

# 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

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

## 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

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**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.

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**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