CURRICULUM VITAE

Name	Chiara Ceccobello
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PUBLICATIONS

Total number of publications in the following categories:
- Peer-reviewed articles (all of these are open access): 9.
- Peer-reviewed conference contributions with results that have not been published in any other form: One lead-author paper of this kind accepted in Proceedings of Science (11th INTEGRAL meeting).
- Review articles, book chapters, books: 0
- Patents: 0
- Self-developed, generally available computer programmes: 1
- Popular scientific articles or presentations: 0

SELECTION OF 10 PEER-REVIEWED PUBLICATIONS MOST RELEVANT TO THE PROJECT

Publications are listed in reverse chronological order.
A full list of publications can be found at http://tiny.cc/ADS_CC.

1 C. Ceccobello, Y. Cavecchi, M. H. M. Heemskerk, S. Markoff, P. Polko, and D. Meier, *New progress on solving the stiff, self-similar relativistic MHD equations for black hole jets*. *MNRAS*, 473:4417–4435, Feb 2018.

2 P. Gandhi, M. Bachetti, V. S. Dhillon, R. P. Fender, ..., C. Ceccobello,...,et a., *An elevation of 0.1 light-seconds for the optical jet base in an accreting Galactic black hole system Nature Astronomy*, I:859-864, Dec 2017.

3 C. Ceccobello, S. Markoff, and R. M. T. Connors, *AGNJET v2.0: Towards self-consistent MHD+RT jet models for XRBs and AGN*. 11th INTEGRAL Conference proceedings, *Proceedings of Science*, 67,February 2017.

4 P. Crumley, C. Ceccobello, R. M. T. Connors, and Y. Cavecchi, *The jet-disk symbiosis without maximal jets: 1-D hydrodynamical jets revisited*, *A&A*,601:A87, May 2017.

5 R. M. T. Connors, S. Markoff, M. A. Nowak, J. Neilsen, C. Ceccobello, P. Crumley, C. S. Froning, E. Gallo, and J. E. Nip. *Mass-scaling as a method to constrain outflows and particle acceleration from low-luminosity accreting black holes*. *MNRAS*, 466:4121– 4137, April 2017.

6 C. Ceccobello and P. Kumar. *Inverse-Compton drag on a highly magnetized GRB jet in stellar envelope*. *MNRAS*, 449:2566–2575, May 2015.

7 C. Ceccobello, R. Farinelli, and L. Titarchuk. *Comptonization in ultra-strong magnetic fields: numerical solution to the radiative transfer problem*. *A&A*, 562:A99, February 2014.

8 P. Romano, V. Mangano, L. Ducci, P. Esposito, S. Vercellone, F. Bocchino, D. N. Burrows, J. A. Kennea, H. A. Krimm, N. Gehrels, R. Farinelli, and C. Ceccobello. *The Swift Supergiant Fast X-ray Transients Project: A review, new results and future perspectives*. *Advances in Space Research*, 52:1593–1601, November 2013.

9 R. Farinelli, C. Ceccobello, P. Romano, and L. Titarchuk. *Numerical solution of the radiative transfer equation: X-ray spectral formation from cylindrical accretion onto a magnetized neutron star*. *A&A*, 538:A67, February 2012a.

10 R. Farinelli, P. Romano, V. Mangano, C. Ceccobello, L. Ducci, S. Vercellone, P. Esposito, J. A. Kennea, and D. N. Burrows. *Swift observations of two supergiant fast X-ray transient prototypes in outburst*. *MNRAS*, 424:2854–2863, August 2012b.

TEACHING AND SUPERVISION

- Co-supervision of the PhD candidate Riley Connors on several theoretical and observational projects related to the upgrade and application of the `AGNJET` radiative transfer code. Fall 2013 - Fall 2017.
- Co-supervision of the bachelor student David van Eijnatten on *Exploring the geometric evolution of the black hole binary GX339-4*, University of Amsterdam, 2016.
- Co-supervision of the bachelor student Coen Neijssel on *Understanding the physical drivers behind different Radio/X-ray correlations in X-ray Binaries*, University of Amsterdam, 2015.
- Co-supervision of the master student Klim Mikhailov on *The use of genetic algorithm to find an optimum MHD fluid solution as an appropriate description of black hole relativistic jets*, University of Amsterdam, 2014.
- Substitute teaching duties for bachelor and master courses thought by Prof. S. Markoff at the University of Amsterdam, fall 2013 - year 2014.
- Teaching Assistant, Physics Laboratory course thought by Prof. G. Ciullo at the University of Ferrara, fall 2009-winter 2010.

CONFERENCES AND SEMINARS

- INVITED SEMINARS
  - *Semi-analytical jet model for multi-wavelength spectral analysis of black hole systems* at the University of Bristol, UK, Dec 1, 2016.
  - *Black hole jets: from jet dynamics to broad-band spectra* at the Onsala Space Observatory, Sweden, April 15, 2015.
  - *inverse Compton drag on a highly magnetized GRB jet in stellar envelope* at the University of Texas at Austin, March 3, 2014.
- TALK CONTRIBUTIONS
  - *Self-similar semi-analytical relativistic MHD jet model: a first step towards a more comprehensive jet modelling for data fitting*; From quiescence to outburst: when microquasar go wild!, Ile de Porquerolles, September 25-29, 2017.
  - *Multiple Inverse Compton scattering component in the `AGNJET` model*; EWASS 2017, Prague, Czech Republich. June 29-30, 2017.
  - *Multiple Inverse Compton scattering component in the `AGNJET` model*; EWASS 2016, Athens, Greece. July 4-8, 2016.
  - *Coupling jet dynamics and emission: a new approach to investigate black hole jets*; NW3 meeting, SRON (Utrecht), Netherlands, Nov 5, 2015.
  - *Inverse-Compton drag of a highly magnetized GRB jet in stellar envelope*; Nederlandse Astronomenconferentie (NAC), Noordwijkerhout, Sterrewacht Leiden, May 19 - 21, 2014.
  - *Inverse-Compton drag of a highly magnetized GRB jet in stellar envelope*; 19th Symposium on Astroparticle Physics in the Netherlands, Beekbergen, March 27 - 28, 2014.
  - *Radiative transfer in strong magnetic fields*; NW3 meeting, Groningen, Netherlands, Oct 24, 2013.

- *A Brief Review of (Possibly) Useful Calculations About Radiative Transfer*; 3rd National GRB Meeting, Naples, September 19-22, 2012.
- *An Iterative Algorithm for the Solution of Radiative Transfer Equation Using Finite Differences and XSPEC spectral fittings*; CNOC 2011, VII Compact Objects National Workshop, Bormio (So), Italy, December 15, 2011.
- *An Iterative Algorithm for the Solution of Radiative Transfer Equation Using Finite Differences and XSPEC spectral fittings*; 2nd Ferrara Workshop on X-ray Astrophysics up to 511 keV, September 16, 2011.
- *Comptonization in Ultra-Strong Magnetic Field: a Numerical Solution of the Radiative Transfer Problem*; MODE-SNR-PWN Workshop, Bordeaux, France. November 15, 2010.
- *Comptonization in Ultra-Strong Magnetic Field: a Numerical Solution of the Radiative Transfer Problem*; Pulsar Conference 2010, Chia Laguna Resort, Sardinia, Italy. October 13, 2010.
- *Comptonization in Ultra-Strong Magnetic Field: a Numerical Solution of the Radiative Transfer Problem*; CNOC 2009, VI Compact Objects National Workshop, Margherita di Pula (CA), Italy. September 23, 2009.

• Poster Contributions
- Markoff, S. and Ceccobello, C. and Heemskerk, M. and Cavecchi, Y. and Polko, P. and Meier, D. *Self-similar semi-analytical RMHD jet model: first step towards a more comprehensive jet modelling for data fitting*, HEAD Meeting, Sun Valley, Idaho, Aug 20-24, 2017.
- Markoff, S. and Chatterjee, K. and Liska, M. and Tchekhovskoy, A. and Hesp, C. and Ceccobello, C. and Russell, T., *New methods to benchmark simulations of accreting black holes systems against observations* HEAD Meeting, Sun Valley, Idaho, Aug 20-24, 2017.
- Ceccobello, C., Cavecchi, Y., Heemskerk, M. H. M. ,Markoff, S. , Polko, P. , and Meier,D. , *Self-similar semi-analytical RMHD jet model: first step towards a more comprehensive jet modelling for data fitting*, Nederlandse Astronomenconferentie (NAC), Nijmegen, The Netherlands, May 22-23, 2017.
- Ceccobello, C., Markoff, S., Connors, R., Crumley, P., van Eijnatten, D., *Improved semi-analytical code for fitting broadband spectra of black hole systems*; 11th INTEGRAL Conference Gamma-Ray Astrophysics in Multi-Wavelength Perspective, Amsterdam, October 10-14, 2016.
- Ceccobello, C., *Numerical Solution of the Radiative Transfer Equation in Strong Magnetic Fields*, Gamma Ray Bursts in the Era of Rapid Follow-up, Liverpool, June 18-22, 2012
- Ceccobello, C., Farinelli, R., Romano, P., Titarchuk, L., Mangano, V., Esposito, P., *Numerical Solution of the Radiative Transfer Problem for Accreting Matter onto Magnetized Compact Objects: Application to Supergiant Fast X-ray Transients*, X-ray Astronomy: towards the next 50 Years!, Milan, October 1-5, 2012
- Mangano, V., Romano, P., Ceccobello, C., Farinelli, R., *IGR J08408-4503 in outburst observed by Swift, X-ray Astronomy: towards the next 50 Years!*, Milan, October 1-5, 2012
- Mangano, V., Romano, P., Ceccobello, C., Farinelli, R., *IGR J08408-4503 in outburst observed by Swift, 5th International Symposium on High-Energy Gamma-Ray Astronomy*, Heidelberg, July 9-13, 2012
- Farinelli, R., Ceccobello, C., Romano, P., Titarchuk, L., Mangano, V., Bocchino, F., *X-ray spectral formation from cylindrical accretion onto a magnetized neutron star: application to the case of supergiant fast X-ray transients*, COSPAR, Mysore, July 14-22, 2012

Co-initiator and chair of LOC/SOC for "Outflow meeting" at Chalmers, June 2017. Chair of LOC of "Second Ferrara Workshop on X-ray Astrophysics up to 511 keV" in Ferrara, September 2011. Chair of LOC "Black Holes in Binary Systems: Observations versus Theory" in Ferrara, September 2009.

Awards

- Poster Prize issued by Nature Astronomy for the poster contribution *Improved semi-analytical code for fitting broadband spectra of black hole systems* in occasion of the 11th INTEGRAL Conference, October 2016.

Workshops and training

- Two-day workshop "Interferometry and CASA" organized by the Nordic ALMA node at the Onsala Space Observatory, Sweden, Feb 2015.
- PhD School of the International Relativistic Astrophysics Program (IRAP), Ferrara, March 22-26, 2010.
- PhD School of the International Relativistic Astrophysics Program (IRAP), Nice, February 8-19, 2010.
- PhD School in Astrophysics "F. Lucchin", "Simulations of Complex Phenomena in Astrophysics & First Light after the Dark ages", Spineto, Italy. September 7-11, 2009.

EMPLOYMENT, EDUCATION AND DEDUCTIBLE TIME

Oct 2017- present: **Postdoctoral Researcher** at Chalmers University. Göteborg, Sweden. *Mentors:* Prof. Wouter Vlemmings and Prof. Susanne Aalto.

Oct 2013 - Sept 2017: **Postdoctoral Researcher** at the University of Amsterdam, Anton Pannekoek Institute, Amsterdam, Netherlands.
Mentor: Prof. Sera Markoff.

Jul 2015 - Sep 2017: Reduced work-load to part-time 60% (self-funded parental leave).

Mar 2015 - Jul 2015: Maternity Leave.

May 2013 - Oct 2013: **Independent Contractor of the Astronomy Department** at the Austin University (Texas).
Mentor: Prof. Pawan Kumar.

Jan 2013 - Apr 2013: Web master at Logikamente, Ferrara.

Mar 2012 - Dec 2012: Self-funded project work at University of Ferrara.

Jan 2009 - Dec 2011: **PhD in Physics**, University of Ferrara, degree obtained Mar 15, 2012.
Advisor: Prof. Lev Titarchuk. *Co-Advisors*: Prof. Filippo Frontera and Dr. Ruben Farinelli.
PhD thesis: Radiative transfer problem in the presence of very strong magnetic field. Analytical and numerical treatment.

Oct 2006 - Oct 2008: **Master Degree in Physics**, University of Ferrara, degree obtained Oct 10, 2008.
Advisor: Prof. Filippo Frontera, *Co-Advisors*: Dr. Ruben Farinelli and Prof. Lev Titarchuk.
Thesis: Comptonization in Ultra Strong Magnetic Field: a Theoretical and Numerical Investigation.

Oct 2003 - Mar 2006 **Bachelor degree in Physics and Astrophysics**, University of Ferrara, degree obtained Mar 26, 2007.
Advisor: Prof. Filippo Frontera, *Co-Advisor*: Dr. Alessandro Pisa.
Thesis: Laue Lenses Simulations for Astrophysical Applications.

OUTREACH ACTIVITIES

- Public talks with different topics (astrophysics, theoretical research, cosmology) addressed to secondary school students within the project "Lauree Scientifiche" sponsored by the University of Ferrara, 2009-2010.
- Lecture about Special Relativity to the first-year student of the high school "Liceo Ariosto", Ferrara, 2009.
- Guide for general public visiting the "Porte Aperte al Polo Scientifico-Tecnologico", seat of the Physics Department, Ferrara, May 9-15, 2011.