

Michele Zanolin PhD

Professional Preparation:

Laurea in Physics (equivalent to bachelor plus master), University of Parma, Italy, 1996

PhD in Physics, University of Parma, Italy, 2001

Massachusetts Institute of Technology, USA, Visiting Scientist and Post Doc, 2000-2007

Appointments:

2018- Present, Full Professor of Physics, Embry-Riddle Aeronautical University, Prescott

2013-2018 Associate Professor of Physics, Embry-Riddle Aeronautical University, Prescott

2007-2013 Assistant Professor of Physics, Embry-Riddle Aeronautical University, Prescott

2001-2007 Post Doctoral Associate, Massachusetts Institute of Technology, Cambridge MA, USA

Publications about expertise in Astrophysics:

1. B.P. Abbott *et al.* [LIGO Scientific and Virgo Collaborations], *A First Targeted Search for Gravitational-Wave Bursts from Core-Collapse Supernovae in Data of First-Generation Laser Interferometer Detectors*, Phys. Rev. D **94**, 102001 (2016).
2. A.W. Alsabati and P. Murdin, eds. *Handbook of Supernovae* Springer, New York (2017). M. Zanolin and Matt Evans co-authored the chapter “Detecting Gravitational Waves from Supernovae with AdvancedLIGO”.
3. R. Tso and M. Zanolin, *Measuring violations of General Relativity from single gravitational wave detection by non-spinning binary systems: higher-order asymptotic analysis*, Phys. Rev. D **93**, 124033 (2016).
4. J. Abadie *et al.* [LIGO Scientific and Virgo Collaborations], *All-sky search for gravitational-wave bursts in the second joint LIGO-Virgo run*, Phys. Rev. D **85**, 122007 (2012).
5. S. Gossan, P. Sutton, A. Stuver, M. Zanolin, K. Gill and C.D. Ott *Observing Gravitational Waves from Core-Collapse Supernovae in the Advanced Detector Era*, Phys. Rev. D **93**, 042002 (2016)

Other relevant products:

1. L. Blackburn *et al.*, *The LSC glitch group: Monitoring noise transients during the fifth LIGO science run*, Class. Quant. Grav. **25**, 184004 (2008).

2. S. Vitale and M. Zanolin, *Application of asymptotic expansions for maximum likelihood estimators errors to gravitational waves from binary mergers: the network case*, Phys. Rev. D

84, 104020 (2011)

3. M. Zanolin, S. Vitale and N. Makris, *Application of asymptotic expansions of maximum likelihood estimators errors to gravitational waves from binary mergers: the single interferometer case*, Phys. Rev. D 81, 124048 (2010)

4. B.P. Abbott *et al.* [LIGO Scientific Collaboration], *Search for high frequency gravitational wave bursts in the first calendar year of LIGO's fifth science run*, Phys. Rev. D 80, 102002 (2009).

5. J. Markowitz, M. Zanolin, L. Cadonati and E. Katsavounidis, *Gravitational wave burst source direction estimation using time and amplitude information*, Phys. Rev. D 78, 122003 (2008).

Synergistic Activities:

- Trained in astrophysics research Rhondale Tso, the first theoretical physicist from the Navajo reservation, as well as Salvatore Vitale (now faculty at MIT).
- Pi and Co-Pi of 3 NSF Research Awards
- Contact point of the Embry Riddle Aeronautical University with the Arizona BASIS high school system.
- LIGO -Embry Riddle group PI. LIGO council member.
- Personal Web Page detailing MZ outreach and research activities :
- <http://mercury.pr.erau.edu/~zanolinm/>