

Rami Masri

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EDUCATION **Ph.D., Computational and Applied Mathematics**, May 2022 (expected)
Rice University, Houston, TX
Advisor: Prof. Beatrice Riviere

Graduate Certificate in Teaching and Learning, December 2022 (expected)
Rice University Center of Teaching Excellence, Houston, TX

M.A., Computational and Applied Mathematics, May 2019
Rice University, Houston, TX
Advisor: Prof. Beatrice Riviere

B.S., Mathematics, with high distinction, May 2017
Lebanese American University, Beirut, Lebanon.

RESEARCH **Numerical Analysis of Discontinuous Galerkin Methods**
Cahn–Hilliard–Navier–Stokes equations, 2020–present
Incompressible Navier–Stokes equations, 2020–present
Elliptic problems with a Dirac line source, 2019–present
Nonlinear convection diffusion equations, 2019–2020

Mathematical Modeling
Blood flow and solute transport in vessel networks, 2018–2019

TEACHING **Teaching Assistant**
CAAM 336, Differential equations in science and engineering
Rice University, Department of Computational and Applied Mathematics
Fall 2021; Fall 2019–Spring 2020

MTH 101–102, Introductory calculus courses
Lebanese American University, Department of Computer Science and Mathematics
Fall 2016–Spring 2017

PAPERS R. Masri, C. Liu, B. Riviere. A discontinuous Galerkin pressure correction scheme for the incompressible Navier-Stokes equations: stability and convergence. *Submitted*, 2021.

 R. Masri, C. Puelz, B. Riviere. A discontinuous Galerkin method for blood flow and solute transport in one dimensional vessel networks. *Communications on Applied Mathematics and Computation*, 2021.

 R. Masri, C. Puelz, B. Riviere. A reduced model for solute transport in compliant blood vessels with arbitrary axial velocity profile. *International Journal of Heat and Mass Transfer*, 2019.

REPORTS N. Berre, G. Castro, H. Kjeldsberg, R. Masri, and I. Gjerde. Flow instabilities in aneurysms, *Group project in Simula summer school in computational physiology*, 2021.

 R. Masri. Derivation and numerical simulation of oxygen transport in blood vessels. *Thesis for degree of Master of Arts, Rice University*, 2019.

TALKS	One dimensional models of solute transport and blood flow: derivation and numerical simulation. <i>SIAM Conference on Computational Science and Engineering</i> , March 2021.
	Derivation and simulation of blood flow and solute transport models in one dimensional vessel networks. <i>SIAM Texas Louisiana Annual Meeting</i> , October 2020.
	Derivation and simulation of a reduced solute transport model in compliant blood vessels with a general velocity field. <i>Accepted in SIAM Life Sciences</i> , June 2020. Cancelled due to Covid.
	Discontinuous Galerkin methods for blood flow and solute transport models. <i>Finite Element Rodeo at Baylor University</i> , March 2020.
	Reduced models of blood flow and solute transport. <i>Departmental Graduate Student Seminar at Rice University</i> , January 2020.
AWARDS	Student Travel Award , SIAM CSE, 2021.
	Alan Weiser Memorial Travel Award , Rice University, 2020.
	Fulbright Winner , U.S. Embassy in Beirut, 2017.
	Full Merit Scholarship , Lebanese American University, 2015-2017.
	National Public Speaking Contest Winner , English Speaking Union, 2016.
SERVICE	Graduate Liason Center of Teaching Excellence, Fall 2021
	Vice President SIAM Student Chapter, Rice University, Fall 2021
COMPUTER SKILLS	Languages: Python, C, C++. Software: MATLAB, L ^A T _E X, FEniCS.
MEMBERSHIPS	SIAM
LANGUAGES	English, Arabic