

CURRICULUM VITAE

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EXPERIENCE

June 2014 - **Marie Curie International Outgoing Fellow**
September 2017 California Institute of Technology and
Max Planck Institute for Radio Astronomy

October 2014 - **Visiting Research Scholar**
June 2016 NASA Jet Propulsion Laboratory

May 2016 **Guest Lecturer**
Ph237, Gravitational Waves
California Institute of Technology, Pasadena, CA

July 2015 **Guest Lecturer**
Caltech Gravitational-Wave Astrophysics School
Special seminar on Pulsar Timing Arrays
California Institute of Technology, Pasadena, CA

August 2010 - **Contract Instructor**
August 2013 “Math Matters” (pre-calculus), Engineering Section
Carleton University, Ottawa, Canada.

October 2009 - **Examples Class Leader and Lab Demonstrator**
June 2013 University of Birmingham, UK.

January 2004 - **Undergraduate Teaching Assistant**
January 2006 Carleton University, Ottawa, Canada.

EDUCATION

- November 2009 - **PhD in Astrophysics**
May 2014 *Gravitational wave astrophysics with Pulsar Timing Arrays*
University of Birmingham, UK
Supervised by Prof. Alberto Vecchio.
- October 2007 - **MSc Astrophysics and Cosmology**
October 2009 University of Bologna, Italy, course average 106/110,
Thesis: *A Generalized Heckmann-Schücking Cosmological Solution for the Bianchi-I Universe in the Presence of a Cosmological Constant*
Supervisors: Dr. Alexandre Kamenchtchik & Prof. Francesco Ravanini.
- September 2001 - **BSc Double Honours Mathematics and Physics**
February 2006 Honours Project in General Relativity
Carleton University, Ottawa, Canada
Supervised by Dr. David Amundsen.

CAREER BREAK

- February 2006 - Career Break
October 2007 Taught English as a second language in Bologna, Italy

MEMBERSHIPS

- December 2010 - **European Pulsar Timing Array (EPTA)**
Present **Chair:** Data Analysis Working Group (2017 –)
- March 2014 - **NANOGrav**
Present Full Member
- December 2010 - **International Pulsar Timing Array**
Present Full member
- January 2015 - **American Physical Society**
Present Full member

October 2014 - Present	American Astronomical Society Full member
May 2011 - May 2015	Royal Astronomical Society Fellow of the Royal Astronomical Society (FRAS)
January 2011 - January 2015	Institute of Physics Associate member
November 2009 - October 2013	STEMNET Ambassador

INVITED TALKS

April 2017	Insights into Supermassive Black Hole Mergers, Stalling and Demographics with Pulsar Timing Arrays Gravity Group, Princeton University, NJ, USA
April 2017	Insights into Supermassive Black Hole Mergers, Stalling and Demographics with Pulsar Timing Arrays Seminar, Washington University in St. Louis, MO, USA
April 2017	Gravitational-Wave Astrophysics with Pulsar Timing Arrays Colloquium, Washington University in St. Louis, MO, USA
March 2017	Unlocking the potential of pulsar timing arrays Perimeter Institute, Waterloo, Canada
March 2017	Gravitational-Wave Astrophysics with Pulsar Timing Arrays University of Guelph, Guelph, Canada
January 2017	Gravitational-Wave Astronomy with Pulsar Timing Arrays 229th AAS Meeting Special Session: HEAD I: "Astronomy Across the Gravitational Wave Spectrum"

- November 2016 **The Gravitational-Wave Universe seen by Pulsar Timing Arrays**
Perimeter Institute, Waterloo, Canada
- October 2016 **The Nanohertz Gravitational-Wave Universe**
Oberlin College, Oberlin, Ohio, USA
- October 2016 **Astrophysics with Pulsar Timing Arrays**
Adler Planetarium Colloquium, Chicago, Il, USA
- September 2016 **The Discovery Potential of Pulsar Timing Arrays**
11th International LISA Symposium, Zurich, Switzerland
- June 2016 **Using Galaxy Catalogs to Model the GW Background**
IPTA Meeting, Stellenbosch, South Africa
- June 2016 **The Nanohertz Gravitational-Wave Sky**
Gordon Research Conference, Salve Regina University, RI, USA
- June 2016 **The Nanohertz Gravitational-Wave Universe**
Astronomy Colloquium, McGill University, Montreal, Canada
- May 2016 **The Universe seen by Pulsar Timing Arrays**
Departmental Astronomy Colloquium, University of Toronto, Canada
- April 2016 **The Gravitational-Wave Universe seen by Pulsar Timing Arrays**
NASA Headquarters, Washington, DC, USA
- April 2016 **The Gravitational-Wave Universe seen by Pulsar Timing Arrays**
NASA Goddard Space Flight Center, Maryland, USA
- April 2016 **The Discovery Potential of PTAs II:
Anisotropy, Cosmology and Fundamental Physics**
Canadian Institute for Advanced Research Meeting, Whistler, Canada
- January 2016 **Gravitational-Wave Astrophysics with Pulsar Timing Arrays**
High Energy Physics Seminar, Caltech, Pasadena, CA, USA

- May 2015 **Astrophysics and Cosmology with Pulsar Timing Arrays**
Astronomy Tea Talk, Caltech, Pasadena, CA, USA
- April 2015 **Pulsar Timing Arrays: tools for astrophysics and cosmology**
McGill Space Institute, McGill University, Montreal, Canada
- April 2015 **Crash Course in PTAs**
Department of Astronomy, Columbia University, NY, USA
- January 2014 **The Search for Gravitational Waves with PTAs**
TAPIR group, Caltech, USA
- January 2014 **Searching for anisotropy in the stochastic GW background
with Pulsar Timing Arrays**
University of British Columbia, British Columbia, Canada.
- January 2014 **Characterizing stochastic GW background anisotropy
with Pulsar Timing Arrays**
University of Victoria, British Columbia, Canada.
- February 2014 **Characterizing anisotropy in the stochastic GW background
with Pulsar Timing Arrays**
NANOGrav Meeting, Arecibo, Puerto Rico.
- September 2013 **Looking for Gravitational Waves with PTAs**
Carleton University, Ottawa, Canada.
- June 2013 **Outreach in the International Pulsar Timing Array Community**
International Pulsar Timing Array Meeting, Krabi, Thailand.
- April 2013 **Using PTAs to observe the dynamics of SMBHBs and
characterize anisotropy in the GW background**
Cardiff University, Cardiff, UK.

CONFERENCE & MEETING PRESENTATIONS AND POSTERS

- July 2017 **IPTA Meeting, Paris**
Talk: *The local nanohertz GW landscape from SMBHBs*
- April 2017 **NANOGrav Meeting, University of West Virginia**
Talk: *The Nanohertz Gravitational Wave Sky: Continuous-Wave Predictions Based on Local Galaxies*
- April 2017 **EPTA Meeting, University of Amsterdam**
Talk: *The Nanohertz Gravitational Wave Sky: Continuous-Wave Predictions Based on Local Galaxies*
- October 2016 **NANOGrav Fall Meeting, University of Illinois Urbana-Champaign**
Remote Talk: *Nanohertz GW sources in the local Universe*
- October 2016 **EPTA Fall Meeting, Cagliari, Italy**
Remote Talk: *Nanohertz GW sources in the local Universe*
- August 2016 **Fellows at the Frontiers, Northwestern University**
Talk: *The Gravitational-Wave Universe seen by Pulsar Timing Arrays*
- April 2016 **American Physical Society Meeting, Salt Lake City, Utah**
Talk: *The NANOGrav Nine-year Data Set: Limits on the Anisotropic Gravitational Wave Background*
- March 2016 **NANOGrav Spring Meeting, Caltech, CA, USA**
Talk: *Searching for correlations in the stochastic gravitational wave background with NANOGrav 9-yr data*
- October 2015 **NANOGrav Meeting, McGill University, Montreal, Canada**
Talks: *Limits on cosmology from the NANOGrav 9-yr dataset; Limits on Anisotropy limits for the NANOGrav 9-yr dataset: new results and updates*

- August 2015 **International Astronomical Union General Assembly 2015
Honolulu, HI, USA**
Talk: *Placing limits on anisotropy in the stochastic gravitational
wave background with NANOGrav data*
- July 2015 **IPTA Meeting, Blue Mountains, NSW, Australia**
Talk: *Project update: IPTA Anisotropy Working Group (remote)*
- May 2015 **“CSI PTA”, Aspen Center for Physics, Aspen, Colorado, USA**
Discussion lead: *Resolvable supermassive black hole binaries*
- April 2015 **American Physical Society Meeting, Baltimore, Maryland, USA**
Talk: *Placing limits on anisotropy in the stochastic gravitational
wave background with the 9-year NANOGrav data set*
- January 2015 **225th American Astronomical Society Meeting
Seattle, Washington, USA**
Dissertation Talk: *A novel approach toward gravitational wave
analyses with pulsar timing arrays*
- November 2014 **Theoretical Astrophysics in Southern California Meeting
University of California San Diego, USA**
Talk: *Anisotropy in the nanoHertz Gravitational Wave Background*
- June 2014 **IPTA Meeting, Banff, Canada**
Talk: *Assumptions in PTA data analysis*
- October 2013 **EPTA meeting, Sardinia, Italy**
Talk: *Revisiting common assumptions in PTA data analysis*
Talk: *The new EPTA Anisotropy Project*
- July 2013 **10th Edoardo Amaldi Conference on Gravitational Waves
Warsaw, Poland**
Talk: *Describing Anisotropy in the Gravitational Wave Background*
- June 2013 **IPTA Meeting, Krabi, Thailand**
Talk: *Describing Anisotropy in the Gravitational Wave Background*

- April 2013 **EPTA meeting, Paris, France**
 Talk: *Anisotropy in the Gravitational Wave Background: Motivation and results of 13 pulsar analysis*
- November 2012 **EPTA meeting, Albert Einstein Institute, Potsdam, Germany**
 Talk: *Describing Anisotropy in the Gravitational Wave Background*
- June 2012 **IPTA meeting, Kiama, Australia**
 Talk: *Observing the dynamical evolution of a super massive black binary using Pulsar Timing Arrays*
- April 2012 **UK-Germany National Astronomy Meeting, Manchester, UK**
 Talk: *Observing the dynamical evolution of a super massive black binary using Pulsar Timing Arrays*
- April 2012 **EPTA meeting, Birmingham, UK**
 Talk: *Observing the dynamical evolution of a super massive black binary using Pulsar Timing Arrays*
- July 2011 **9th Edoardo Amaldi Conference on Gravitational Waves Cardiff, Wales**
 Poster presentation: *Detecting the spin orbit precession of a super massive black hole binary using Pulsar Timing Arrays*

OBSERVING PROPOSALS

- Nov 2016 **High-Impact MSPs for the International Pulsar Timing Array**
 Green Bank Telescope, proposal GBT17A-353
 Status: awarded 21.0 hours
- Sep 2016 **High-Impact MSPs for the International Pulsar Timing Array**
 Arecibo Radio Telescope, proposal P3133
 Status: awarded 32.5 hours

HONOURS, AWARDS AND GRANTS

May 2017	MSCA 2017 Communicating Science Prize (1st Place) Marie Skłodowska-Curie Actions, Award ceremony in Malta, http://msca2017.eu
February 2017	Marie Skłodowska-Curie Actions “Fellow of the Week”
November 2016	American Physical Society “Woman Physicist of the Month”
June 2014 - June 2017	Marie Curie International Outgoing Fellowship Project “GW ASAP”, Proposal No. 623380 Award value €262,975
June 2015	International Pulsar Timing Array Steering Committee Prize Honorable Mention
May 2015	International Astronomical Union Travel Grant: \$1350 USD
May 2015	GWIC Thesis Prize Honorable Mention
January 2015	Springer Thesis Award Thesis published by Springer Theses with \$650 cash prize
Declined	CITA National Fellowship To be taken up at the University of British Columbia
September 2009 - March 2014	PhD Studentship £15,000 p.a. scholarship and £3,466 p.a. tuition fee bursary School of Physics and Astronomy, University of Birmingham, UK
2011 – 2013	University of Birmingham Travel Grants £2,420 Moreton Travel Award

- 2011 – 2013 **Royal Astronomical Society**
£2,500 cumulative total, Research and Grants Fund
- 2011 – 2013 **Institute of Physics**
£2,800 cumulative total, Research and Public Engagement
- November 2013 **Postgraduate Research Student Development Funding**
£500 to fund the *Graduate Student Poster Conference*, Dec 2013
University of Birmingham, UK
- April 2013 **Universitas 21 Scholarship**
£1,500 to fund a one-month collaboration with Prof. I. H. Stairs
at the University of British Columbia, Vancouver, Canada.
- May 2013 **Catalyst Grant for Public Engagement**
£880 University of Birmingham, UK
- October 2012 **Very Early Career Woman Physicist of the Year**
Runner-up, Shell and Institute of Physics, UK

REFEREE

Referee for Physical Review Letters, Physical Review D, The Astrophysical Journal, Monthly Notices of the Royal Astronomical Society, Classical and Quantum Gravity, Journal of Physics: Conference Series, and Reports on Progress in Physics

SERVICE WORK

National Science Foundation grant review panelist (2016)

COMMITTEES

- June 2017 - **OzGrav Governance Committee**
June 2020
- August 2015- **TAPIR Seminar Series, Caltech**
July 2016 Astrophysics Coordinator

October 2014 - **Caltech-JPL Association for Gravitational Wave Research**
July 2016 Executive Committee

October 2014- **Caltech Postdoc Lunch Seminar Series**
October 2015 Coordinator

MENTORING

July 2017 - **Scientific Mentor**
present Supernova Foundation, <http://supernovafoundation.org>

October 2016 - **Graduate Student Mentor**
present I am working with Shane Larson's student, Katie Breivik, at Northwestern University on applying I methods developed to characterize GW background anisotropy to the LISA white dwarf foreground.

June 2015 - **Research student mentor**
June 2016 I worked with undergraduates visiting at Caltech & JPL, and remotely contributed to mentoring 2 NANOGrav graduate students.

October 2014 - **Caltech Women Mentoring Women Program**
July 2016 Mentor for two graduate students per year

CONFERENCE AND MEETING ORGANIZATION

September 2016 **Pulsar Scintillometry Workshop, MPIfR, Bonn, Germany**
Scientific and Local Organizing Committees

April 2016 **American Physical Society Meeting, Salt Lake City, Utah**
Session Chair: Listening to the Universe with Pulsar Timing Arrays

March 2016 **NANOGrav Spring Meeting 2016**
Chair of the Scientific Organizing Committee
Local Organizing Committee

July 6-10 2015 **Caltech Gravitational Wave Astrophysics School**
Scientific Organizing Committee July 6–10 2015

- June 2015 **IPTA Meeting, Australia**
Scientific Organizing Committee
- February 2015 **NANOGrav Meeting, Arecibo, Puerto Rico**
Scientific Organizing Committee
- December 2013 **Graduate Student Poster Conference, Birmingham, UK**
Chair of the Scientific and Local Organizing Committees
- October 2013 **European Pulsar Timing Array Meeting, Sardinia, Italy**
Member of the Scientific Organizing Committee
Session Chair for Gravitational Wave Sources
- March 2012 **European Pulsar Timing Array Meeting, Birmingham, UK**
Chair of the Scientific and Local Organizing Committees

PUBLIC ENGAGEMENT IN SCIENCE

TELEVISION, RADIO & PODCASTS

- May 2016 **How the Universe Works**
The Science Channel, aired Dec 6th 2016
- February 2016 **Probably Science**
Episode 197, Podcast on black holes and GWs
- February 2016 **Titanium Physicist**
Episode 62: Black Bells with Brent Knopf and Matt Sheehy
- August 2015 **Amy Poehler Smart Girls**
Experimenting with Megan Amram, Episode 5;
Dr. Chiara Mingarelli Answers 39 Smart Questions
- July 2015 **Talk Nerdy with Cara Santa Maria**
Podcast, Episode 70 - Chiara Mingarelli

- January 2015 **How I Ended Up At the Center of the Universe**
Story Collider & Beyond the Abstract: Springer Storytellers
- April 2015 **Astro McGill Podcast**
Podcast, Episode 68 - What are pulsar timing arrays?
- November 2014 **Listening for black holes and neutron stars**
Podcast for APS Physics Central, by Meg Rosenburg
- June 2013 **The Incomplete Map of the Cosmic Genome (App, iTunes)**
Interviewed as a “Black Hole Expert” by Trunkman Productions for their “The Incomplete Map of the Cosmic Genome ” app. Other interviewees include Prof. Brian Cox and Prof. Richard Dawkins.
- March 2013 **Voice of the Future, London**
Representative of the Royal Astronomical Society, this was a live televised forum where one could ask MPs questions about policy pertaining to science. My question appears at 11:11:00 on the broadcast.
- January 2013 **BBC Stargazing Live 2013**
Appeared around the 3 minute mark on Season 3 Episode 3 in pictorial form representing the outreach activities at the University of Birmingham.
- June 2012 **Naked Scientist Podcast Interview**
Live podcast from the UK-Germany National Astronomy Meeting in Manchester, UK. I was interviewed about my latest work with Pulsar Timing Arrays.
- January 2012 **BBC West Midlands Interview**
Radio interview at BBC West Midlands with Ed Doolan and David Gregory about the BBC Stargazing Live (2012).
- January 2012 **BBC Midlands Today Interview**
Live television interview for BBC Midlands Today with David Gregory to promote the BBC Stargazing Live (2012).

POPULAR SCIENCE ARTICLES AND PRESS

2016

Scientific American

- *Searching for the Gravitational Waves LIGO Can't Hear*
by Chiara Mingarelli, invited article
- *Gravitational Waves from Black Hole Megamergers Are Weaker Than Predicted*, by Shannon Hall

Nautilus Magazine

- *The Hidden Science of the Missing Gravitational Waves*, by Sarah Scoles
- *The Gravity Wave Hunter*, Interview by Michael Segal
- *Top 5 Targets of a Gravity Wave Observatory*, by Brian Gallagher
- *Why it's hard for black holes to get together*, by Kate Becker

The Wall Street Journal

Gravity Waves Detected, Verifying Part of Albert Einstein's Theory of General Relativity, by Lee Hotz

Amy Poehler Smart Girls

Conversations with a Theoretical Astrophysicist, by Chiara Mingarelli

Popular Mechanics

Second Gravitational Wave Discovery Confirmed, by William Herkewitz

Gizmodo

Articles by Jennifer Ouellette

- *We Could Soon Find Even More Gravitational Waves with Pulsar Arrays*
- *We've Found Gravitational Waves. Now What?*

Horizon Magazine – European Commission

What's next for gravitational waves?, by Ethan Bilby

Wired Magazine

- *LIGO's First-Ever Detection of Gravitational Waves Opens a New Window on the Universe*, by Sarah Scoles
- *Astrophysicists may have found gravitational waves. Or not*, by Sarah Scoles

2015

New Scientist

Black hole batteries could power mysterious radio bursts, by Sarah Scoles
Print version: *Weird flashes run on black hole batteries*, Issue 3049

I Fucking Love Science

What's Causing These Mysterious Radio Bursts From Beyond Our Galaxy?
by Alfredo Carpineti

Astrobites

Fast Radio Bursts: Shocking Neutron Stars with Black Hole Batteries
by Ashley Villar

PUBLIC LECTURES, SCIENCE FAIRS AND EXHIBITS

November 2016

STEM Panelist

OWN IT, Washing University in St. Louis, MO

October 2016

Black Holes Don't Suck

Adler After Dark, Adler Planetarium

September 2016

Black Holes Don't Suck

Astronomy on Tap, Chicago, USA

June 2016

Black Holes Don't Suck

Dreamworks, Hollywood, CA, USA

June 2016

Black Holes Don't Suck

Public Lecture at Caltech, Pasadena, CA, USA

April 2016

Science Speed Dating

Lecture Series on Gravitational Waves at NeueHouse, LA
Organized by *The Science & Entertainment Exchange*
National Academy of Sciences, USA

February 2016

Caltech Astronomy Lecture and Stargazing

Invited panelist for Gravitational Wave discovery discussion

- September 2013 **Girls into STEM Day**
Lecture and Workshop
Organized and gave 2 interactive “Gravity and Black Holes” workshops for female YR 9 students visiting the University for this event.
- July 2013 **Physics Experience Week**
University of Birmingham
Organizer/facilitator for hands on activities and lab tour
- June 2013 **Cheltenham Science Festival**
Area 42
Main organizer and coordinator for the University of Birmingham’s Outreach group. Also secured funding from the IoP to attend this event.
- April 2013 **Girls Day, ASTRON**
Invited to chat with young women visiting the Netherlands Institute for Radio Astronomy (ASTRON) about my career in astronomy, as part of a national initiative interest girls aged 10-15 in science and technology.
- March 2013 **Birmingham Arts and Science Festival**
Public lecture
Discovering Black Holes with Gravitational Waves
University of Birmingham
- January 2013 **BBC Stargazing Live 2013**
Coordinator of the University of Birmingham Gravitational Wave Group outreach team. Staffed an exhibit at the University of Birmingham.
- February 2012 **Institute of Physics Evening Lecture Series**
Public lecture
Looking for Gravitational Waves with Pulsars
University of Birmingham, attended by ~ 160 people
- September 2012 **Gravity Fields Festival, Grantham**
Demonstrator from the University of Birmingham Gravitational Wave Group outreach team.

- March 2012 **Big Bang Fair 2012**
Part of the University of Birmingham Gravitational Wave Group outreach team, an arts and science festival celebrating Sir Isaac Newton.
- January 2012 **BBC Stargazing Live 2012**
Joint coordinator of the University of Birmingham Gravitational Wave Group outreach team. Staffed an exhibit in Birmingham City Centre
- May 2011 **Institute of Physics Evening Lecture Series**
Public Lecture
How to Find a Black Hole
Institute of Physics Hereford & Worcester Centre.
- November 2010 **Eastside Projects**
Invited public lecture on the meaning of zero and nothingness to a group of artists in Birmingham, UK.
- September 2010 **British Science Festival**
Physics in the Field volunteer for the Institute of Physics
- August 2010 **Bakewell Show**
Physics in the Field volunteer for the Institute of Physics
- January 2010 **ThinkTank Futures Expert**
STEMNET Ambassador to Percy Shurmer Primary School, B'ham.
- SCHOOL VISITS
- June 2016 **Alverno Academy visit to Caltech & JPL**
Capstone event for Caltech Pulsar Search Collaboratory
- May 2016 **Rockland District High School, Ontario, Canada**
Black Hole Lecture
- April 2016 **Ad Astra Academy, Los Angeles**
Lecture and Interactive Workshop

- June 2012 **Cleeve School, Bishops Cleeve**
Outreach Day at Cleeve School
 This is a joint venture with the particle physics group and will be open to the general public in the afternoon.
- December 2012 **Holy Trinity International School**
Gravitational Wave Open Day
 Lead the organization of this open day to encourage students to study physics. Included lab tour, talk and experiments. 90% of students were female and 78% said they were now more likely to take physics at A-level.
- May 2011 **Edgbaston High School for Girls**
Looking for Black Holes with Lasers
 An interactive outreach day including a talk, video games developed by the Birmingham GW group and a working Michelson interferometer.
- February 2010 **Percy Shurmer Elementary School**
STEMNET Ambassador Programme
 I visited this school after their visit to the ThinkTank. Students learned about eclipses and the solar system. and did experiments pertaining to gravity. This school has unfortunately closed since the visit.

PUBLICATION LIST

SUMMARY OF PUBLICATIONS

My current research interests include the use Pulsar Timing Arrays (PTAs) to detect low-frequency gravitational waves (GWs) [1, 3-7, 10-21, 23, 24], predicting the time to detection of the GW background (GWB) [1], and fast radio bursts [2]. GW detection with PTAs comes in two flavors: the stochastic GWB, and sources of continuous GWs. My recent results in nanohertz GW astronomy include generalizing the isotropic GWB searches to include anisotropy [3-6, 17], and exploring where assumptions made in GWB searches break down [4]. Searches for stochastic GWB anisotropy are now standard in the EPTA [17] and NANOGrav (in prep.). Collaboration contributions include isotropic stochastic GWB searches, focusing on the cosmological limits one can extract from PTA observations, [10, 18, 19] and how one can use the shape of the GW background spectrum to make astrophysical inferences about the underlying supermassive black hole binary (SMBHB) population [10, 23]. In [7] we explore the physics that can be extracted from GWs originating from resolvable SMBHBs with PTAs.

In Mingarelli + 2017 (submitted to Nature Astronomy), I developed tools to produce realistic low frequency GW skies from galaxy catalogues for the first time, for the purposes

of assessing the time to detection of resolvable PTA GW sources, and estimating the contribution of these sources to the GWB and its anisotropy. Mingarelli for NANOGrav (in prep) is a collaboration paper with a full-author list, making it a slower-moving project.

As a member of the LIGO collaboration from 2011-14, I participated in the LAL Inference review led by Matthew Pitkin. I also contributed to outreach efforts on behalf of the Education and Public Outreach Group.

Number of monographs:	1
Number of short author papers:	13
Number of papers as part of PTA collaborations:	8
Number of papers as part of LIGO Scientific Collaboration:	25
Total NASA ADS citation count (including LIGO papers):	1563

MONOGRAPHS

C. M. F. Mingarelli, *Gravitational Wave Astrophysics with Pulsar Timing Arrays*, Springer Thesis Series 2016, ISBN 978-3-319-18400-5.

SHORT-AUTHOR PAPERS

- [1] S. R. Taylor, M. Vallisneri, J. A. Ellis, **C. M. F. Mingarelli**, T. J. W. Lazio, R. van Haasteren, *Are we there yet? Time to detection of nanohertz gravitational waves based on pulsar-timing array limits*, ApJL, **819**, L6 (2016).
- [2] **C. M. F. Mingarelli**, J. Levin, T. J. W. Lazio, *Fast Radio Bursts and Radio Transients from Black Hole Batteries*, ApJL **814**, L20 (2015).
- [3] J. D. Romano, S. R. Taylor, N. J. Cornish, J. Gair, **C. M. F. Mingarelli**, R. van Haasteren, *Phase-coherent mapping of gravitational-wave backgrounds using ground-based laser interferometers*, Phys. Rev. D **92**, 042003 (2015).
- [4] **C. M. F. Mingarelli**, T. Sidery. *Effect of small interpulsar distance variations in stochastic gravitational wave background searches with Pulsar Timing Arrays*, Phys. Rev. D **90**, 062011 (2014)¹.
- [5] J. R. Gair, J. D. Romano, S. R. Taylor, **C. M. F. Mingarelli**. *Mapping gravitational-wave backgrounds using methods from CMB analysis: Application to pulsar timing arrays*, Phys. Rev. D **90**, 082001 (2014)²

¹Selected for APS Kaleidoscope

²Editor's Suggestion, PRD Highlights

- [6] **C. M. F. Mingarelli**, T. Sidery, I. Mandel and A. Vecchio. *Characterizing stochastic gravitational wave background anisotropy with Pulsar Timing Arrays*. Phys. Rev. D **88**, 062005 (2013).
- [7] **C. M. F. Mingarelli**, K. Grover, T. Sidery, R. J. E. Smith, and A. Vecchio. *Observing the Dynamics of Supermassive Black Hole Binaries with Pulsar Timing Arrays*. Phys. Rev. Lett., **109** 081104 (2012)³.
- [8] A. Y. Kamenshchik and **C. M. F. Mingarelli**, *A generalized Heckmann-Schücking cosmological solution in the presence of a negative cosmological constant*. Phys. Lett. B (**693**), 213 (2010).
- [9] A. Mingarelli and **C. M. F. Mingarelli**, *Conjugate points in the gravitational n-body problem*, Celest. Mech. Dynam. Astron. **91**, 391 (2005).

PUBLICATIONS WITH COLLABORATIONS: EPTA, NANOGrav, PPTA and IPTA

- [10] Z. Arzoumanian et al. (including **C. M. F. Mingarelli**), *The NANOGrav Nine-year Data Set: Limits on the Isotropic Stochastic Gravitational Wave Background*, ApJ 821, Issue 1, article id. 13, (2016).
- [11] P. Lasky, **C. M. F. Mingarelli**, T. Smith et al., *Gravitational-wave cosmology across 29 decades in frequency*, Phys. Rev. X, Volume 6, Issue 1, id.011035 (2016)⁴.
- [12] G. Desvignes et al. (including **C. M. F. Mingarelli**), *High-precision timing of 42 millisecond pulsars with the European Pulsar Timing Array*, MNRAS, Volume 458 (2016).
- [13] L. Lentati et al. (including **C. M. F. Mingarelli**), *From Spin Noise to Systematics: Stochastic Processes in the First International Pulsar Timing Array Data Release*, MNRAS, Volume 458 (2016).
- [14] J. P. W. Verbiest et al. (including **C. M. F. Mingarelli**), *The International Pulsar Timing Array: First Data Release*, MNRAS, Volume 457 (2016).
- [15] S. Babak et al. (including **C. M. F. Mingarelli**), *European Pulsar Timing Array limits on continuous gravitational waves from individual supermassive black hole binaries*, MNRAS Volume 455 (2016).
- [16] N. Caballero et al. (including **C. M. F. Mingarelli**), *The noise properties of 42 millisecond pulsars from the European Pulsar Timing Array and their impact on gravitational wave searches*, MNRAS, Volume 457 (2016).
- [17] S. R. Taylor, **C. M. F. Mingarelli**, et al. *Limits on anisotropy in the nanohertz stochastic gravitational-wave background* Phys. Rev. Lett. **115**, 041101 (2015).

³Highlighted in APS “Physics”. Synopsis: Sailing Choppy Gravitational Seas

⁴Highlighted in APS “Physics”. Synopsis: Homing in on Primordial Gravitational Waves

- [18] L. Lentati, S. R. Taylor, **C. M. F. Mingarelli**, et al., *European Pulsar Timing Array Limits On An Isotropic Stochastic Gravitational-Wave Background*, MNRAS, Volume 453 (2015).

REFEREED CONFERENCE PROCEEDINGS

- [19] G. Janssen et al. (including **C. M. F. Mingarelli**), *Gravitational wave astronomy with the SKA*, Proceedings of Science (2014), arXiv:501.00127
- [20] R. M. Shannon et al. (including **C. M. F. Mingarelli**), Summary of session C1: pulsar timing arrays, General Relativity and Gravitation, Volume 46, Issue 8, article id. 1765, 11 pp. (2014).
- [21] A. Lassus, R. van Haasteren, **C. M. F. Mingarelli**, K. J. Lee, A. Vecchio, Data Analysis Library for Gravitational Wave Detection, Proceedings IAU Symposium No. 291, Volume 8, pp 438-440 Beijing, China, August (2012).
- [22] L. Carbone, C. Bond, D. Brown, F. Bruckner, K. Grover, D. Lodhia, **C. M. F. Mingarelli**, P. Fulda, R. J. E. Smith, R. Unwin, A. Vecchio, M. Wang, L. Whalley, and A. Freise. Computer-games for Gravitational Wave science outreach: Black Hole Pong and Space Time Quest, *Journal of Physics Conference Series*, 363 012057, June (2012).

ARXIV DOCUMENTS

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