

# SUMEET KULKARNI

Ph.D. Candidate, The University of Mississippi & Science Communicator

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📍 Oxford, MS

🔗 <https://sumeetkul.github.io/>

🐦 @sumeet\_kul

## EXPERIENCE

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- **Los Angeles Times**

AAAS Mass Media Fellow (June - August 2022)

- Reported on **12 science stories** over a period of 10 weeks for the LA Times' science desk. 6 of these were pitched.
- **3 stories featured on A1**, with another getting a footnote mention.
- **Interviewed over 30 diverse sources** from a variety of backgrounds, such as researchers, students, medical doctors, patients, a state assemblymember, and even **Bill Nye**, the Science Guy!
- Link to all stories: <https://www.latimes.com/people/sumeet-kulkarni>

- **LIGO Livingston Science Education Center**

Outreach Fellow, Spring 2022

- Lead middle- and high-school field trips around the LIGO detector in Livingston, Louisiana; developed and performed classroom activities; trained undergraduate docents at the on-site museum containing physics exhibits.
- Developed a web-based classroom tool to teach the physics of oscillations and waves by linking it to cutting-edge research in the field of Gravitational-wave Astronomy.

- **Astrobites**

Author and Editor on rotation (January 2020-present)

I am a regular author for Astrobites, a team of astronomy graduate students who write and edit science summaries of new research papers aimed at undergraduate students. Link to all posts:

<https://astrobites.org/author/skulkar/>

- **India Bioscience**

Science Journalism Intern (June-September 2019),

Wrote **3 news articles and 2 features** during a 3-month remote internship with India's leading life sciences communication outlet. Link to all stories: <https://indiabioscience.org/authors/SumeetKulkarni>

- **LIGO Magazine**

Co-editor, (December 2020-present)

As part of the team of editors for the bi-annual magazine of the LIGO Scientific Collaboration, I commission and edit stories about science as well as the social and professional aspects of life in a big collaboration spanning over 18 countries worldwide.

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## EDUCATION

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### The University of Mississippi

Doctor of Philosophy (Ph.D.), Physics

📅 Expected Fall 2023

📍 Oxford, MS

- Spring 2023 Graduate School Dissertation Fellowship

### M. Ed., Science Curriculum and Instruction

📅 January 2020 - December 2021

### Indian Institute of Science Education and Research (IISER)

Integrated B.S.-M.S., Physics & Mathematics

📅 August 2012 - May 2017 📍 Pune, India

- INSPIRE Scholarship, Department of Science & Technology (DST), Govt. of India

# SCIENCE COMMUNICATION & OUTREACH

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## FameLab

### Winner, 3rd prize

📅 February 2017

📍 Cheltenham, UK

- Famelab: 'The world's biggest Science Communication competition' by the British Council challenges participants to Communicate Science in 3 minutes without using any visual aids
- My presentation titled "Cosmic Fireworks" explained how two neutron stars collided in a *Kilonova* explosion, using a pair of balloons filled with confetti. By Winning the 3rd prize here, represented India at the Cheltenham Science Festival. Story in *The Times of India*.

## Winner, 3MT®

📍 University of Mississippi

- October 2021: First place, Doctoral Category of the 3-Minute Thesis competition organized by the University of Mississippi Graduate School. Spoke about gravitational wave detection.
- November 2022: First place, Masters' Category. Spoke about the deficit model of science communication.

## Oxford Science Café

📅 December 2018-present

📍 Oxford, MS, USA

- Co-organizer of the Oxford Science Cafe: monthly public talks and conversations about science for the local community in Oxford, and the only event of its kind in north Mississippi.
- Roles: Emceeing for the main event, identifying and inviting speakers, securing funds, publicity.

## Ssippin' Science Podcast

📅 March 2020-present

📍 Podcastland

- Creator and host of *Ssippin' Science*, the only science podcast in Mississippi in which we share the Oxford Science cafe talks with a broader audience in the form of interviews and soundbites; Available to listen on **Spotify**, **Apple Podcasts** or **Google Podcasts**.

## Conference on Science Communication (Comscicon)

📅 September 2019-March 2021

📍 College Park MD, Athens GA

- Comscicon is a series of workshops focused on the communication of complex and technical concepts organized by graduate students, for graduate students
- Selected to attend (i) Comscicon-AIP at the American Institute of Physics (September 2019), (ii) Comscicon-Atlanta (March 2020), (iii) Comscicon-SciWri at NASW.
- **Chaired** the 6-member organizing committee for the regional **Comscicon-Atlanta** (conducted virtually in March 2021); designed panels and workshops for graduate students interested in science communication across the southeastern USA.

## University Outreach

📅 August 2017 - present

📍 University of Mississippi

- **Spooky Physics Night:** Dressed up in nerdy costumes and presented fun, spooky physics demos to kids every Halloween night at the UM Department of Physics.
- **Astronomy Open House:** Conducted star-gazing and planet-hunting sessions for the monthly open house at the Kennon observatory, The University of Mississippi.

## Invited Talks

- The British Council's *Cafe Scientifique*: 'The Rise of Artificial Intelligence in Astronomy' at the British Library, Pune. Cafe Scientifique provides a unique forum for the discussion of scientific issues in a way that is much more relaxed, informal and accessible than a public lecture. (January 5, 2018)

# TEACHING

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## Teaching Assistant, Astronomy

📅 August 2017-present

- Taught the lab component of the Astronomy 103/104 courses comprising mostly of non-STEM majors. The labs have an emphasis on teaching over grading.
  - Guided Astrophotography sessions for Honors students using the 17-inch telescope and professional-grade imaging equipment at the Kennon Observatory, University of Mississippi.
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# RESEARCH

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## PhD, Gravitational-wave Astrophysics

📅 August 2017-present

The Nobel-prize winning first detection of gravitational waves in 2015 by the LIGO-Virgo collaboration renewed our understanding of neutron stars and black holes in the universe. In my thesis, I am using computational simulations to study the population properties merging compact objects in order to figure out how and where they formed, the dynamics of their collision, what happens after they collide.

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# PEER-REVIEWED ACADEMIC ARTICLES

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## 1. Astrophysics:

- **Sumeet Kulkarni** et al. (May 2019). "Random projections in gravitational wave searches of compact binaries". In: *Phys. Rev. D* 99 (10), p. 101503. DOI: 10.1103/PhysRevD.99.101503. URL: <https://link.aps.org/doi/10.1103/PhysRevD.99.101503>.
- Kentaro Mogushi, **Sumeet Kulkarni** et al. (June 2021). "NNETFIX: an artificial neural network-based denoising engine for gravitational-wave signals". In: *Machine Learning: Science and Technology* 2.3, p. 035018. DOI: 10.1088/2632-2153/abea69. URL: <https://doi.org/10.1088/2632-2153/abea69>.
- Nathan McDaniel, **Sumeet Kulkarni** and Anuradha Gupta (2021). *Inferring spin tilts at formation from gravitational wave observations of binary black holes: Interfacing precession-averaged and orbit-averaged spin evolution*. arXiv: 2107.11902 [astro-ph.HE].
- Singhal, Akshat and others including **Sumeet Kulkarni** (Aug. 2021). "Deep co-added sky from Catalina Sky Survey images". In: *Monthly Notices of the Royal Astronomical Society* 507.4, pp. 4983–4996. ISSN: 0035-8711. DOI: 10.1093/mnras/stab2246. URL: <https://doi.org/10.1093/mnras/stab2246>.

## 2. Science Education:

- **Sumeet Kulkarni** and Brooke Whitworth. (Accepted for publication, January 2022). Podcasts in Science Classrooms: Storytelling For all Ears! In: *The Physics Teacher*, article ref. no. TPT20-AR-00818R
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# SCIENCE COMMUNICATION TRAINING / WORKSHOPS

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## 1. Comscicon-SciWri

📅 October 2021

📍 Virtual

- This workshop accompanied my participation in the National Association of Science Writers (NASW) annual meeting, 2021.
- Produced a podcast on *Wildfire Smoke and Health*, to be published on the NASW Student Newsroom as a part of Comscicon-SciWri 2021.

## 2. Comscicon-Atlanta (Organizer, 2021)

📅 March 2021

📍 Virtual

- Co-chair of the organizing committee for Comscicon-Atl '21
- Hosted Atlanta-based journalist Maryn McKenna as Keynote Speaker
- Organized and moderated a panel discussion titled *Interviewing for Science Stories*

## 3. Comscicon-Atlanta

📅 March 2020

📍 Athens, GA, USA

- Started my podcast, *Ssippin' Science* through the conference write-a-thon

## 4. Comscicon-AIP

📅 September 2019

📍 College Park, MD, USA

- Presented a poster on the Humans of LIGO project; Got a clip in Scientific American through the conference write-a-thon

## 5. The Cheltenham Science Festival

📅 June 2017

📍 Cheltenham, UK

- Represented India at Famelab international, 2019

## 6. EURAXESS: Science Out Of The Lab

📅 August 2015

📍 Mumbai, India

- Finalist in the EURAXESS National Science Slam

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## MULTIMEDIA SKILLS

Graphics: Adobe Illustrator, Photoshop, Matplotlib

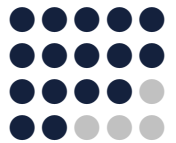
Audio/Video Editing: Audacity, Adobe Premier Pro

Microsoft Office Suite

HTML5, FLASK

## LANGUAGES

English  
Marathi  
Hindi  
Spanish



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## ASTROPHOTOGRAPHY

- My most recent hobby has been clicking beautiful pictures of the Milky Way, the Moon, the Planets and other starscapes. Check out my Astrophotography portfolio here:  
<https://sumeet-astrophoto.myportfolio.com/>
  - My pictures have been selected for a dedicated exhibit at the University of Mississippi Library from February-June 2022.
  - Blog post on my personal webpage on how I chased and captured comet NEOWISE in Summer 2020:  
<https://sumeetkul.github.io/blog/neowise/>
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