TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE 5564**

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Fisica Aldo Pontremoli, Università degli Studi di Milano**

Scientist- in – charge: **Dr. Giovanni Rosotti**

Marion Villenave

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Villenave
Name	Marion

PRESENT OCCUPATION

Appointment	Structure
Nasa Postdoctoral Fellow	Jet Propulsion Laboratory, Pasadena, USA

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
PhD	Astrophysics	Université Grenoble Alpes	2020
Master	MSc in Astrophysics	ISAE-SUPAERO	2017
Master	MSc in Engineering	ISAE-SUPAERO	2017

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
NA	NA	NA

FOREIGN LANGUAGES

Languages	level of knowledge
French	Mother tongue
English	Fluent
Spanish	Good

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2023	North American ALMA Science Center's 2023 ALMA Ambassador
2021-now	NASA Postdoctoral Fellowship, JPL, Pasadena, USA
2017-2019	Studentship at the European Southern Observatory, Santiago, Chile

TRAINING OR RESEARCH ACTIVITY

Teaching and Outreach

2019 Teaching assistant: solar system & exoplanet at Universidad de Chile (Prof L. Perez, BSc level, 3h)
2019 Observing nights with the general public (2 nights, ~10 persons per sessions)
2018 – 2019 Presentations about ESO and basic astrophysics to general public

Organisation of conference

2019 Co-organizer of the "*Summer protoplanetary Disk Workshop (SPPD19)"* at ESO Santiago. This workshop gathered 50 researchers from the Chilean community working on protoplanetary disk, both through observations and modelization, for two days. My main roles were to be in contact with the participants, gather all the abstracts proposed for the workshop, and compile the science program, with help from the other members of the organizing committee.

Mentoring

2022 *Emily Baylock* (undergraduate)
Radiative transfer modeling and automatization of methods to estimate the vertical extent of highly inclined protoplanetary disks showing ring substructures (now undergraduate at Caltech).

2019 *Paulina Palma* (undergraduate)
ALMA data reduction and preliminary analysis of a survey of the Chamaeleon I star-forming region (now graduate student at OCA).

Community work

2022 Referee for the Astronomy and Astrophysics journal
2022 Subject-matter expert reviewer in a NASA peer review
2021&2022 Participation to the distributed peer review process for ALMA proposals
2021 Helper at the hands-on disk session of the 2021 Sagan Exoplanet Virtual workshop
2017 – 2019 Active organizer of science coffee talks at ESO (once a month)

Successful P.I. Proposals

VLA period 2023A: *Characterizing pebble concentration in an edge-on disk.* 23h, B grade
VLA period 2022B: *Characterizing radial drift of cm dust in highly inclined disks.* 9h, A grade
VLA period 2021B: *Characterizing dust settling in a Class I edge-on disk.* 3h, B grade
ALMA cycle 6: *Probing an extreme case of dust settling in a protoplanetary disk.* 4h, A grade
ALMA cycle 5: *The Edge-On disk of HH 30: How much flatter can it get?* 4h, A grade

Successful Proposals as co-investigator

HST cycle 30, 29 orbits, instrument WFC3, project number 17067, PI: G. Duchêne
JWST cycle 1, 11h, instrument MIRI, NIRCAM, project number 2562, PI: F. Ménard
ALMA cycle 9, 6h, C grade, project number 2022.1.01758, PI: A. Ribas
ALMA cycle 9 23h, C grade, project number 2022.1.01166.S, PI: A. Ribas
ALMA cycle 9, 10h, C grade, project 2022.1.00742.S, PI: F. Ménard
ALMA cycle 8, 10h, C grade, project 2021.1.01372.S, PI: A. Ribas
ALMA cycle 7, 10h, C grade, project 2021.1.01372.S, PI: A. Ribas
ALMA cycle 6, 8h, A grade, project 2018.1.01.302.S, PI: F. Louvet
ALMA cycle 6, 4h, C grade, project 2018.1.01302.S, PI: M. Benisty
ALMA cycle 5, 1h, B grade, project 2017.1.00878.S, PI: G. Duchêne
ALMA cycle 5, 5h, C grade, project 2017.1.00106.S, PI: F. Ménard

Observing experience

08/2018 One-week observation at ALMA, Chile. Training with the night shift astronomer on duty.
02/2018 Two nights, visitor observations on VLT/SPHERE, Chile

Programming and language skills

Programming in python, LaTeX, Unix, Linux
ALMA and VLA data reduction using the CASA software
Use of the radiative transfert code *mcfost* (Pinte et al. 2006, 2009)

PROJECT ACTIVITY

Year	Project
NA	NA

PATENTS

No Patents

CONGRESSES AND SEMINARS

Date	Institute/Conference	Place
12/2022	California State University Northridge	Northridge, USA
12/2022	Planetary Science Seminar, Caltech	Pasadena, USA
11/2022	Vertical Shear Instability meeting – ***invited review talk***	Online conference
10/2022	Niels Bohr Legacy Symposium in Astrochemistry	Copenhagen, Danemark
10/2022	INAF Arcetri	Florence, Italy
10/2022	IPAG	Grenoble, France
10/2022	OCA	Nice, France

09/2022	LAM	Marseille, France
09/2022	Europlanet Science Congress	Granada, Spain
09/2022	Origins Seminar, University of Arizona	Virtual, Tucson, USA
06/2022	American Astronomical Society meeting	Pasadena, USA
05/2022	Exoplanet IV	Las Vegas, USA
03/2022	Chalmers Astrophysics Colloquium	Virtual, Gotherburg, Sweeden
02/2022	ESO Star and Planet Formation Seminar	Virtual, Garching, Germany
12/2021	Oxford SPIMAX seminar	Virtual, Oxford, UK
12/2021	JPL, exoplanet group	Pasadena, USA
09/2021	Planet forming disks: from Survey to Answers – ***invited***	Virtual, Lorentz Center, Leiden
06/2021	California Institute of Techology	Pasadena, USA
12/2020	IRAP	Toulouse, France
12/2020	Five years after HL Tau: a new era in planet formation	Online conference
04/2020	Building blocks of planets – ***invited***	Online conference
12/2019	MPIA	Heidelberg, Germany
04/2019	Planet forming disks, a workshop for A. Natta	Menaggio, Italy
11/2019	European Southern Observatory	Garching, Germany
10/2019	European Southern Observatory	Santiago, Chile
01/2019	Protoplanetary disk workshop	Santiago, Chile

PUBLICATIONS

Books
No books

Articles in reviews

First author publications:

1. A highly settled disk around Oph163131.
   M. Villenave, K. Stapelfeldt, G. Duchêne, F. Ménard, et al. 2022, ApJ, 930, 11

2. Probing protoplanetary disk evolution in the Chamaeleon II region.
   M. Villenave, F. Ménard, W.R.F. Dent, M. Benisty, et al., 2021, A&A, 653, A46

3. Observations of edge-on protoplanetary disk with ALMA. I. Results from continuum data.
   M. Villenave, F. Ménard, W.R.F. Dent, G. Duchêne, et al., 2020, A&A, 642, A164

4. Spatial segregation of dust grains in transition disks. SPHERE observations of 2MASS J16083070-3828268 and RXJ1852.3-3700.
   M. Villenave, M. Benisty, W. R. F. Dent, F. Ménard et al., 2019, A&A, 624, A7

Co-authored publications:

5. The distributions of Gas, Small-, and Large grains in the LkHa 330 Disk Trace a Young Planetary System
   P. Pinilla, M. Benisty, N. Kurtovic, …, **M. Villenave**, et al., 2022, A&A, 665, A128
6. A SPHERE survey of self-shadowed planet-forming disks
   A. Garufi, C. Dominik, C. Ginski, …, **M. Villenave**, et al., 2022, A&A, 658, A137
7. Circumbinary and circumstellar discs around the eccentric binary IRAS 04158+2805 - a testbed for binary-disc interaction
   E. Ragusa, F. Daniele, C. Toci, …, **M. Villenave**, et al., 2021, MNRAS, 507, 1157
8. Perturbers: SPHERE detection limits to planetary-mass companions in protoplanetary disks
   R. Asensio-Torres, T. Henning, F. Cantalloube, …, **M. Villenave**, et al., 2021, A&A, 652, A101
9. The anatomy of an unusual edge-on protoplanetary disk II. Gas temperature and warm outer region
   C. Flores, G. Duchêne, S. Wolff, **M. Villenave**, et al., 2021, ApJ, 161, 5
10. The anatomy of an unusual edge-on protoplanetary disk I. Dust settling in a cold disk
    S. Wolff, G. Duchêne, K. Stapelfeldt, …, **M. Villenave**, et al., 2021, ApJ, 161, 5
11. On going flyby in the young multiple system UX Tauri
    F. Ménard, N. Cuello, C. Ginski, …, **M. Villenave**, et al., 2020, A&A, 635, L1
12. A gap, shadows, spirals, streamers: SPHERE observations of binary-disk in GG Tau A
    M. Keppler, A. Penzlin, M. Benisty, ..., **M. Villenave**, et al., 2020, A&A, 639, A62
13. Spirals inside the millimeter cavity of transition disk SR21
    G. Muro-Arena, C. Ginski, C. Dominik, ..., **M. Villenave**, et al., 2020, A&A, 636, L4
14. Shadowing and multiple rings in the protoplanetary disk of HD 139614
    G. Muro-Arena, M. Benisty, C. Ginski, ..., **M. Villenave**, et al., 2020, A&A, 635, A121
15. Evolution of protoplanetary disks from their taxonomy in scattered light: spirals, rings, cavities, and shadows.
    A. Garufi, M. Benisty, P. Pinilla, M. Tazzari, …, **M. Villenave** et al., 2018, A&A, 620, A94
16. Shadows and asymmetries in the T Tauri disk HD 143006: evidence for a misaligned inner disk.
    M. Benisty, A. Juhász, S. Facchini, P. Pinilla, …, **M. Villenave** et al., 2018, A&A, 619, A171
17. Dust modeling of the combined ALMA and SPHERE datasets of HD 163296. Is HD 163296 really a Meeus group II disk?
    G. A. Muro-Arena, C. Dominik, L. B. F. M. Waters, M. Min, …, **M. Villenave** et al., 2018, A&A, 614, A24

18. The Circumstellar Disk HD 169142: Gas, Dust, and Planets Acting in Concert?
A. Pohl, M. Benisty, P. Pinilla, C. Ginski, …, **M. Villenave** et al., 2017, ApJ, 850, 1

Submitted publications

19. Modest Dust Settling in the Class I IRAS04302+2247 protoplanetary disk
M. Villenave, L. Podio, G. Duchêne et al. submitted to ApJ.

20. Demographics of Protoplanetary Disks: A simulated Population of edge-on system.
I. Angelo, G. Duchêne, K. Stapelfeldt, …, **M. Villenave** et al. submitted to ApJ.

21. Survey of Protoplnaetary Disks using the Keck/NIRC2 Vortex Coronagraph
N. Wallack, J-B Ruffio, G. Ruane, …, **M. Villenave** et al. submitted to ApJ.

OTHER INFORMATION

References

Dr. Karl Stapelfeldt karl.r.stapelfeldt@jpl.nasa.gov

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Dr. Myriam Benisty myriam.benisty@univ-grenoble-alpes.fr

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

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Place and date: Autrans, December 22 2022