

# JAVIER ROULET

Citizenship: Argentina  
Email: jroulet@princeton.edu  
Phone: +1 908 3440660  
DOB: September 11, 1992

Department of Physics, Princeton University  
Office Address: Jadwin Hall 307  
Princeton University  
Princeton, NJ, USA

<b>Education</b>	DEPARTMENT OF PHYSICS, PRINCETON UNIVERSITY, USA	2016 – Expected 2021
	Ph.D. in Physics Thesis Advisor: Prof. Matias Zaldarriaga	
	UNIVERSIDAD DE BUENOS AIRES, ARGENTINA	2011 – 2016
	Licenciatura in Physics Thesis Title: “Average Activities in Populations of Excitable Phase Oscillators” Thesis Advisor: Prof. Gabriel B. Mindlin	
<b>Teaching Experience</b>	ASSISTANT IN INSTRUCTION PRINCETON UNIVERSITY, USA	Sep. 2017 – Present
	Courses: Physics for Future Leaders, Advanced Electromagnetism, Introduction to General Relativity, Advanced Physics (Electromagnetism), Introduction to the Quantum Theory	
	TEACHING ASSISTANT UNIVERSIDAD DE BUENOS AIRES, ARGENTINA	Mar. 2015 – Aug. 2016
	Courses: Fluid Dynamics, Wave Mechanics, Physics for Biologists	
<b>Fellowships</b>	President’s Fellowship, Princeton University	Sep. 2016 – Jun. 2017
	Dean’s Grant Research Allowance, Princeton University	2016
	CONICET Fellow	Apr. – Aug. 2016
<b>Publications</b>	[1] Javier Roulet, Tejaswi Venumadhav, Barak Zackay, Liang Dai and Matias Zaldarriaga, (2020). <i>Binary Black Hole Mergers from LIGO/Virgo O1 and O2: Population Inference Combining Confident and Marginal Events</i> . arXiv:2008.07014 [astro-ph.HE].	
	[2] Liang Dai, Barak Zackay, Tejaswi Venumadhav, Javier Roulet and Matias Zaldarriaga (2020). <i>Search for Lensed Gravitational Waves Including Morse Phase Information: An Intriguing Candidate in O2</i> . arXiv:2007.12709 [astro-ph].	
	[3] Yiwen Huang, Carl-Johan Haster, Salvatore Vitale, Aaron Zimmerman, Javier Roulet, Tejaswi Venumadhav, Barak Zackay, Liang Dai and Matias Zaldarriaga (2020). <i>Source properties of the lowest signal-to-noise-ratio binary black hole detections</i> . arXiv:2003.04513 [gr-qc].	
	[4] Barak Zackay, Liang Dai, Tejaswi Venumadhav, Javier Roulet and Matias Zaldarriaga (2019). <i>Detecting Gravitational Waves With Disparate Detector Responses: Two New Binary Black Hole Mergers</i> . arXiv:1910.09528 [astro-ph.HE].	
	[5] Barak Zackay, Tejaswi Venumadhav, Javier Roulet, Liang Dai and Matias Zaldarriaga (2019). <i>Detecting Gravitational Waves in Data with Non-Gaussian Noise</i> . arXiv:1908.05644 [astro-ph.IM].	
	[6] Tejaswi Venumadhav, Barak Zackay, Javier Roulet, Liang Dai and Matias Zaldarriaga (2019). <i>New Binary Black Hole Mergers in the Second Observing Run of Advanced LIGO and Advanced Virgo</i> . Physical Review D. 101, 083030.	

- [7] Javier Roulet, Liang Dai, Tejaswi Venumadhav, Barak Zackay and Matias Zaldarriaga (2019). *Template Bank for Compact Binary Coalescence Searches in Gravitational Wave Data: A General Geometric Placement Algorithm*. Physical Review D. 99.123022.
- [8] Barak Zackay, Tejaswi Venumadhav, Liang Dai, Javier Roulet and Matias Zaldarriaga (2019). *A Highly Spinning and Aligned Binary Black Hole Merger in the Advanced LIGO First Observing Run*. Physical Review D. 100, 023007.
- [9] Tejaswi Venumadhav, Barak Zackay, Javier Roulet, Liang Dai and Matias Zaldarriaga (2019). *A New Search Pipeline for Compact Binary Mergers: Results for Binary Black Holes in the First Observing Run of Advanced LIGO* Physical Review D. 100, 023011.
- [10] Javier Roulet and Matias Zaldarriaga (2019). *Constraints on Binary Black Hole Populations from LIGO–Virgo Detections*. Monthly Notices of the Royal Astronomical Society. 484, 4216.
- [11] Javier Roulet and Gabriel B. Mindlin (2017). *A Diagrammatic Representation of Phase Portraits and Bifurcation Diagrams of Two-Dimensional Dynamical Systems*. International Journal of Bifurcation and Chaos. 27. 1730045. 10.1142/S0218127417300452
- [12] Javier Roulet and Gabriel B. Mindlin (2016). *Average Activity of Excitatory and Inhibitory Neural Populations*. Chaos: An Interdisciplinary Journal of Nonlinear Science. 26. 10.1063/1.4962326

## Talks

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|---|------|
| Talk, APS April Meeting 2020<br><i>Binary black hole populations including independently found events and marginal triggers</i>   | 2020 |
| Invited talk, High Energy Physics Journal Club, Princeton University<br><i>Binary Black Hole Populations with LIGO–Virgo</i>  | 2020 |
| Talk, 22nd International Conference on General Relativity and Gravitation – 13th Edoardo Amaldi Conference on Gravitational Waves<br><i>A Highly Spinning and Aligned Binary Black Hole Merger in the Advanced LIGO First Observing Run</i> | 2019 |
| Invited Seminar, Institut de Ciències del Cosmos, Universitat de Barcelona<br><i>Binary Black Hole Populations with LIGO–Virgo</i>  | 2019 |
| Talk, JSI Workshop 2018: Gravitational Wave Physics and Astronomy Workshop<br><i>Constraints on Binary Black Hole Populations from LIGO–Virgo Detections</i>  | 2018 |
| Poster, Princeton Research Day, Princeton University<br><i>Average activity of excitatory and inhibitory neural populations</i>   | 2017 |

## Professional service

- Referee for *Chaos, Solitons and Fractals: the interdisciplinary journal of Nonlinear Science, and Nonequilibrium and Complex Phenomena*.