Matrix Exponential Solutions to Partial Differential Equations for Molten Salt Reactor Analysis

A Dissertation Presented for the Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Robert Zachary Taylor May 2021 © by Robert Zachary Taylor, 2021 All Rights Reserved. $Dedicated\ to\ those\ who\ bring\ da\ ruckus$

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Abstract

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Vita

Zack Taylor was born 1992 in Memphis Tennessee to parents Bob and Francis Taylor. At a young age he and his family moved to the gulf coast of Mississippi where he grew up playing soccer and swimming in the bayou. In high school he was part of a foreign exchange program with a partner school in Germany. In 2016 Zack graduated from Mississippi State University with a Bachelors of Science degree in chemical engineering. After graduating he was accepted to The University of Tennessee, Knoxville, in the nuclear engineering program where he is pursuing his PhD. During his graduate research he decided to pursue a Masters of Science degree in chemical engineering. Many of the research areas he is interested in includes; computational and non-equilibrium thermodynamics, mass transport and numerical analysis.