



Carolina Pepe

Curriculum Vitae

Education

- 2009–2014 **PhD in Physics**, *School of Exact and Natural Sciences*, University of Buenos Aires, PhD Thesis: *Intermediate-mass black holes: effects on environment and detectability*.
Supervisor: Dr. Leonardo J. Pellizza & Dr. Andrés Piatti
- 2002–2009 **Master of Science (Physics)**, *School of Exact and Natural Sciences*, University of Buenos Aires, Degree Thesis: *Accretion of the Interstellar Medium by Galactic Intermediate-mass black holes*.
Supervisor: Dr. Leonardo J. Pellizza
- 1997 – 2001 **Commercial Expert**, *Instituto Nuestra Señora del Huerto*.

Fellowships

- 2014–Present **Posdoctoral CONICET Research Fellow (National Research Council)**.
2009–2014 **PhD CONICET Research Fellow (National Research Council)**.

Professional Societies

- 2007–Present Argentinian Physics Association
2009–Present GARRA- Group of Relativistic Astronomy and Radioastronomy
2010–Present Argentinian Astronomical Association

Publications

Referred articles in international journal

- 2013 **Numerical estimates of the accretion rate on to intermediate-mass black holes**, *Pepe C. & Pellizza L. J.*, MNRAS, 430, 2789.
- 2012 **Dark matter and dark energy accretion onto intermediate-mass black holes**, *Pepe C., Pellizza L. J. & Romero G. E.*, MNRAS, 420, 3298.

*Camino General Belgrano km 40, Berazategui
Provincia de Buenos Aires (1894)*

☎ (+54221) 425-4903 (ext 111) • ☎ (+54221) 425-4909
✉ carolina@iar.unlp.edu.ar

Referred articles in international proceedings

- 2013 **IMBHs in Globular Clusters: Accretion rate correlations with cluster parameters**, *Pepe, C. & Pellizza L. J.*, Proceedings of the meeting Reading the book of globular clusters with the lens of stellar evolution, in press.
- 2012 **Intermediate mass black hole growth by cosmological fluids accretion: preliminary results**, *Pepe C. & Pellizza L. J.*, Proceedings of the I Argentinian-Brazilian Meeting on Gravitation, Astrophysics and Cosmology, in press.
- 2010 **Intermediate-mass black holes in Galactic globular clusters**, *Pepe C. & Pellizza L. J.*, Star clusters: basic galactic building blocks throughout time and space, Proceedings of the International Astronomical Union, IAU Symposium, Volume 266, p. 491-494.
- 2008 **A novel method for 2-D agricultural soil roughness characterization based on a laser scanning technique**, *Barber, M., Pepe, C., Perna, P., Grings, F., Jacobo, J., Thibeault, M., Karszenbaum, H.*, Proceedings of 2008 IEEE Geoscience and Remote Sensing Symposium.

Referred articles in national proceedings

- 2013 **Radial gas density profiles in globular clusters: what can millisecond pulsars tell about it?**, *Pepe C. & Pellizza L. J.*, Boletín de la Asociación Argentina de Astronomía, in press.
- 2009 **Intermediate-mass black holes in globular clusters**, *Pepe C. & Pellizza L. J.*, Boletín de la Asociación Argentina de Astronomía, vol.51, p.141-144.

Technical reports

- 2008 **Technical report 6. "Progress report – Calibration/Quality: Simulation and Experimental Tools"**, *Grings, F., Perna, P., Dominguez, L., Salvia, M., Barber, M., Pepe, C., Karszenbaum, H., Jacobo-Berles, J.*, Agreement Resolution CONAE (National Commission of Space Activities) 443/05.

Grants

- 2009-2011 **PICT 2007/00848**, Supported by ANPCyT, Team member.

Travel Grants and Financial Support

- 2012 **Observatory of Rome**, Lodging to attend the meeting "Reading the book of Globular Clusters with lens of stellar evolution".
- 2011 **I GRACO**, Lodging expenses to attend the meeting "I Argentinian-Brazilian Meeting of Gravitation, Astrophysics and Cosmology".
- 2010 **Vatican Observatory**, Grant that covered 75% of travel and lodging expenses to attend the Vatican Observatory Summer School.
- 2010 **Exact Sciences Foundation**, Grant that covered 25% of travel and lodging expenses to attend the Vatican Observatory Summer School.

Camino General Belgrano km 40, Berazategui
Provincia de Buenos Aires (1894)

☎ (+54221) 425-4903 (ext 111) • ☎ (+54221) 425-4909

✉ carolina@iar.unlp.edu.ar

Awards

- 2012 **John Bahcall Award to the Outstanding Latinamerican PhD Student.**, *It covered the expenses for a collaboration trip to the U.S.* .

Scientific Meetings

Contributions to international meetings

- 26 – **IMBHs in Globular Clusters: Accretion rate correlations with cluster parameters**, *Reading the book of globular clusters with the lens of stellar evolution*, Pepe C. & Pellizza L. J., Oral Contribution.
Monte Porzio Catone, Italy
- 4 – **Intermediate mass black hole growth by cosmological fluids accretion: preliminary results**, *I Argentinian-Brazilian Meeting of Gravitation, Astrophysics and Cosmology*, Pepe C., Pellizza L. J. & Romero G. E., Poster Contribution.
Foz de Iguazú, Brasil
- 19– **Accretion on to intermediate-mass black holes**, *II AFA-SUF Meeting*, Pellizza L. J., Pepe C. & Romero G. E., Oral contribution.
Montevideo, Uruguay
- 03 – **Intermediate-mass black holes in Galactic globular clusters**, *IAU General Assembly*, Pepe C. & Pellizza L. J., Poster Contribution.
Río de Janeiro, Brasil

Contributions to national meetings

- 16– **Radial gas density profiles in globular clusters: what can millisecond pulsars tell about it?**, *56th Anual Meeting of the Argentinian Astronomical Association*, Pepe C. & Pellizza L. J., Poster Contribution.
Tandil, Argentina
- 15/06/2012 **Middle mass black holes: Where to find them?**, *New Frontiers in Relativistic and Numerical Astrophysics Workshop*, Pepe C., Oral Contribution.
Buenos Aires, Argentina
- 22– **Intermediate-mass black holes in globular clusters**, *51th Anual Meeting of the Argentinian Astronomical Association*, Pepe C. & Pellizza L. J., Poster Contribution.
San Juan, Argentina
- 29– **Design and construction of a laser profiler for soil rugosity measurements**, *Barber, M., Pepe, C., Grings, F., Perna, P. & Karszenbaum, H*, Poster Contribution, Applied Optics Meeting.
Buenos Aires, Argentina
- 24– **Design and construction of a laser profiler for soil rugosity measurements**, *Barber, M., Pepe, C., Grings, F., Perna, P. & Karszenbaum, H*, Poster Contribution, 2th Anual Meeting of the Argentinian Physics Association.
Salta, Argentina

Attendance to national and international meetings

- 22 – **II Argentinian-Brazilian Meeting of Gravitation, Astrophysics and Cosmology**, *Buenos Aires, Argentina.*

Camino General Belgrano km 40, Berazategui

Provincia de Buenos Aires (1894)

☎ (+54221) 425-4903 (ext 111) • ☎ (+54221) 425-4909

✉ carolina@iar.unlp.edu.ar

- 08 – **6th Workshop of the AAA: Computational Astronomy**, Córdoba, Argentina.
09/08/2011
- 13 – **IAU Symposium 275: Jets at all Scales**, Buenos Aires, Argentina.
17/09/2010
- 30/05 – **Vatican Observatory Summer School**, Albano Laziale, Italy.
26/06/2010
- 26 – **High Energy Phenomena in Relativistic Outflows II**, Buenos Aires, Argentina.
30/10/2009
- 06 – **9th J. J. Giambiagi Winter School Part B. From the nano to the macro scale: electromagnetic response of complex structures**, Buenos Aires, Argentina.
10/08/2007

Industry Outreach

- 10/2008 **Presentation at INNOVAR 2008 Contest. "3D laser scanner for the characterization of the rugosity parameter in agricultural soils"**, Barber, M. ; Grings, F. , Perna, P. , Jacobo Berlles, J. Pepe, C., Buenos Aires, Argentina.

Organization of Scientific Meetings

- 22 – **II Argentinian-Brazilian Meeting of Gravitation, Astrophysics and Cosmology**, Buenos Aires, Argentina, Member of the Local Organizing Comitee.
25/04/2014
- 4 – **I Argentinian-Brazilian Meeting of Gravitation, Astrophysics and Cosmology**, Foz de Iguazú, Brasil, Member of the Local Organizing Comitee.
8/10/2011

Teaching Experience

- 03/2014– **Assistant Professor**, Physics Department, School of Exact and Natural Sciences,
08/2014 University of Buenos Aires.
- 04/2011– **Graduated Teaching Assistant**, Physics Department, School of Exact and Natural
03/2017 Sciences, University of Buenos Aires.
- 04/2010– **Graduated Teaching Assistant**, Math Department, Initial Common Cycle, Uni-
03/2012 versity of Buenos Aires.
- 10/2008– **Undergraduated Teaching Assistant**, Physics Department, School of Exact and
03/2010 Natural Sciences, University of Buenos Aires.
- 04/2008– **Undergraduated Teaching Assistant**, Math Department, Initial Common Cycle,
03/2010 University of Buenos Aires.

Scientific Outreach

- 09/10/2013 **Telescopes observe what eyes can't see**, Oral exposition at Museums Night, Audience: general public.
- 04/2010– **Tutor at the Programme of Freshmen of ICC-Exact Sciences through the
12/2012 Project of Support for the Improvement of the Education during the First Year of Exact and Natural Sciences, Economical Sciences and Informatics Careers (PACENI)**, Extension, Grad Students and Student Welfare Secretary, School of Exact and Natural Sciences.

Camino General Belgrano km 40, Berazategui

Provincia de Buenos Aires (1894)

☎ (+54221) 425-4903 (ext 111) • ☎ (+54221) 425-4909

✉ carolina@iar.unlp.edu.ar

- 28/10/2011 **"Intermediate-mass black holes: are you there? "**, *Oral presentation*, Institute for Astronomy and Space Physics and Physics Department - FECyN, Audience: students and grad-students.
- 06/09/2011 **"About black holes and some other stuff"**, *Oral presentation at Madre Teresa highschool*, Audience: senior-year students.
- 6-7/05/2010 **"A window to maths"**, *Annual exhibition for elementary and high school students. San Martin Cultural Center.*
- 04/2007 – **General scientific outreach activities at the Physics Department.**
- 07/2007 and Detailed activities:
- 06/2008 – ○ "Scientists go back to school". Lectures for high-school teachers. Interactive activities to perform in the classroom. Exhibitions at schools.
- 08/2008 ○ Participation at interactive stands during Physics Week.
- Collaborator at the lectures "How does a scientist work?"

Conferences of outreach

- 08-08/11/2007 **Scientists go back to school**, *Averbuj, P., Bragas, A., Caputo, C., Estrada, L., Mazzitelli, D., Pepe, C.*, 1st Outreach Conference : "Exact sciences and the society", Poster Contribution.
Buenos Aires, Argentina