

Stanford | ENGINEERING
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COMMENCEMENT CEREMONY



JUNE 12, 2022
CEMEX AUDITORIUM



FORTY-FOURTH ANNUAL DEGREE CONFERRAL CEREMONY

JUNE • 12 • 2022

PRESENTED BY:

WELCOME AND INTRODUCTION OF
FACULTY

**PROFESSOR
CHARBEL FARHAT**

PRESENTATION OF DIPLOMAS

DEGREE OF BACHELOR OF SCIENCE
DEGREE OF MASTER OF SCIENCE

**PROFESSOR
JUAN ALONSO**

DEGREE OF DOCTOR OF PHILOSOPHY

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PROFESSOR BRIAN CANTWELL
PROFESSOR FU-KUO CHANG
PROFESSOR SIGRID CLOSE
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**FORTY-FOURTH ANNUAL
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MASTER'S DEGREE STUDENT**

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BALLHAUS PRIZE FOR BEST PH.D. THESIS

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PRESENTED BY WALTER MANUEL, AIAA STANFORD CHAPTER

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CHRISTOPHER WILLIAM NAUGHTON

JAYDEN ALLAN ZUNDEL

DOCTOR OF PHILOSOPHY, AERONAUTICS & ASTRONAUTICS

EDWARD BALABAN

Health-Aware Decision Making under Uncertainty for Complex Systems

ASHLEY MICHELLE COATES

Computational Flame Propagation Studies in Support of Launch Vehicle Risk Assessment

KYLE DAVID JULIAN

Safe and Efficient Aircraft Guidance and Control using Neural Networks

JEREMY MORTON

Deep Data Driven Modeling and Control of High Dimensional Nonlinear Systems

SUMEET SINGH

Robust Control, Planning, and Inference for Safe Robot Autonomy

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KARTHIK SRIVATSAN
GADIEL MARK SZNAIER CAMPS

DOCTOR OF PHILOSOPHY, AERONAUTICS & ASTRONAUTICS

HANNAH SARA ALPERT Characterizing the Sensitivity of 2DEG Based Magnetic Field and
Ultraviolet Light Sensors in Space Simulant Environments

MICHELLE CHERNICK Optimal Impulsive Control of Spacecraft Relative Motion
(Mechanical Engineering)

VINCENT PAUL GIRALO Precision Navigation of Miniaturized Distributed Space Systems
Using GNSS

KAREN YAN MING LEUNG On Using Formal Methods for Safe and Robust Robot Autonomy

HARUKI NISHIMURA Online Trajectory Planning Algorithms for Robotic Systems
under Uncertainty in Interactive Environments

KUNAL SHAH Safe Large-Scale Aerial Survey Planning for Multi-Robot Systems
(Mechanical Engineering)

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JEAN-RAYMOND MELINGUI BETTERTON (Computer Science)	Reinforcement Learning for Adaptive Sampling in X-ray Applications
ANTHONY JAMES BOMBIK	Efficient Scaling of Li-ion Batteries for EV Applications via Structural Batteries
ANDREW MICHAEL AARON BYLARD	Leveraging the Geometric Structure of Robotic Tasks for Motion Design
ABHISHEK SRIHARI CAULIGI	Data Driven Approaches for Mixed Integer Convex Programming in Robot Control
MATTHEW ALEXANDER CLARKE	Towards a Regional and Urban Air Mobility Future: The Development of Computational Approaches for Quantifying Trade-offs in Electric Aircraft Design
PRESTON CULBERTSON (Mechanical Engineering)	Planning and Control for Multi-Robot Manipulation and Assembly in Unstructured Environments
SAVANNAH RYANN EISNER (Electrical Engineering)	InAlN/GaN High Electron Mobility Transistors for Venus Surface Exploration
BENJAMIN TROY ESTACIO	Characterizing Dusty Hypervelocity Impact Plasma Plume Dynamics and Effects
TOMMASO GUFFANTI	Optimal Passively-Safe Control of Multi-Agent Motion with Application to Distributed Space Systems
THOMAS ALAN HEUSER (Materials Science and Engineering)	Transduction Characterization of Robust Wurtzite Wide-Bandgap Semiconductor Devices under Irradiation
JONATHAN BING HANG HO	An Embedded Boundary Method with Smoothness Guarantees and its Impact on Aerodynamic Shape Optimization with Topological Changes
MAXIMILLIAN ALVAREZ HOLLIDAY (Materials Science and Engineering)	Circuit-Level Techniques for Mitigating Radiation-Induced Degradation of Commercial Microelectronics in Space
MASHA (MIKHAL) ITKINA	Uncertainty-Aware Spatiotemporal Perception for Autonomous Vehicles
BORIS IVANOVIC	Trajectory Forecasting in the Modern Robotic Autonomy Stack

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ANAND VIKAS LALWANI (Electrical Engineering)	High Frequency Hall-effect Sensor Modalities and Frequency Limit Characterization for 2DEGs
CHRISTOPHER LAZARUS GARCIA (Computational & Mathematical Engineering)	Trustworthy Machine Learning by Efficiently Verifying Compressed Models
SHENG LI	Structured Cooperative Multi-Agent Coordination
CORINNE ELIZABETH LIPPE	Optimal Guidance and Control of Spacecraft Swarms in Planetary and Asteroid Orbits
CHEN LIU (Mechanical Engineering)	Failure Analysis of IC Bond Pad Structures using Acoustic Emission Testing and FEA Simulation
WALTER MAIER	A Discrete Adjoint Framework for Turbulent Hypersonic Flows in Thermochemical Nonequilibrium
JOHN MICHAEL MERN	Monte Carlo Planning and Reinforcement Learning for Large Scale Sequential Decision Problems
APOORVA SHARMA	Methods for Quantifying, Representing, and Utilizing Uncertainty in Learning-Enabled Autonomy
GIL SHOHET	Dusty Plasma Effects in Hypervelocity Impacts
CHELSEA SIDRANE	Extending Neural Network Verification Tools to Nonlinear Systems through the Use of Overapproximation
MATTHEW TSAO (Electrical Engineering)	Techniques for Efficient and Responsible Operation of Mobility Systems
MINGYU WANG (Mechanical Engineering)	Safe Interactive Motion Planning for Autonomous Cars
ADAM TADEUSZ WIKTOR	Cooperative Terrain-Relative Navigation
MATTHEW BENJAMIN WILLIS	Analytical Theory of Satellite Relative Motion with Applications to Autonomous Navigation and Control
SEAN ALDEN QUIGG YOUNG	Harnessing Energy in the Space Environment for Spacecraft Operations