**Image synthesis:** NRAO CASA, GPU-UVMEM.

**Programming languages:** Python (astropy, numpy, scipy), Perl (PDL), C, CUDA GPU, OpenGL, Fortran.

## Recent outreach activity

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- Odessa House of Scientists, Astronomy society, Odessa, Ukraine. Oct 2018.
- Keynote speaker at “Simposio de Arte y Astronomía”, UDP, Santiago, Chile. Mar 2018
- Workshop talk on art and astronomy at UNESCO’s “Learning through Art” week. Coyhaique, Chile. 2016
- >50 outreach talks at schools since 2013, in Chile (50), UK (4), India (2), Ukraine (1) and South Africa (1).
- Invited to 7 radio shows at four major radio stations and four appearances on national TV (including S02E10 Hijos de las Estrellas, Metropolitobros).
- Invited to several “Diálogos en movimiento” by Ministry of Cultures at schools in Chile.

## Other highlights

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- Observing experience on VLT/SPHERE, ALMA, Gemini North and South, 6m Magellan, VLA, SAAO 2m
- Advanced English and Native Spanish.

## Reference letters / People who are familiar with my work

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### Prof. Katherine M. Blundell

- Astrophysics, University of Oxford
- katherine.blundell@physics.ox.ac.uk

### Prof. Lucas Cieza

- Nucleo de Astronomia, U. Diego Portales
- lucas.cieza@mail.udp.cl

## Prof. Simon Casassus

- DAS, Universidad de Chile
- simon@das.uchile.cl

## Prof. Dame Jocelyn Bell-Burnell

- Astrophysics, University of Oxford
- Jocelyn.BellBurnell@physics.ox.ac.uk

## Publications list (WoS/ISI, peer-reviewed)

- [1] Rafael Martinez-Brunner, Simon Casassus, **Pérez, Sebastián**, Antonio Hales, Philipp Weber, Miguel Cárcamo, Carla Arce-Tord, Lucas Cieza, Antonio Garufi, Sebastián Marino, and Alice Zurlo. High-resolution ALMA observations of V4046 Sgr: a circumbinary disc with a thin ring. *MNRAS*, 510(1):1248–1257, February 2022.
- [2] P. P. Poblete, N. Cuello, **Pérez, S.**, S. Marino, J. Calcino, E. Macías, Á. Ribas, A. Zurlo, J. Cuadra, M. Montesinos, S. Zúñiga-Fernández, A. Bayo, C. Pinte, F. Ménard, and D. J. Price. The protoplanetary disc around HD 169142: circumstellar or circumbinary? *MNRAS*, 510(1):205–215, February 2022.
- [3] Allison Youngblood, Aki Roberge, Meredith A. MacGregor, Alexis Brandeker, Alycia J. Weinberger, **Pérez, Sebastián**, Carol Grady, and Barry Welsh. A Radiatively Driven Wind from the  $\eta$  Tel Debris Disk. *AJ*, 162(6):235, December 2021.
- [4] Philipp Weber, Simon Casassus, and **Pérez, Sebastián**. The steady-state hydrodynamics of a long-lived disc: planetary system architecture and prospects of observing a circumplanetary disc shadow in V4046 Sgr. *MNRAS*, November 2021.
- [5] Simon Casassus, Valentin Christiaens, Miguel Cárcamo, **Pérez, Sebastián**, Philipp Weber, Barbara Ercolano, Nienke van der Marel, Christophe Pinte, Ruobing Dong, Clément Baruteau, Lucas Cieza, Ewine F. van Dishoeck, Andrés Jordan, Daniel J. Price, Olivier Absil, Carla Arce-Tord, Virginie Faramaz, Christian Flores, and Maddalena Reggiani. A dusty filament and turbulent CO spirals in HD 135344B - SAO 206462. *MNRAS*, 507(3):3789–3809, November 2021.
- [6] R. Franz, B. Ercolano, S. Casassus, G. Picogna, T. Birnstiel, **Pérez, S.**, Ch. Rab, and A. Sharma. Dust entrainment in photoevaporative winds: Densities and imaging. *arXiv e-prints*, page arXiv:2110.10637, October 2021.
- [7] Haoyu Baobab Liu, An-Li Tsai, Wen Ping Chen, Jin Zhong Liu, Xuan Zhang, Shuo Ma, Vardan Elbakyan, Joel D. Green, Antonio S. Hales, Michihiro Takami, **Pérez, Sebastián**, Eduard I. Vorobyov, and Yao-Lun Yang. Millimeter-sized Dust Grains Appear Surviving the Water-sublimating Temperature in the Inner 10 au of the FU Ori Disk. *arXiv e-prints*, page arXiv:2110.09684, October 2021.
- [8] Marcelo Barraza-Alfaro, Mario Flock, Sebastian Marino, and **Pérez, Sebastián**. Observability of the vertical shear instability in protoplanetary disk CO kinematics. *A&A*, 653:A113, September 2021.
- [9] H. Garg, C. Pinte, V. Christiaens, D. J. Price, J. S. Lazendic, Y. Boehler, S. Casassus, S. Marino, **Pérez, S.**, and A. Zuleta. Non-Keplerian spirals, a gas-pressure dust trap, and an eccentric gas cavity in the circumbinary disc around HD 142527. *MNRAS*, 504(1):782–791, June 2021.
- [10] Alice Zurlo, Antonio Garufi, **Pérez, Sebastián**, Felipe O. Alves, Josep M. Girart, Zhaohuan Zhu, Gabriel A. P. Franco, and L. Ilseidore Cleeves. Near-IR Observations of the Young Star [BHB2007]-1: A Substellar Companion Opening the Gap in the Disk. *ApJ*, 912(1):64, May 2021.
- [11] S. Marino, A. Zurlo, V. Faramaz, J. Milli, Th Henning, G. M. Kennedy, L. Matrà, **Pérez, S.**, P. Delorme, L. A. Cieza, and A. M. Hughes. Insights into the planetary dynamics of HD 206893 with ALMA. *MNRAS*, 498(1):1319–1334, October 2020.



- [12] Lucas A. Cieza, Camilo González-Ruilova, Antonio S. Hales, Paola Pinilla, Dary Ruíz-Rodríguez, Alice Zurlo, Simón Casassus, **Pérez, Sebastián**, Hector Cánovas, Carla Arce-Tord, Mario Flock, Nicolas Kurtovic, Sebastian Marino, Pedro H. Nogueira, Laura Perez, Daniel J. Price, David A. Principe, and Jonathan P. Williams. The Ophiuchus DIsc Survey Employing ALMA (ODISEA) - III. The evolution of substructures in massive discs at 3-5 au resolution. *MNRAS*, 501(2):2934–2953, February 2021.
- [13] Alice Zurlo, Lucas A. Cieza, Megan Ansdell, Valentin Christiaens, **Pérez, Sebastián**, Josh Lovell, Dino Mesa, Jonathan P. Williams, Camilo Gonzalez-Ruilova, Rosamaria Carraro, Dary Ruíz-Rodríguez, and Mark Wyatt. The effect of stellar multiplicity on protoplanetary discs: a near-infrared survey of the Lupus star-forming region. *MNRAS*, 501(2):2305–2315, February 2021.
- [14] D. Mesa, S. Marino, M. Bonavita, C. Lazzoni, C. Fontanive, **Pérez, S.**, V. D’Orazi, S. Desidera, R. Gratton, N. Engler, T. Henning, M. Janson, Q. Kral, M. Langlois, S. Messina, J. Milli, N. Pawellek, C. Perrot, E. Rigliaco, E. Rickman, V. Squicciarini, A. Vigan, Z. Wahhaj, A. Zurlo, A. Boccaletti, M. Bonnefoy, G. Chauvin, V. De Caprio, M. Feldt, L. Gluck, J. Hagelberg, M. Keppler, A. M. Lagrange, R. Launhardt, A. L. Maire, M. Meyer, O. Moeller-Nilsson, A. Pavlov, M. Samland, T. Schmidt, and L. Weber. Limits on the presence of planets in systems with debris discs: HD 92945 and HD 107146. *MNRAS*, 503(1):1276–1289, May 2021.
- [15] V. Christiaens, M. G. Ubeira-Gabellini, H. Cánovas, P. Delorme, B. Pairet, O. Absil, S. Casassus, J. H. Girard, A. Zurlo, Y. Aoyama, G. D. Marleau, L. Spina, N. van der Marel, L. Cieza, G. Lodato, **Pérez, S.**, C. Pinte, D. J. Price, and M. Reggiani. A faint companion around CrA-9: protoplanet or obscured binary? *MNRAS*, 502(4):6117–6139, April 2021.
- [16] Camilo González-Ruilova, Lucas A. Cieza, Antonio S. Hales, **Pérez, Sebastián**, Alice Zurlo, Carla Arce-Tord, Simón Casassus, Hector Cánovas, Mario Flock, Gregory J. Herczeg, Paola Pinilla, Daniel J. Price, David A. Principe, Dary Ruíz-Rodríguez, and Jonathan P. Williams. A Tale of Two Transition Disks: ALMA Long-baseline Observations of ISO-Oph 2 Reveal Two Closely Packed Nonaxisymmetric Rings and a  $\sim 2$  au Cavity. *ApJL*, 902(2):L33, October 2020.
- [17] Antonio S. Hales, **Pérez, Sebastián**, Camilo Gonzalez-Ruilova, Lucas A. Cieza, Jonathan P. Williams, Patrick D. Sheehan, Cristián López, Simon Casassus, David A. Principe, and Alice Zurlo. ALMA Observations of Young Eruptive Stars: Continuum Disk Sizes and Molecular Outflows. *ApJ*, 900(1):7, September 2020.
- [18] Alice Zurlo, Lucas A. Cieza, **Pérez, Sebastián**, Valentin Christiaens, Jonathan P. Williams, Greta Guidi, Hector Cánovas, Simon Casassus, Antonio Hales, David A. Principe, Dary Ruíz-Rodríguez, and Antonia Fernandez-Figueroa. The Ophiuchus DIsc Survey Employing ALMA (ODISEA) - II. The effect of stellar multiplicity on disc properties. *MNRAS*, 496(4):5089–5100, July 2020.
- [19] A. Zurlo, G. Cugno, M. Montesinos, **Pérez, S.**, H. Canovas, S. Casassus, V. Christiaens, L. Cieza, and N. Huelamo. The widest H $\alpha$  survey of accreting protoplanets around nearby transition disks. *A&A*, 633:A119, January 2020.
- [20] **Pérez, Sebastián**, Simon Casassus, Antonio Hales, Sebastián Marino, Anthony Cheetham, Alice Zurlo, Lucas Cieza, Ruobing Dong, Felipe Alarcón, Pablo Benítez-Llambay, Ed Fomalont, and Henning Avenhaus. Long Baseline Observations of the HD 100546 Protoplanetary Disk with ALMA. *ApJL*, 889(1):L24, Jan 2020.
- [21] Satoshi Mayama, **Pérez, Sebastián**, Nobuhiko Kusakabe, and Takayuki Muto et al. Subaru Near-infrared Imaging Polarimetry of Misaligned Disks around the SR 24 Hierarchical Triple System. *AJ*, 159(1):12, Jan 2020.
- [22] **Pérez, Sebastián**, Antonio Hales, Haoyu Baobab Liu, Zhaohuan Zhu, Simon Casassus, Jonathan Williams, Alice Zurlo, Nicolás Cuello, Lucas Cieza, and David Principe. Resolving the FU Orionis System with ALMA: Interacting Twin Disks? *ApJ*, 889(1):59, Jan 2020.

- [23] A. Garufi, H. Avenhaus, **Pérez, S.**, S. P. Quanz, R. G. van Holstein, G. H. M. Bertrang, S. Casassus, L. Cieza, D. A. Principe, G. van der Plas, and A. Zurlo. Disks Around T Tauri Stars with SPHERE (DARTTS-S). II. Twenty-one new polarimetric images of young stellar disks. *A&A*, 633:A82, Jan 2020.
- [24] Simon Casassus, **Pérez, Sebastián**, Axel Osses, and Sebastián Marino. Erratum: Cooling in the shade of warped transition disks. *MNRAS*, 491(1):L17–L17, January 2020.
- [25] Philipp Weber, **Pérez, Sebastián**, Pablo Benítez-Llambay, Oliver Gressel, Simon Casassus, and Leonardo Krapp. Predicting the Observational Signature of Migrating Neptune-sized Planets in Low-viscosity Disks. *ApJ*, 884(2):178, Oct 2019.
- [26] Simon Casassus and **Pérez, Sebastián**. Kinematic Detections of Protoplanets: A Doppler Flip in the Disk of HD 100546. *ApJL*, 883(2):L41, Oct 2019.
- [27] Haoyu Baobab Liu, Antoine Mérand, Joel D. Green, **Pérez, Sebastián**, Antonio S. Hales, Yao-Lun Yang, Michael M. Dunham, Yasuhiro Hasegawa, Thomas Henning, Roberto Galván-Madrid, Ágnes Kóspál, Michihiro Takami, Eduard I. Vorobyov, and Zhaohuan Zhu. Diagnosing 0.1-10 au Scale Morphology of the FU Ori Disk Using ALMA and VLTI/GRAVITY. *ApJ*, 884(1):97, Oct 2019.
- [28] **Pérez, Sebastián**, Sebastián Marino, Simon Casassus, Clément Baruteau, Alice Zurlo, Christian Flores, and Gael Chauvin. Upper limits on protolunar disc masses using ALMA observations of directly imaged exoplanets. *MNRAS*, 488(1):1005–1011, September 2019.
- [29] C. Pinte, G. van der Plas, F. Ménard, D. J. Price, V. Christiaens, T. Hill, D. Mentiplay, C. Ginski, E. Choquet, Y. Boehler, G. Duchêne, **Perez, S.**, and S. Casassus. Kinematic detection of a planet carving a gap in a protoplanetary disk. *Nature Astronomy*, 3:1109–1114, August 2019.
- [30] **Pérez, Sebastián**, Simon Casassus, Clément Baruteau, Ruobing Dong, Antonio Hales, and Lucas Cieza. Dust Unveils the Formation of a Mini-Neptune Planet in a Protoplanetary Ring. *AJ*, 158(1):15, Jul 2019.
- [31] Clément Baruteau, Marcelo Barraza, **Pérez, Sebastián**, Simon Casassus, Ruobing Dong, Wladimir Lyra, Sebastián Marino, Valentin Christiaens, Zhaohuan Zhu, Andrés Carmona, Florian Debras, and Felipe Alarcon. Dust traps in the protoplanetary disc MWC 758: two vortices produced by two giant planets? *MNRAS*, 486(1):304–319, Jun 2019.
- [32] Simon Casassus, **Pérez, Sebastián**, Axel Osses, and Sebastián Marino. Cooling in the shade of warped transition discs. *MNRAS*, 486(1):L58–L62, Jun 2019.
- [33] G. van der Plas, F. Ménard, J. F. Gonzalez, **Perez, S.**, L. Rodet, C. Pinte, L. Cieza, S. Casassus, and M. Benisty. ALMA study of the HD 100453 AB system and the tidal interaction of the companion with the disk. *A&A*, 624:A33, Apr 2019.
- [34] Jonathan P. Williams, Lucas Cieza, Antonio Hales, Megan Ansdell, Dary Ruiz-Rodriguez, Simon Casassus, **Perez, Sebastian**, and Alice Zurlo. The Ophiuchus Disk Survey Employing ALMA (ODISEA): Disk Dust Mass Distributions across Protostellar Evolutionary Classes. *ApJ*, 875(2):L9, Apr 2019.
- [35] Simon Casassus, Sebastián Marino, Wladimir Lyra, Clément Baruteau, Matías Vidal, Alwyn Wootten, **Pérez, Sebastián**, Felipe Alarcon, Marcelo Barraza, Miguel Cárcamo, Ruobing Dong, Anibal Sierra, Zhaohuan Zhu, Luca Ricci, Valentin Christiaens, and Lucas Cieza. Cm-wavelength observations of MWC 758: resolved dust trapping in a vortex. *MNRAS*, 483(3):3278–3287, Mar 2019.
- [36] L. A. Cieza, D. Ruíz-Rodríguez, A. Hales, S. Casassus, **Pérez, S.**, C. Gonzalez-Ruilova, H. Cánovas, J. P. Williams, A. Zurlo, M. Ansdell, H. Avenhaus, A. Bayo, G. H.-M. Bertrang, V. Christiaens, W. Dent, G. Ferrero, R. Gamen, J. Olofsson, S. Orcajo, K. Peña Ramírez, D. Principe, M. R. Schreiber, and G. van der Plas. The

Ophiuchus Disc Survey Employing ALMA (ODISEA) - I: project description and continuum images at 28 au resolution. *MNRAS*, 482:698–714, January 2019.

[37] Daniel J. Price, Nicolás Cuello, Christophe Pinte, Daniel Mentiplay, Simon Casassus, Valentin Christiaens, Grant M. Kennedy, Jorge Cuadra, **Pérez M., Sebastian**, Sebastian Marino, Philip J. Armitage, Alice Zurlo, Attila Juhasz, Enrico Ragusa, Guillaume Laibe, and Giuseppe Lodato. Publisher Note: Circumbinary, not transitional: On the spiral arms, cavity, shadows, fast radial flows, streamers and horseshoe in the HD142527 disc. *MNRAS*, 481(3):3169–3169, December 2018.

[38] **Pérez, S.**, S. Casassus, and P. Benítez-Llambay. **Observability of planet-disc interactions in CO kinematics**. *MNRAS*, 480:L12–L17, October 2018.

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