

TEMPLE UNIVERSITY

Department of Mathematics

Analysis Seminar

Room 617 Wachman Hall

Monday, December 11th, 2023, 2:30 p.m.

*Well-posedness of PDE-ODE coupling with
applications to tissue perfusion*

by Sarah Strikwerda

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Abstract: In biomechanics, local phenomena, such as tissue perfusion, are strictly related to the global features of the surrounding blood circulation. The local and global features can be accounted for through a PDE-ODE coupling. I will discuss the well-posedness results for the PDE and our fixed-point strategy to show well-posedness of the PDE-ODE coupled system.