

# LABORATORY FOR AGNOSTIC BIOSIGNATURES



SANTA FE  
INSTITUTE



GEORGETOWN UNIVERSITY

## Two Postdoctoral Positions in Theoretical Astrobiology

The Laboratory for Agnostic Biosignatures (LAB) – a NASA-funded project consisting of 15 investigators at 7 Institutions – is seeking applicants for two postdoctoral fellowships to develop a theoretical and computational framework for agnostic biosignatures to be used in a variety of astrobiological contexts. The research program seeks to assess the signs of life at the most general theoretical level, evaluate existing biosignatures and data from the LAB team, and to propose novel biosignatures. The research will draw on a wide range of techniques spanning mathematical biology to machine learning.

The work will be conducted in close coordination with The Santa Fe Institute – a private, not-for-profit theoretical research and education facility. The successful candidates will be supervised by Profs. Chris Kempes at the Santa Fe Institute, Eric Libby at Umeå University, and Sarah Stewart Johnson at Georgetown University, and will work closely with the group of interdisciplinary researchers within the LAB team.

Candidates should demonstrate a track record of publication; have strong organizational, written, and oral communication skills; and be able to work both independently and as part of a collaborative team. Initial appointments will be for one year, with possible renewal up to two additional years depending on progress.

These are highly interdisciplinary positions, and combined skills and training are desired. For instance, candidates might combine a background in quantitative modeling and theory development with detailed knowledge of theoretical/mathematical biology, evolution, bioinformatics, or physiology. Fluency with machine learning is also desirable.

The LAB team consists of leading scientists on the study of biosignatures and astrobiology, and the ideal candidate should enjoy and be able to take advantage of these diverse research contacts. Postdoctoral fellows will also be strongly encouraged to interact and collaborate with members of the larger LAB, NASA, and SFI communities.

The position comes with full employee benefits including insurance and paid time off, and there is flexibility as to where candidates are physically based (Santa Fe, Sweden, or Washington, DC). Additional resources are available to assist with travel and other research needs.

To apply, please send an email containing your CV and a 1-page research statement to LAB Project Manager Béatrice Leydier at [bl517@georgetown.edu](mailto:bl517@georgetown.edu). Please include names and contact information of at least three references as well as a possible start date.

Candidates who have applied to the SFI Complexity Postdoctoral Fellowship can be considered for this position without submitting any additional materials; they should however indicate their interest to the email above. Hiring is rolling, and the start date is negotiable, however the ideal candidate would be able to start immediately.

For additional information regarding scientific matters, email [ckempes@gmail.com](mailto:ckempes@gmail.com), [nzelibby@gmail.com](mailto:nzelibby@gmail.com), or [sarah.johnson@georgetown.edu](mailto:sarah.johnson@georgetown.edu). For technical questions or assistance with the application, email [bl517@georgetown.edu](mailto:bl517@georgetown.edu).

LAB and the Santa Fe Institute are equal opportunity employers. Women and members of underrepresented groups are especially encouraged to apply. For more information, see [www.agnosticbiosignatures.org](http://www.agnosticbiosignatures.org).