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Biographical Sketch**

PROFESSIONAL PREPARATION

UCLA, Los Angeles, California, Applied Mathematics, B.S., 1996.
Rice University, Houston, Texas, Computational and Applied Mathematics, M.A., 2000.
Rice University, Houston, Texas, Computational and Applied Mathematics, Ph.D., 2003.
National Institute of Standards & Technology (NIST), Gaithersburg, Maryland,
Mathematical and Computational Sciences Division, NRC Postdoctoral Fellow, 2002-2004.

APPOINTMENTS

Assistant Director, Wood Honors College, Shippensburg University, August 2019-Present
Professor of Mathematics, Shippensburg University, Aug. 2021-Present
Associate Professor of Mathematics, Shippensburg University, Aug. 2013-Aug. 2021
Adjunct Associate Professor, Simon A. Levin Mathematical, Computational and Modeling
Sciences Center, Arizona State University, Sept. 2013 - June 2014
Assistant Professor of Mathematics, Shippensburg University, Aug. 2008-Aug. 2013

SELECTED PUBLICATIONS

S. Lee, O. Baek, L. A. Melara, *Resource Allocation in Two-Patch Epidemic Model with State-Dependent Dispersal Behaviors Using Optimal Control*, Processes, Volume 8, Issue 9, pp. 1087, September 2020.

K. G. Bendinskas, L. Caudill, L. A. Melara, *The case for undergraduate research journals*, Bulletin of Mathematical Biology, Volume 82, Issue 8, pp. 1-6, August 2020.

D. A. Malagon, L. A. Melara, O. F. Prosper, S. Lenhart, E. D. Carter, J. A. Fordyce, A. C. Peterson, D. L. Miller, M. J. Gray, *Host density and habitat structure influence host contact rates and Batrachochytrium salamandrivorans transmission*, NATURE Scientific Reports, Volume 10, Issue 1, pp. 1-11, March 2020.

E. T. Camacho, L.A. Melara, M.C. Villalobos, S. Wirkus, *Optimal control with MANF treatment of photoreceptor degeneration*. Mathematical Medicine and Biology: A Journal of the IMA, Volume 37, Issue 1, pp. 1-21, February 2020.

E. T. Camacho, L.A. Melara, M.C. Villalobos, S. Wirkus, *Optimal Control in the Treatment of Retinitis Pigmentosa*. Bulletin of Mathematical Biology, Volume 76, Issue 2, pp. 292-313, February 2014.

L.A. Melara, A.J. Kearsley, R.A. Tapia, *An Augmented Lagrangian Homotopy Method In The Regularization Of Total Variation Denoising Problems*, Journal of Optimization Theory and Applications, Vol. 133, No. 2, May 2007

PRODUCTS

None.

SYNERGISTIC ACTIVITIES

Editor-in-Chief, SIAM Undergraduate Research Online. Jan. 2015 - Present.

Deputy Chair, Scholarship Committee, Tapia Conference 2015, Boston, MA. Feb. 18-21, 2015.
Read applications and awarded scholarships to undergraduate and graduate students in mathematics and the computational sciences.

Faculty. Mathematical and Theoretical Biology Institute, Arizona State University.
June - August, 2011, 2012 & 2013. Presented current research.
Lead faculty advisor and co-advisor for various undergraduate research projects in mathematical biology.

Invited Featured Speaker, Pennsylvania Council of Teachers of Mathematics, Harrisburg, Pennsylvania, Nov. 2010.

Faculty Advisor, Math Club and SIAM Student Chapter, Shippensburg University,
Aug. 2009-Present. Advised and helped in the professional development of undergraduate students majoring and/or interested in mathematics and mathematics education. Club activities ranged from participating in conferences, attending seminar talks, and building a sense of community for undergraduates in the university.

COLLABORATORS & OTHER AFFILIATIONS

Collaborators and Co-Editors (Total: 8)

Erika Camacho, The Arizona State University.

Anthony Kearsley, NIST.

Suzanne Lenhart, The University of Tennessee, Knoxville & NIMBioS

Mary Nelson, George Mason University/University of Colorado at Boulder

Padmanabhan Seshaiyer, George Mason University

Richard Tapia, Rice University.

Cristina Villalobos, The University of Texas-PanAmerican.

Stephen Wirkus, The Arizona State University.

Graduate Advisors and Postdoctoral Sponsor (Total: 2)

Anthony Kearsley, NIST (Principal Postdoctoral Sponsor).

Petr Klouček, Rice University (Graduate Advisor)

Thesis Advisor and Postgraduate-Scholar Sponsor (Total: 0)

None.