




# MICHAEL A. GULLY-SANTIAGO

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## Education and Experience

**Research Associate** University of Texas at Austin · Austin, TX · 9/2022 – present

**Research Fellow** University of Texas at Austin · Austin, TX · 2/2020 – 8/2022

**Support Scientist** Kepler/K2 Guest Observer Office · Moffett Field, CA · 05/2017–01/2020

**Research Scientist** [baeri.org](https://baeri.org) at NASA Ames Research Center · Moffett Field, CA · 02/2017–05/2017

**Forward modeling Keck and IRTF spectra:** Analysis of low resolution near-IR spectroscopy of young stars and brown dwarfs with collaborators T. Greene and M. Marley

**Postdoctoral Researcher** Kavli Institute for Astronomy and Astrophysics · Beijing, China · 10/2015–10/2016

**Forward modeling IGRINS spectra:** Analysis of high resolution, high bandwidth near-IR spectroscopy of young stars with collaborator G. Herczeg

**Ph.D., Astronomy** The University of Texas at Austin · Austin, TX · 8/2008–5/2015

 NASA GSRP Fellow, JPL Microdevices Lab, 9/2010-9/2013

**B. A., Astronomy & Physics** Boston University · Boston, MA · 9/2003–5/2007

## Open Source Software Development

 blasé: Transfer learning for high-bandwidth spectroscopy in PyTorch [blase.readthedocs.io](https://blase.readthedocs.io)

 gollum: Interactive dashboard and interface to precomputed synthetic spectra [gollum-astro.readthedocs.io](https://gollum-astro.readthedocs.io)

 muler: Fluent interface to échelle spectroscopy data [muler.readthedocs.io](https://muler.readthedocs.io)

 lightkurve: Time series data analysis for NASA's Kepler/K2/TESS missions [lightkurve.org](https://lightkurve.org)

 Starfish: Open source statistical framework for spectral inference [starfish.readthedocs.io](https://starfish.readthedocs.io)

## Selected Publications

- [1] **Gully-Santiago, Michael A.** and C. V. Morley, "An Interpretable Machine Learning Framework for Modeling High-Resolution Spectroscopic Data," *arXiv e-prints*, p. arXiv:2210.01827, Oct. 2022.
- [2] N. M. Gosnell, **Gully-Santiago, Michael A.**, E. M. Leiner, and B. M. Tofflemire, "Observationally Constraining the Starspot Properties of Magnetically Active M67 Sub-subgiant S1063," *The Astrophysical Journal*, vol. 925, no. 1, p. 5, Jan. 2022.
- [3] **Gully-Santiago, M. A.**, G. J. Herczeg, I. Czekala, G. Somers, K. Grankin, K. R. Covey, J. F. Donati, S. H. P. Alencar, G. A. J. Hussain, B. J. Shappee, G. N. Mace, J.-J. Lee, T. W.-S. Holoien, J. Jose, and C.-F. Liu, "Placing the Spotted T Tauri Star LkCa 4 on an HR Diagram," *The Astrophysical Journal*, vol. 836, p. 200, Feb. 2017.
- [4] **Gully-Santiago, M.**, D. T. Jaffe, and V. White, "Optical characterization of gaps in directly bonded Si compound optics using infrared spectroscopy," *Applied Optics*, vol. 54, p. 10177, Dec. 2015.