Claremont Graduate University

Institute of Mathematical Sciences
Graduate Math Dissertations

Henok **Abebe** 2002

Modeling the Current-Voltage (I-V) Characteristics of the MOSFET Device with Quantum Mechanical Effects due to Thin Oxide near 'Si/SiO2' Interface using Asymptotic Methods

(JDP with CSULB) Advisor: Ellis Cumberbatch

Shaher **Abdallah** 2016

General Stability Analysis of Composite Sandwich Plates Under Thermal Load

(JDP with CSULB) Advisor: Hsin-Piao Chen

Mohammad **Abouali** 2014

Investigating Castillo-Grone's Mimetic Difference Operators in Development of Geophysical Fluid Dynamics Models Implemented on GPGPUs

(JDP with SDSU) Advisor: José Castillo

Sajia **Akhter** 2013

Finding a Novel Way for Fast Sequence Alignment and Exploiting Information Theory in Bacterial Genomes and Complete Phages

(JDP with SDSU) Advisor: Robert Edwards

Abdulrahman **Alansari** 2019

Risk Assessment for Marine Construction Projects

(JDP with CSULB) Advisor: Hung Nguyen

Monairah **Alansari** 2017

Distance in Metric Trees and Banach Spaces

Advisor: Asuman Aksoy

Weaam **Alhejaili** 2018

A Numerical Study of Steklov Eigenvalue Problems

Advisor: Chiu-Yen Kao

Collins **Allan** 2018

Constructive Neural Networks for Function Approximation and their Application to CFD Shape Optimization

(JDP with CSULB) Advisor: Emelinda Parentela

Martin **Ambrose** 2011

Adaptive Monte Carlo Algorithms for Continuous and Discrete Transport Problems

Advisor: Jerome Spanier

Florent **Angly** 2010

A Computational Workflow for the Estimation of Environmental Viral Diversity in Metagenomes

(JDP with SDSU) Advisor: Forest Rohwer

Yontha **Ath** 2000

Stochastic Properties of Uniformly Optimally Reliable Networks (and their Graphs)

Advisor: Milton Sobel (UC Santa Barbara)

John **Aven** 2010

Stochastic Dynamics in Coupled Bistable Systems with Applications to Sensor Devices

(JDP with SDSU) Advisor: Visarath In

Mohsen **Babaeian** 2020

Modeling, Designing and Applying Machine Learning Algorithms for Driver Drowsiness Detection

(JDP with CSULB) Advisor: Mohammad Mozumdar

Dariouch Herve **Babai** 1995

Models of HIV Mutations and Interaction with the Immune System using Differential Equations: Coupling "Diffusion," Specific and Global Interaction

Advisor: Kenneth Cooke

Behrouz **Babakhani** 2017

Novel Microstrip Patch Antennas with Frequency Agility, Polarization Reconfigurability, Dual Null Steering Capability and Phased Array Antenna with Beam Steering Performance

(JDP with SDSU) Advisor: Satish Sharma

Eunsil **Baik** 2012

Dynamics of Two Components Bose-Einstein Condensates

(JDP with SDSU) Advisor: Ellis Cumberbatch

David Torres **Barba** 2011

Assessment of Functional Activity in Isolated Cardiomyocytes using Computational Methods

(JDP with SDSU) Advisor: Paul Paolini

Carlos **Bazán** 2009

PDE-Based Image and Structure Enhancement for Electron Tomography of Mitochondria

(JDP with SDSU) Advisor: Peter Blomgren

Joseph **Beasley** 2008

Performance Feedback and Control of Solar Concentrators using Wave Front Sensing Techniques

(JDP with CSULB) Advisors: Hen-Geul Yeh and Greg Dewey

Joshua **Beemer** 2020

Ensemble Learning Methods for Educational Data Mining Applications

(JDP with SDSU) Advisor: Richard A. Levine

Steven F. **Bellenot** 1974

Completeness and Reflexivity Properties in Topological Vector Spaces using Standard and Nonstandard Methods

Advisor: Sandy Grabiner

Vincent **Berardi** 2016

Analytic Framework for the Design, Implementation, and Analysis of Dynamic, Real-Time Health Interventions

(JDP with SDSU) Advisor: Ricardo Carretero

Susan Anne Elizabeth **Berggren** 2012

Computational and Mathematical Modeling of Coupled Superconducting Quantum Interference Devices

(JDP with SDSU) Advisor: Antonio Palacios

Frank **Bergmann** 2010

An Integrative Approach to Modeling in Systems Biology

(JDP with KGI) Advisor: Ali Nadim

Eric **Besnard** 1997

Prediction of High Lift Flows with Separation

(JDP with CSULB) Advisor: Tuncer Cebeci

Ashish **Bhan** 2004

Structure of Gene Expression Networks Derived from Microarray Time Series Data

Advisor: Greg Dewey

Nasima **Bhuiyan** 2018

Towards Performance Measure Analysis: Development of a Left Turn Saturation Flow Rate Model at Signalized Intersections

(JDP with CSULB) Advisor: Emelinda Parentela

Joris **Billen** 2012

Simulated Associating Polymer Networks

(JDP with SDSU) Advisor: Arlette Baljon

David Atwood **Bliss** 2012

Periodic Boundary Value Problems and the Dancer-Fucik Spectrum Under Conditions of Resonance

Advisor: Adolfo Rumbos

Theodoros Spyridon **Bolis** 1971

Differentiable Nuclear Manifolds

Advisor: Robert James

Jeremy **Bonifacio** 2019

Oscillatory Flow Driven by Cavity

(JDP with CSULB) Advisor: Hamid Rahai

Minh **Bui** 2005

Linear Phase Orthogonal Filter Bank Constructions with Applications to Image and Geometric Approximations

(JDP with CSULB) Advisor: Nick Panagiotacopulos

David **Caballero** 2011

Discrete Variable Representation of the Angular Variables in Quantum Three-Body Scattering

(JDP with CSULB) Advisor: Alfonso Rueda

Todd **Cadwallader-Olsker** 2007

Proof Schemes and Proof Writing

Advisor: John Angus

Peter **Calhoun** 2017

Novel Random Forest and Variable Importance Methods for Clustered Data

(JDP with SDSU) Advisor: Juanjuan Fan

Karen **Campbell** 2017

SEIRscape, an Agent-Based Mosquito-Human Virus Basis of Dengue Risk across Peru and Thailand

(JDP with CSULB) Advisor: C. D. Lin

Vito **Cantu Alessio Robles** 2020

Machine Learning Methods for the Analysis of Metagenomes

(JDP with SDSU) Advisor: Robert Edwards

Ronald **Caplan** 2012

Study of Vortex Ring Dynamics in the Nonlinear Schrodinger Equation Utilizing GPU-Accelerated High-Order Compact Numerical Integrators

(JDP with SDSU) Advisor: Ricardo Carretero

Juan **Cepeda-Rizo** 2006

Solid and Fluid Mechanics Case Studies in Advanced Electronic Packaging

(JDP with CSULB) Advisor: Hsien-Yang Yeh

Dwayne **Chambers** 2011

Topological Symmetry Groups of Complete Graphs

Advisor: Erica Flapan

Nicolas **Chaumont** 2014

From Brains to Populations: Modeling Animal Interactions with their Environment

(JDP with KGI) Advisor: Animesh Ray

Xiaoyu **Che** 2013

Joint Modeling and Analysis of Recurrent and Terminal Events

Advisor: John Angus

Paul O. **Chelson** 1976

Quasi-Random Techniques for Monte Carlo Methods

Advisor: Jerome Spanier

Aisha **Chen** 2019

Gait and Postural Analysis in Healthy Young Adults and People with Parkinson's Disease

(JDP with CSULB) Advisors: Shadnez Asgari and Deenila Karishnan

Jerry **Chen** 2013

Role of the MicroRNA miR-124 in the Regulatory Network Governing PNS Development in Ciona Intestinalis

(JDP with SDSU) Advisor: Robert Zeller

Yuan **Chen** 2019

Free Market on the Freeway

Advisor: Henry Schellhorn

Aisha Najera **Chesler** 2015

Non-Linear Analysis and Modeling of FHR and ECOG: Predicting Fetal Distress in Labor

Advisor: Ami Radunskaya

Michael R. **Chiaro** 1977

Patrick **Choi** 2016

Optimization of the Principal Eigenvalue of an Elliptic Operator with Application to Heat Conductor

Advisor: Chiu-Yen Kao

Todd **Coburn** 2010

Optimization: Nurbs and the Quasi-Newton Method

(JDP with CSULB) Advisor: Ortwin Ohtmer

Cherlyn Lee **Converse** 1992

Lower Bounds for the Maximum Number of Stable Pairings for the General Marriage Problem Based on the Latin Marriage Problem

Advisor: Henry A. Krieger

Daniel **Cuevas** 2018

Bridging the genomic gaps: genome-scale metabolic network tools for bioinformatics analyses

(JDP with SDSU) Advisor: Robert Edwards

Jack M. **Cuzick** 1976

On the Moments of the Number of Curve Crossings by a Stationary Gaussian Process

Advisor: Jerome Spanier

Yousef **Daneshbod** 2006

Mathematical Models in Microfluidics: Capillary Electrophoresis and Sessile Drop Physics

Advisor: Ali Nadim

Tuan **Dao** 2019

Solving the Prandtl Boundary Layer Equation in Fluid Dynamics via Non-Linear Numberical Optimization

(JDP with CSULB) Advisors: Chrishtiane Beye and Ali Nadim

Paul **David** 2019

A Riemannian Quotient Structure for Correlation Matrices with Applications to Data Science

Advisor: Weiqing Gu

Dany **De Cecchis** 2012

Development of a Parallel Coupler Library with Minimal Inter-Process Synchronization for Large-scale Computer

(JDP with SDSU) Advisor: José Castillo

Vladimir **Delengov** 2018

Computing Eigenmodes of Elliptic Operators on Manifolds Using Radial Basis Functions

Advisor: Chiu-Yen Kao

Johnny Corbino **Delgado** 2018

SubFlow: Simulating Geological Storage of CO2 Using Mimetic Operators

(JDP with SDSU) Advisor: José Castillo

Kameryn **Denaro** 2017

Quantifying Disease Severity of Cystic Fibrosis Using Linear Quantile Mixed Models

(JDP with SDSU) Advisor: Barbara Ann Bailey

Monica **de Pass** 2006

Wavelet Feature Extraction of High-Range Resolution Radar Profiles using Generalized Gaussian Distributions for Automatic Target Recognition

Advisor: John Angus

Son **Doan** 2020

Optimization in Engineering Applications

(JDP with CSULB) Advisor: Hen-Geul Yeh

Christina **Durón** 2019

The Distribution of Betweenness Centrality in Exponential Random Graph Models

Advisors: Ami Radunskaya and Johanna Hardin

Mohamed Osman **El-Doma** 1986

Analysis of Nonlinear Integra-Differential Equations Arising in Age-Dependent Epidemic Models

Advisor: Stavros Busenberg

Omer **Eljairi** 2020

Preliminary Study of Highway Pavement and Materials

(JDP with CSULB) Advisor: Shadi Saadeh

Azzam **Elshihabi** 1997

Disturbance Decoupling with Stability for Nonlinear Systems using Static/Output Feedback: A Geometric Approach

(JDP with CSULB) Advisor: Fumio Hamano

Luis Waldo **Escalona Galvis** 2020

Guided Wave Actuation for Enhanced Damage Identification in Carbon Fiber Reinforced Polymer Material Using Electrical Resistance Tomography

(JDP with SDSU) Advisor: Satchi Venkataraman

Claudia Rangel **Escareno** 2003

Modeling Biological Responses Using Gene Expression Profiling and Linear Dynamical Statistical Models

Advisors: John Angus and David Wild (KGI)

Mohammad (Al Ahmad) **Eyadat** 2003

Comparative Performance Evaluation of Practical Digital Watermar Embedded Schemes

(JDP with CSULB) Advisors: Samir Chatterjee, Ali Nadim, and Dar-Biau Liu

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Weifu **Fang** 1990

Identification of Transistor Contact Resistivity

Advisors: Ellis Cumberbatch and Stavros Busenberg

Katherine **Fedorchuk** 2005

Condensed History Methods for Monte Carlo Solutions of Photon Transport Problems

Advisor: Jerome Spanier

Jennifer **Flenner** 2017

Deep Non-Negative Matrix Factorization

Advisor: Blake Hunter

Michael B. **Franklin** 2013

Electrowetting-Based Microfluidics: Modeling and Simulation

Advisor: Ali Nadim

Michael E. **Frantz** 1995

On the Interaction of a Cold Front with a Mountain Ridge

Advisor: Ellis Cumberbatch

Jesse Peter **Frumkin** 2012

Induction of Chromosome Instability by Gene Dosage and Over-Expression in Saccharomyces Cerevisiae

(JDP with KGI) Advisor: Animesh Ray

Samuel H. **Fryer** 1988

Mathematical Models of Typhoid Fever

Advisor: Kenneth L. Cooke

Mariangel **Garcia** 2016

Data Assimilation Unit for the General Curvilinear Environmental Model

(JDP with SDSU) Advisor: José Castillo

Cristina **Garcia**-**Cardona** 2013

Multiclass Learning on Graphs: Diffuse Interface Models and Beyond

(JDP with SDSU) Advisor: Allon Percus

Scott **Gasner** 2006

Cellular Pattern Formation and Noise in O(2) Symmetric Systems

Advisor: Peter Blomgren

Ruben Jeffrey **Glueck** 2013

Pseudo-Spectral and Kronecker Product Methods for Fourth Order Partial Differential Equations

Advisor: Ali Nadim

Chris Giles **Graham** 1996

Cooperative Solution Concepts for Multi-Sided Assignment Games

Advisor: William F. Lucas

Gregory **Green** 1992

Confidence Bounds on Functions of Parameters

Advisor: Janet Myhre

Zhengji **Guo** 2019

A Full Asymptotic Series of European Call Option Prices in the SABR Model with Beta = 1

Advisor: Henry Schellhorn

Melodie **Hallett** 2015

Novel Random Forest and Variable Importance Methods for Correlated Survival Data, with Applications to Tooth Prognosis

(JDP with SDSU) Advisor: Juanjuan Fan

Hamza Abid-ali **Hamza** 1997

Multi-Person Cooperative Games: The Nucleoli Approach Assignment Games

Advisor: William F. Lucas

Carole **Hayakawa** 2001

Perturbation Monte Carlo Methods for the Solution of Inverse Problems

Advisor: Jerome Spanier

Lingjun **He** 2016

Semiparametric Varying-Coefficient Mixed Effects Modeling Approaches to Longitudinal Data

(JDP with SDSU) Advisor: Jianwei Chen

Shuan **He** 2019

QoE Driven Multimedia Service Schemes in Wireless Networks Resource Allocation: Evolution from Optimization, Game Theory, to Economics

(JDP with SDSU) Advisor: Wei Wang

David **Heckman** 2014

Variations on Markov Chain Monte Carlo Methods: Continuous and Discrete Optimization of Scheduling Problems

Advisor: Alpan Raval

Susan Kay **Herring** 1992

Statistical Tests for Stochastic Dominance

Advisor: Henry A. Krieger

Daniel **Herrlin** 2016

Forecasting MLB Performance Utilizing a Bayesian Approach in Order to Optimize a Fantasy Baseball Draft

(JDP with SDSU) Advisor: Richard Levine

Huy **Hoang** 2002

Experimental and Numerical Investigations of Steady Turbulent Jets from Round Ribbed Tubes

(JDP with CSULB) Advisor: Hamid Rahai

Uyen **Hoang** 2019

Applications of Machine Learning in Cancer Prediction: Renal Cell Carcinoma and Glioblastoma Multiforme

(JDP with SDSU) Advisor: Usha Sinha

Alexander **Holland** 2019

Modeling and Analysis of Quasi-periodic Signals with Application to Hemodynamics

(JDP with CSULB) Advisors: Ali Nadim and Shadnaz Asgari

Christopher **Hovick** 2002

Statistical and Structural Dynamic Analysis of the Darthman Periometer Measure of Tooth and Implant and Damping Capacity

(JDP with CSULB) Advisors: Ortwin Ohtmer and John Angus

Wenzhang **Huang** 1990

Studies in Differential Equations and Applications

Advisor: Kenneth L. Cooke

Alice A. **Huffman** 1975

Lifting Isomorphisms Between l-algebras of f-algebras

Advisor: Melvin Henriksen

(Anthony) Kwok **Hui** 2009

Risk Analysis of Software Development using Bayesian Belief Network and Non-Linear Programming Methods

(JDP with CSULB) Advisors: Dar-Biau Liu and Alpan Raval

Vigen **Isayan** 2010

t-copula Based Credit Risk Modeling in a Network Economy

Advisor: Henry Schellhorn

Thomas E. **Iverson** 1975

Extensions of the Theory of the Fractional Calculus with an Application

Advisor: Jerome Spanier

Afrooz **Jahedi** 2020

Novel Random Forest Methods and Algorithms for Autism Spectrum Disorders Research

(JDP with SDSU) Advisors: Ralph A. Muller and Juanjuan Fan

Sammuel **Jalali** 2012

A New Approach in Blind Equalization of Multipath Wireless Channels

(JDP with CSULB) Advisor: Rajendra Kumar

Saeid **Janani** 2020

Numerical Simulations of Multi-Confined Jets in Crossflow at Supercritical Pressure

(JDP with CSULB) Advisor: Hamid Rahai

Sixian **Jin** 2017

Martingale Representation Theorems Based on Malliavin Calculus

Advisor: Henry Schellhorn

Casey **Johnson** 2020

Spectral Analysis of Complex Dynamical Systems

Advisor: Marina Chugunova

Kevin **Joiner** 2018

Modeling Phage-bacteria dynamics in mucus: An agent based approach to phage therapy

(JDP with SDSU) Advisor: Antonio Luque

Richard L. **Jow** 1983

Some Contributions to the Theory of Random Sets

Advisor: Richard Vitale

Khalil Antoun **Kairouz** 2002

Numerical and Experimental Investigations of a Turbulent Junction Flow with Upstream Ribbed Surface

(JDP with CSULB) Advisor: Hamid R. Rahai

Martin **Kandes** 2016

Modeling the Effects of Inertial Forces on Bose-Einstein Condensates in Rotating Frames of Reference

(JDP with SDSU) Advisor: Ricardo Carretero

Di **Kang** 2018

Modeling and Analysis of Thin Viscous Liquid Films in Spherical Geometry

Advisor: Ali Nadim

Priscilla **Kelly** 2019

Ultrashort Pulse Shaping Multilayered Aluminum-doped Zinc Oxide Metamaterials

(JDP with SDSU) Advisor: Lyuba Kuznetsova

Alice M. **King** 1975

Gene **Ko** 2015

Computational Approaches for Descriptor Optimization and Model Development for HIV-1 Drug Design

(JDP with SDSU) Advisor: Sunil Kumar

Darin **Koblick** 2017

Re-Purposing the Advanced Solar Photon Thruster as a Constellation of Solar Reflectors to Track Debris in Geosynchronous Earth Orbit

(JDP with CSULB) Advisor: Praveen Shankar

Rong **Kong** 1999

Transport Problems and Monte Carlo Methods

Advisor: Jerome Spanier

Yongzeng **Lai** 1999

Monte Carlo and Quasi-Monte Carlo Methods and their Applications

Advisor: Jerome Spanier

John Patrick **Lambert** 1982

Some Developments in Optimal and Quasi-Monte Carlo Quadrature and a New Outlook on a Classical Chebyshev Problem

Advisor: Jerome Spanier

Suzanne L. **Larson** 1984

Convexity Conditions on a Class of Lattice Ordered Rings

Advisor: Melvin Henriksen

Eugene **Lavretsky** 1999

Neural Networks for Function Approximation and Control System Design

Advisor: Robert Williamson

Hieu **Le** 2004

A Method to Detect Single and Multiple Delamination Problems using a Combined Neural Network Technique and Genetic Algorithm Optimization

(JDP with CSULB) Advisor: Ellis Cumberbatch

Jeffrey **Ledahl** 2016

Bayesian Join Modeling of Longitudinal Visual Field Data with Correlated Binary and Survival Outcomes

(JDP with SDSU) Advisor: Richard Levine

Kimberly **Leung** 2016

Stochastic Models for Precipitable Water in Convection

(JDP with SDSU) Advisor: Samuel Shen

Steve **Lewis** 2007

Bayesian Parameter and Order Estimation in Profile Hidden Markov Models

Advisor: Alpan Raval

Liming **Li** 1995

Quasi-Monte Carlo Methods for Transport Equations

Advisor: Jerome Spanier

Luo **Li** 2020

Causal Effect Random Forest of Interaction Trees for Learning Individualized Treatment Regimes in Observational Studies: With Applications to Education Study Data

(JDP with SDSU) Advisor: Juanjuan Fan

Alfonso **Limon** 2009

A Multilevel Framework for PDEs whose Solution Exhibits Fast Transitions

(JDP with SDSU) Advisor: Ellis Cumberbatch

Aggie Gloria Ho **Liu** 1978

Trees, Tree-Like Structures, and Extreme Points in Banach Spaces

Advisor: Robert James

Chen **Liu** 2016

Monte Carlo Algorithms for American Option Pricing: An Analysis of Convergence Rates and the Application for Backward Taylor Expansion on Variance Reduction Techniques

Advisor: Henry Schellhorn

Zheng **Liu** 2014

A Bond Option Pricing Formula in the Extended CIR Model

Advisor: Henry Schellhorn

Shinen **Lo** 2012

A Fire Spread Model Using Levet Set Methods

(JDP with CSULB) Advisor: Burkhard Englert

Patrick **Longhini** 2005

Nonlinear Dynamics Design and Operation of Advanced Magnetic Sensors

(JDP with SDSU) Advisor: Antonio Palacios

Gabriel **Lopez-Garza** 2003

Resonance and Strong Resonance for Semilinear Elliptic Equations in RN

Advisor: Adolfo Rumbos

Haisheng **Luo** 1995

Curve Estimation and Graduation

Advisor: John Angus

Barry **Luong** 2003

Evaluation Modeling in Performance and Resource Allocation for Residential Broadband Gateways

(JDP with CSULB) Advisor: John Angus

José Alberto **Luzardo-Flores** 1997

Neural Networks for Approximation and Control of Continuous Time Nonlinear Systems

(JDP with CSULB) Advisor: A. G. Chassiakos

Anna **Ma** 2018

Stochastic Iterative Algorithms for Large-scale Data
(JDP with SDSU) Advisor: Deanna Needell

José **Macias** 1998

*An Approximation Method for Solving Non-Homogeneous
Wave Equations and Related Inverse Problems*
Advisor: Ellis Cumberbatch

Earl H. **Maize** 1981

*Contributions to the Theory of Error Reduction in
Quasi-Monte Carlo Methods*
Advisor: Jerome Spanier

Kun **Marhadi** 2010

*Investigation of Progressive Failure Robustness and Alternate
Load Paths for Damage Tolerant Structures*
(JDP with SDSU) Advisor: Satchi Venkataraman

Sean **Matz** 2020

*Detection and Localization of Linear Features Based on Image
Processing Methods*
Advisor: Marina Chugunova

Philip W. **McCartney** 1978

*On Some Banach Space Properties Related to the Radon-
Nikodým Property*
Advisor: Robert James

Matthew **Michal** 2016

*Analytical and Numerical Analysis of Lubrication Coating
Flow Models*
Advisor: Marina Chugunova

Raymond **Moberly** 2012

Quantization of a Low-Density Parity-Check (LDPC) Decoder
(JDP with SDSU) Advisor: Michael E. O'Sullivan

Jeffrey Louis **Molony** 1997

*Studies of the Geometric Theory: Nonlinear Dynamical
Systems*
Advisor: Courtney Coleman

Hana **Moshirvaziri** 2019

*Prediction of the Outcome in Cardiac Arrest Patients
Undergoing Hypothermia Using EEG Wavelet Entropy*
(JDP with CSULB) Advisor: Shadnaz Asgari

Imad **Muhi El-Ddin** 2009

*Watermarking Schemes Robust against Affine Attacks:
Applied Mathematics, An Application of Digital Image
Processing in Information Technology*
Advisor: Hedley Morris

Susan **Nachawati** 2013

*DNA Visualization with Sacks Spiral Method: An Application
in Genomic Engineering*
(JDP with CSULB) Advisor: Forouzan Golshani

Hai Ah **Nam** 2010

*Ab Initio Nuclear Shell Model Calculations of Some Light
Nuclei with a Three-Nucleon Force*
(JDP with SDSU) Advisor: Calvin Johnson

Hareshram **Natarajan** 2020

*High Order Explicit Semi-Lagrangian Method for the Solution
of Lagrangian Transport and Stochastic Differential Equations*
(JDP with SDSU) Advisor: Gustaaf Jacobs

Rafael **Navarro** 2012

Dynamical Properties of Bose-Einstein Condensates
(JDP with SDSU) Advisor: Ricardo Careterro

Rodrigo **Negreiros** 2010

Numerical Study of the Properties of Compact Stars
(JDP with SDSU) Advisor: Fridolin Weber

Dan Manh **Nguyen** 2002

*An Unified Automated Approach to Surface Approximation
via Finite Element and Non Uniform Rational B-spline
Methods*
(JDP with CSULB) Advisors: Ortwin Ohtmer and Ellis Cum-
berbatch

Dong **Nguyen** 2000

*Reliability Modeling and Evaluation in Computer Networks
and Distributed Systems*
(JDP with CSULB) Advisors: John Angus and Dar-Biau Liu

Huu **Nguyen** 2018

*Efficient Digital Image Reconstruction/Restoration Using a
Novel Application of Markov Random Fields*
Advisor: John Angus

James **Nguyen** 2009

*A Hardware Implementation of the Level Set Method for
Robotic Path Finding with Multiple Obstacle Avoidance*
(JDP with CSULB) Advisor: Ali Nadim

Tien Manh **Nguyen** 1995

Mathematical Modeling and Digital Signal Processing Techniques for Modern Digital Communication Systems

(JDP with CSULB) Advisor: Hen-Geul Yeh

Kieran **Nolan** 2009

Meta-Scheduling of Level-Set Methods in a Grid Computing Environment

(JDP with CSULB) Advisors: Dar-Biau Liu and Ali Nadim

Giray **Ökten** 1997

Contributions to the Theory of Monte Carlo and Quasi-Monte Carlo Methods

Advisor: Jerome Spanier

Kim Joseph **Olszewski** 1998

Concatenated Reed-Solomon and Reed-Muller Codecs with Blind Adaptation for CDMA Antenna Array Systems

(JDP with CSULB) Advisor: R. Kumar

Fred **Ovadia** 1978

Contributions to the Theory of Fractional Difference Operators

Advisor: Jerome Spanier

Seethal **Paluri** 2016

Cross-Layer Schemes for Enhancing H.264/AVC Video Quality over Wireless Channels

(JDP with SDSU) Advisor: Sunil Kumar

Wen **Pan** 2019

Data Management on Non-volatile Memory: from Mobil Applications to Large-scale Databases

(JDP with SDSU) Advisor: Tao Xie

Christopher **Paolini** 2007

A Service-Oriented Architecture for Thermochemical Computation

(JDP with SDSU) Advisor: Subrata Bhattacharjee

Jeho **Park** 2009

Applications of Cluster Systems

(JDP with CSULB) Advisor: John Angus

Moein **Parsinia** 2019

Distributed Mode Selection and Cross-layer Routing Protocol for FDD Nodes in Mobile Ad Hoc Networks

(JDP with SDSU) Advisor: Sunil Kumar

Julien **Pierret** 2018

Climate Data Computing: Optimal Interpolation, Averaging, Visualization and Delivery

(JDP with SDSU) Advisor: Samuel Shen

Claudia L. **Pinter** 1987

The Average Error from the Approximation of Functions and Integrals

Advisor: Robert Williamson

Carlos Orrala **Poveda** 2004

Numerical and Experimental Investigations of Two Side-by-Side Turbulent Jets in a Cross Flow

(JDP with CSULB) Advisor: Hamid R. Rahai

Jerry Emmett **Purcell** 1995

Allpass Filters

(JDP with CSULB) Advisor: Ellis Cumberbatch

Saravana **Raman** 2017

Simulation of Plethysmographic Environment in Pulmonary Function Studies

(JDP with CSULB) Advisor: Christopher Druzgalski

Nan **Rao** 2019

Cluster Analysis on Stochastic Processes

Advisors: Qidi Peng and Allon Percus

Leandro **Recova** 2014

Applications of Morse Theory to Semilinear Elliptic Boundary Value Problems

Advisor: Adolfo Rumbos

Norman **Richert** 1981

Diophantine Approximation of Complex Numbers

Advisor: Jerome Spanier

Beltran **Rodriguez-Brito** 2010

A Metagenomic Examination of a Solar Saltern in Southern California

(JDP with SDSU) Advisor: Forest Rohwer

Julia **Rossi** 2016

Non-Conservative Variational Approximation for Nonlinear Schrodinger Equations and its Applications

(JDP with CSULB) Advisor: Hamid Rahai

Otilio **Rojas Ulacio** 2009

Modeling of Rupture Propagation under Different Friction Laws using High-Order Mimetic Operations

(JDP with SDSU) Advisors: Steven Day and José Castillo

Mary **Royston** 1995

Three-Sided Assignment Games

Advisor: William F. Lucas

Yadong **Ruan** 2020

Modeling and Analysis of Falling Liquid Films

Advisor: Ali Nadim

Eduardo **Sanchez** 2015

Mimetic Finite Differences and Parallel Computing to Stimulate Carbon Dioxide Subsurface Mass Transport

(JDP with SDSU) Advisor: José Castillo

Thomas R. **Savage** 1997

On Some Problems in the Theory of Von Neumann Regular Rings

Advisor: Melvin Henriksen

Robert Armin **Schmieder** 2012

A Framework for Identifying Antibiotic Resistance in the Human Microbiome

(JDP with SDSU) Advisor: Robert Edwards

Adeline **Schmitz** 2007

Constructive Neural Networks for Function Approximation and their Application to CFD Shape Optimization

(JDP with CSULB) Advisor: Hamid Hefazi

Henry J. **Schultz** 1974

Banach and Frechet Algebras of Power Series

Micah **Schuster** 2015

Systematic Investigation of Operators in Nuclear Systems

(JDP with SDSU) Advisor: Calvin Johnson

Victor **Seguritan** 2013

Neural Network Predictions of Protein Function

(JDP with SDSU) Advisor: Anca Segall

John **Sepikas** 2011

Enhanced Lattice Methods for High Dimensional Quadrature Applications

Advisor: Jerome Spanier

Lucie **Sharpsten** 2013

Predicting Glaucoma Progression Using Random Forests for Correlated Binary Response Based on Longitudinally Collected Standard Automated Perimetry Data

(JDP with SDSU) Advisor: Juanjuan Fan

Jody Hewychun **Shu** 2013

Autonomous Voice and Motion Controlled Video Camera System for Instructional Technology

(JDP with CSULB) Advisor: John Angus

Genivaldo **Silva** 2017

Who is There and What are They Doing? An Agile and Computationally Efficient Framework for Genome Discovery and Annotation from Metagenomic Big Data

(JDP with SDSU) Advisor: Robert Edwards

Colette **Smirniotis** 2018

Transformation and Parameterization in LatticeKrig

(JDP with SDSU) Advisor: Barbara Ann Bailey

Jean Suarez **Solano** 2015

Regularization of Singular Sources for PSIC Computations of Particle-Laden Flows with Shocks

(JDP with SDSU) Advisor: Gustaaf Jacobs

Xiaojia **Song** 2019

Accelerating Data Center Applications through Energy-Efficient Reconfigurable Computing: from Near-Data Processing to Data-Access Reduction

(JDP with SDSU) Advisor: Tao Xie

William **Spinella** 2017

A Systematic Investigaton of Exotic Matter in Neutron Stars

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On the Geometry of Cyclic and Permutation Invariant Lattices

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Hiroki **Sunahata** 2006

Interaction of the Quantum Vacuum with an Accelerated Object and its Contribution to Inertia Reaction Force

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Jennifer **Switkes** 2000

The Geographic Mosaic Theory in Relation to Coevolutionary Interactions between Two Species

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Shahab **Taherian** 2015

Computational Fluid Dynamics Analyses of Ambient Particle Deposition in the Human Respiratory System and Virus Transport Abroad a Regional Aircraft

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Inferring Undirected and Causally Directed Graph Structures from Multivariate Time Series

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Very Efficient Numerical Solutions via the "Mehrstellen" Method in 1D,2D, and 3D for Complex Differential Equations Demonstrated for Acoustics and Related Fields

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Modeling and Simulation of Aeroservoelastic Control with Multiple Control Surfaces Using μ-Method

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Mary **Thomas** 2014

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Model Predictive Energy Management for Building Microgrids with IoT-based controllable Loads

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Stochastic Optimization Powered by Markov Chain Monte Carlo: Mixed-Integer Nonlinear Programming for Communications Network Scheduling

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Phuong Yen Thi **Tran** 1996

Asymptotic Reliability of the Hypercube and the D-Octahedral Networks

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John C. **Tripp** 1975

Multiplications on Banach Spaces

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Gregg **Turner** 1991

Spectral Conditions for Oscillations and Stabilization of Systems of Differential Equations with Piecewise Constant Arguments

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Synchronization in Coupled Spin-Torque Nano Oscillators: Nonlinear Dynamics Analysis

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Analysis and Optimization of Chassis Movements in Transportation Networks with Centralized Chassis Processing Facilities

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Jorge Xicotencatl **Velasco-Hernandez** 1991

Models of Chagas' Disease : Stability, Thresholds and Asymptotic Behavior

Advisor: Stavros Busenberg

Diana W. **Verzi** 2001

A Mathematical Description of Diagrammatic Models for Structural Changes in Dendritic Spines

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A Delay Differential Equation Model for Tumor Growth

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Michael **Vodhanel** 2011

Problems in GPS Accuracy

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Rudolf **Volz** 1982

Global Asymptotic Stability of a Periodic Solution to an Epidemic Model

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Jean H. M. **Wang** 1981

Error Reduction Techniques for Monte Carlo Neutron Transport Calculations

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Binghui **Wu** 1992

Integrated Semigroups of Bounded Linear Operations and

Kaiqi **Xiong** 1997

Analysis of a Class of Nonlinear Dynamical Systems and Applications to Neural Networks

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Femvib, an Ab Initio Multi-Dimensional Solver for Probing Vibrational Dynamics in Polyatomic Molecules and Free Radicals

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Thomas M. **Zacharia** 1984

Stochastic and Deterministic Sets

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Peter **Zajac** 2013

Globally Accessible Finite Element Based Web Solver for the Vibrational Schrodinger Equation and Application to HC3O and ZnCl2+

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A Neural Network-Augmented Bayesian Approach to Uncertain Parameter Estimation in Nonlinear Dynamic Systems

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Sarah **Zarei** 2012

Mathematic Modeling of Cystic Fibrosis

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Frederick P. **Zemke** 1975

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Novel Random Forest Methods Applied to Medical Studies

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I/O Stack Optimization for Non-Volatile Memory Based Storage Systems

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Ming **Zhou** 2010

A Mathematical Analysis of Vesicle Shapes

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Computational Modeling and Bifurcation Analysis of Bubbling Fluidized Processes

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The Efficiency, Robustness and Carry-over under the Crossover Designs with Binary Outcomes

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An Investigation of Deformation of the Stellar Structure of Neutrons Stars

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710 N. College Avenue | Claremont, CA 91711 | cgu.edu/ims