

David Mis

PhD Candidate

Department of Computational Applied Mathematics and Operations Research

Rice University, Houston, TX, USA

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Education

Rice University

2021–present

PhD, *Computational and Applied Mathematics*

Houston, TX, USA

Advised by Dr. Maarten de Hoop

University of Texas

2019–2021

MS, *Computer Science*

Austin, TX, USA

University of Texas

2009–2014

BS, *Computer Science*

BS, *Mathematics*

BA, *Economics and Chinese Language*

Austin, TX, USA

Publications

Conference papers

Semialgebraic Neural Networks: From roots to representations

May 2025

SD Mis, M Lassas, MV de Hoop

International Conference on Learning Representations (ICLR) 2025

Singapore

Journal papers

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

2012

TE Keller, SD Mis, KE Jia, CO Wilke

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

Talks

Measure flows in Bayes Hilbert spaces

Dec 2025

Inverse Days, Helsinki, Finland

(Poster) Measure flows in Bayes Hilbert spaces: Particle methods and sampling

Dec 2025

CBMS Conference, University of Houston

Measure flows in Bayes Hilbert spaces: Diffeomorphism invariance, optimal control, and flocking	Sep 2025
<i>Geo-Mathematical Imaging Group Partners Meeting, Rice University</i>	
Diffeomorphism invariant measure flows in Bayes Hilbert spaces	Jul 2025
<i>Applied Inverse Problems (AIP) 2025, Rio de Janeiro, Brazil</i>	
Semialgebraic Neural Networks: From roots to representations	Dec 2024
<i>Inverse Days, Oulu, Finland</i>	
Semialgebraic Neural Networks	Nov 2024
<i>Geo-Mathematical Imaging Group Partners Meeting, Rice University</i>	
Matrix-Recurrent and Semialgebraic Neural Networks	May 2023
<i>Geo-Mathematical Imaging Group Partners Meeting, Rice University</i>	

Professional Experience

Teaching

Rice University	2021–present
<i>Grader / Teaching Assistant</i>	
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	2020–2021
<i>Grader / Teaching Assistant</i>	
Virtual	
Various high school mathematics courses	
University of Texas	2011–2012
<i>Undergraduate Teaching Assistant</i>	
Austin, TX	
Courses: Computational Biology, Statistics for Biologists	

Research

Rice University	2022–present
<i>PhD Research Assistant</i>	
Houston, TX	
Geo-Mathematical Imaging Group (GMIG)	
University of Texas	2010–2012
<i>Undergraduate Research Assistant</i>	
Austin, TX	
Lab of Dr. Clause O. Wilke, Professor of Integrative Biology	

Software Development

David Mis Software LLC

2018–2021

Software Developer

Houston, TX

Independent software consultant

Unaliwear

2015–2018

Cloud Engineer

Austin, TX

Principal architect of AWS infrastructure for consumer IOT device

Hewlett Packard

2014–2015

Software Developer

Austin, TX

Enterprise software development

Mentorship

Rice Data2Knowledge Capstone Project Mentor

Spring 2025

Rice University

NASA Orbital Transfer Project

Professional Activities

Minisymposium Organizer

March 2026

Measure Flows for Inverse Problems and Machine Learning

SIAM UQ '26

Awards

SIAM UQ 2026 student travel award