## NASA BIOGRAPHICAL SKETCH FORM October 1, 2024

# \*Identifying Information

\*Name: Yeo, Sara K.

Persistent Identifier (PID) of the Senior/Key Person: ORCID 0000-0002-2043-8400

\*Position Title: Professor

### \*Organization and Location

Name: University of Utah

Location: Salt Lake City, UT, USA

### \*Professional Preparation

PhD, Aug 2011 - May 2014, Science Communication, University of Wisconsin-Madison (Madison, WI, USA)

MS, Aug 2010 – May 2011, Life Sciences Communication, University of Wisconsin-Madison (Madison, WI, USA)

MS, Aug 2005 – May 2008, Oceanography, University of Hawai'i at Manoa (Honolulu, HI, USA)

BS, Aug 2000 – May 2005, Oceanography, Hawai'i Pacific University (Honolulu, HI, USA)

### \*Appointments and Positions

2025-present: Professor, Department of Communication, University of Utah (Salt Lake City, UT, USA)

2022-present: Director, STEM Ambassador Program (STEMAP), University of Utah (Salt Lake City, UT, USA)

2020-2024: Associate Professor, Department of Communication, University of Utah (Salt Lake City, UT, USA)

2014-2020: Assistant Professor, Department of Communication, University of Utah (Salt Lake City, UT, USA)

#### \*Products

- Sara K. Yeo, Xuan Liang, Dominique Brossard, Kathleen M. Rose, Kaine Korzekwa, Dietram Scheufele, Michael A. Xenos. The case of #arseniclife: Blogs and Twitter in informal peer review. *Public Understanding of Science*. 2017 November. DOI: 10.1177/0963662516649806
- 2) Sara K. Yeo, Michael A. Cacciatore, Isabelle Freiling, Leona Yi-Fan Su, Jennifer S. Zhang, Meaghan McKasy, Sung In Choi. Understanding Knowledge Among White, Black, and Hispanic Audiences: Media Attention and Inequities in Factual and Perceived Knowledge.

- Mass Communication and Society. 2025 January. DOI: 10.1080/15205436.2024.2440320
- 3) Sara K. Yeo, Isabelle Freiling, Jiyoung Yeon, Jennifer S. Zhang, Meaghan McKasy, Michael A. Cacciatore, Leona Yi-Fan Su, Sarah Rose Siskind. Examining the Use of Aggressive Satirical Humor on Perceptions of Trustworthiness in Communication About Renewable Energy. *Science Communication*. 2025 July. DOI: 10.1177/10755470251345746
- 4) Sara K. Yeo, Meaghan McKasy. Emotion and humor as misinformation antidotes. *Proceedings of the National Academy of Sciences*. 2021 April; 118(15). DOI: 10.1073/pnas.2002484118
- 5) Sara K. Yeo, Leona Y.-F. Su, Michael A. Cacciatore, Jennifer Shiyue Zhang, Meaghan McKasy. The differential effects of humor on three scientific issues: global warming, artificial intelligence, and microbiomes. *International Journal of Science Education, Part B.* 2023 January. DOI: 10.1080/21548455.2022.2123259
- 6) Michael A. Cacciatore, Sara K. Yeo, Amy B. Becker, Ashley A. Anderson, Kasha Patel. Cultivating Interest in Science Through Humor: Mirth as a Leveler of Gaps in Science Engagement. *Environmental Communication*. 2025 March. DOI: 10.1080/17524032.2025.2477264

### \*Certification

Each senior/key person is required to complete the following certifications regarding the information provided in their Biographical Sketch:

I certify that the information provided is current, accurate, and complete. This includes but is not limited to information related to domestic and foreign appointments and positions.

I also certify that, at the time of submission, I am not a party to a <u>malign foreign talent recruitment</u> program.

Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Signature<sup>1</sup>

Date: September 18, 2025

<sup>&</sup>lt;sup>1</sup> To be acceptable to NASA, the date of the signature must be within the past 12 months from when the document is submitted to NASA.



I am writing to express my strong interest in serving as a NASA Decadal Astrobiology Research and Exploration Strategy (DARES) Task Force 2 General Member or Focus Area Lead. My background, expertise, and leadership in science communication align well with Focus Area 9 (Astrobiology in Society) and are directly relevant to Topic 8 (Prepare for the Discovery of Life Beyond Earth and Subsequent Post-Discovery Activities) of NASA-DARES. I am interested in continuing conversations and work that I began as part of the Scientific Organizing Committee (SOC) for the 2024 NASA workshop, Communicating Discoveries in the Search for Life in the Universe (CDSLU). The societal implications of any discovery of life beyond Earth are profound and farreaching, and will have significance for all aspects of humanity. It is thus imperative that we are prepared to responsibly and ethically communicate about astrobiology research that finds evidence of life beyond Earth. In this endeavor, it is critical that we rely on empirical evidence from science communication.

I have a multifaceted background in science and communication, which has informed my research program. My scholarship is centered on understanding the processes through which public audiences form attitudes, opinions, and beliefs, and make decisions in the context of media representations of and messages about scientific issues. Broadly, my work focuses on strategic tactics for communicating information in the context of diverse scientific issues, including climate change, renewable energy, biomanufacturing, and astrobiology. Of relevance to TF2, I conducted a study on the Arsenic bacteria controversy (Yeo et al., 2017), which exeplifies the crucial role of media in post-publication peer review, and the need to understand and be strategic about communication at the intersection of science, media, and society.

Throughout my career, I have contributed to national and international public science communication and engagement efforts that bridge research and society. In addition to my service on the CDSLU SOC, I co-led a section of the CDSLU workshop report (Bimm et al., forthcoming). I have also served on the Steering Committee of the Science and Public Engagement Partnership (SciPEP) between the Kavli Foundation and the Department of Energy's Office of Science. I am currently on the Standing Committee for Advancing Science Communication and the Board on Life Sciences in the National Academies of Sciences, Engineering, and Medicine (NASEM). Internationally, I have served on the Scientific Committee of the Global Network for Science Communication (PCST) and the Scientific Advisory Committee for the International Symposium on Communicating Discovery Science, which was held in Stellenbosch, South Africa, in 2024.

In addition to my expertise and service experience, I am the Director of the STEM Ambassador

Program (STEMAP)<sup>1</sup>, a public engagement training program that equips scientists with practical skills and knowledge to effectively connect with audiences that are typically underserved by traditional modes of science communication. This role, combined with my experience in leading research projects in science communication, participating in conference and workshop planning, and serving in advisory roles, has provided me with a broad perspective of the landscape of societal impacts of research and a nuanced understanding of the challenges and opportunities that scientists face when engaging with public audiences across diverse contexts.

I am excited about the opportunity to collaborate with other experts to advance NASA Astrobiology's strategic goals and am open to serving as a Focus Area Lead. My goals are two-fold: First, I hope to advance our understanding and the role of communication in astrobiology by applying lessons learned from empirical scholarship in science communication. Second, I hope to encourage more scholarship related to astrobiology in society among my colleagues and peers in science communication and related disciplines. My expertise, experiences, and leadership skills position me well to contribute meaningfully to TF2's work. I am committed to fostering an collaborative environment that values multiple perspectives and expertise. I am confident that my background, expertise, skills, and dedication to science communication will enable me to make significant contributions to the NASA-DARES Task Force 2.

Thank you for considering this nomination. I look forward to hearing from you and the opportunity to contribute to this important work.

Sincerely,

Sara K. Yeo

**Professor** 

Department of Communication

University of Utah

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<sup>&</sup>lt;sup>1</sup>https://stemap.utah.edu/

## References

- Bimm, J., Voytek, M., Scharf, C., Billings, L., Suldovsky, B., Wolfe-Simon, F., Cable, M., Yeo, S. K., Xenos, M. A., Segura, A., Berea, A., Anbar, A., Kaufman, M., Meadows, V., Graham, H., Cartier, K., Sheikh, S., Nováková, J., Ockert, I., & Determann, J. (forthcoming). Workshop Report: Communicating Discoveries in the Search for Life in the Universe. *Astrobiology*.
- Yeo, S. K., Liang, X., Brossard, D., Rose, K. M., Korzekwa, K., Scheufele, D. A., & Xenos, M. A. (2017). The case of #arseniclife: Blogs and Twitter in informal peer review. *Public Understanding of Science*, 26(8), 937–952. https://doi.org/10.1177/0963662516649806