

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 Learned Representations (ICLR) 2025

Singapore

Journal papers

Reduced mRNA secondary-structure stability near the start codon

2012

indicates functional genes in prokaryotes

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: Diffeomorphism invariance, optimal control, and flocking

Sep 2025

SD Mis, MV de Hoop

Geo-Mathematical Imaging Group Partners Meeting, Rice University

Diffeomorphism invariant measure flows in Bayes Hilbert spaces

Jul 2025

SD Mis, MV de Hoop

Applied Inverse Problems (AIP) 2025, Rio de Janeiro, Brazil

Semialgebraic Neural Networks: From roots to representations	Dec 2024
<u>SD Mis</u> , M Lassas, MV de Hoop	
<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
<i>Software Developer</i>	
Houston, TX	
Independent software consultant	
Unaliwear	2015–2018
<i>Cloud Engineer</i>	
Austin, TX	
Principal architect of AWS infrastructure for consumer IOT device	

Hewlett Packard
Software Developer
Austin, TX
Enterprise software development

2014–2015

Mentorship

Rice Data2Knowledge Capstone Project Mentor
Rice University
NASA Orbital Transfer Project

Spring 2025