

S David Mis

PhD Student

Education

Rice University

PhD, *Computational and Applied Mathematics*

2021–present, Houston, TX, USA

Advised by Dr. Maarten de Hoop

University of Texas

MS, *Computer Science*

2019–2021, Austin, TX, USA

University of Texas

BS, *Computer Science*

BS, *Mathematics*

BA, *Economics and Chinese Language*

2009–2014, Austin, TX, USA

Publications

Conference papers

Semialgebraic Neural Networks: From roots to representations

SD Mis, M Lassas, MV de Hoop

International Conference on Learned Representations (ICLR) 2025

May 2025, Singapore

[\[pdf\]](#) [\[arxiv\]](#) [\[conference\]](#)

Journal papers

Reduced mRNA secondary-structure stability near the start codon indicates functional genes in prokaryotes

TE Keller, SD Mis, KE Jia, CO Wilke

Genome Biology and Evolution, Volume 4, Issue 2, 2012, Pages 80–88

[\[pdf\]](#) [\[link\]](#)

Talks

Semialgebraic Neural Networks: From roots to representations

SD Mis, M Lassas, MV de Hoop

Inverse Days

December 2024, Oulu, Finland

Semialgebraic Neural Networks

Geo-Mathematical Imaging Group Partners Meeting

November 2024, Rice University

Matrix-Recurrent and Semialgebraic Neural Networks

Geo-Mathematical Imaging Group Partners Meeting

May 2023, Rice University

Professional Experience

Teaching

Rice University

Grader / Teaching Assistant

2021–present, Houston, TX

Grader:

Differential Equations for Science and Engineering

Partial Differential Equations I

Applied Functional Analysis

Numerical Analysis

Graduate Teaching Assistant:

Matrix Analysis

The Art of Problem Solving

Grader / Teaching Assistant

2020–2021, Virtual

Various high school mathematics courses.

University of Texas*Undergraduate Teaching Assistant*

2011–2012, Austin, TX

Courses:

Computational Biology

Statistics for Biologists

Research**Rice University***PhD Research Assistant*

2022–present, Houston, TX

Geo-Mathematical Imaging Group (GMIG).

University of Texas*Undergraduate Research Assistant*

2010–2012, Austin, TX

Lab of Dr. Clause O. Wilke, Professor of Integrative Biology.

Software Development**David Mis Software LLC***Software Developer*

2018–2021, Houston, TX

Independent software consultant.

Unaliwear*Cloud Engineer*

2015–2018, Austin, TX

Principal architect of AWS infrastructure for consumer IOT device.

Hewlett Packard*Software Developer*

2014–2015, Austin, TX

Enterprise software development.

Mentorship

Rice Data2Knowledge Capstone Project Mentor

NASA Orbital Transfer Project

Spring 2025