# 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**

# **Preprints**

Semialgebraic Neural Networks: From roots to representations <a href="SD Mis">SD Mis</a>, M Lassas, MV de Hoop <a href="January 2025">January 2025</a>. <a href="January 2025">[pdf] [link]</a>

#### Journal papers

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

TE Keller, <u>SD Mis</u>, KE Jia, CO Wilke Genome Biology and Evolution, Volume 4, Issue 2, 2012, Pages 80–88 [pdf] [link]

#### **Talks**

#### Contributed Talks

# Semialgebraic Neural Networks: From roots to representations

 $\frac{\mathrm{SD\ Mis}}{Inverse}$ , M Lassas, MV de Hoop  $\overline{Inverse}$  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.