

Friday October 19<sup>th</sup>

1:45-2:00	Opening Remarks			
2:00-2:50 Freed Curd Auditorium	Gerda deVries, University of Alberta, <i>From Models of Radiation Treatment of Cancer to Tumour Control Probability Curves</i>			
3:00-3:30	Coffee Break			
	<b>Session 1-A</b> Freed Curd Auditorium	<b>Session 1-B</b> Room 237	<b>Session 1-C</b> Room 229	<b>Session 1-D</b> Room 242
3:30-3:50	Zhao	Akila	Attanayake	Kaufmann
4:00-4:20	Ernstberger	Bociu	Kreuger	Kamgue
4:30-4:50	Segal	Mavinga	Roop	Raffoul
5:00-5:20	Oppenheimer	Raynor	Redchys	Kunkel
6:00-8:00	Reception at Miller Memorial Golf Club Directions in registration packet Shuttle available			

Saturday October 20<sup>th</sup>

7:45-8:30	Continental Breakfast			
8:30-9:20 Freed Curd	Barbara L. Keyfitz, Fields Institute & University of Houston, <i>Hyperbolic conservation laws: more questions than answers</i>			
9:30-10:15 Freed Curd	Future Trends: Differential Equations & SEARCDE			
10:15-10:45	Coffee Break			
	<b>Session 2-A</b> Freed Curd Auditorium	<b>Session 2-B</b> Room 237	<b>Session 2-C</b> Room 229	<b>Session 2-D</b> Room 242
10:45-11:05	Lenhart	Nkashama	Boyd	Ozsari
11:15-11:35	Miller	Ignatyev	Stoyanov	Zietsman
11:45-12:15	Collins/Williams	Schaefer	Okay	Usman
12:15-2:00	Lunch Break			
2:00-2:50 Freed Curd	Jeff Borggaard, Virginia Tech, <i>Nonlinear Model Reduction Methods and Applications</i>			
3:00-3:30	Coffee Break			
	<b>Session 3-A</b> Freed Curd Auditorium	<b>Session 3-B</b> Room 106	<b>Session 3-C</b> Room 229	<b>Session 3-D</b> Room 242
3:30-3:50	Bodine	ShahulHameed	Neugebauer	Yao
4:00-4:20	Clayton	Tameru	Kosmatov	Atici
4:30-4:50	Ding	Chan	Islam	Kaymakcalan
5:00-5:20	Ye	Nguyen		Wendt

Friday October 19<sup>th</sup>

- 1:45pm *Opening Remarks, Freed Curd Auditorium*  
Gary Brockway, Provost and Vice President of Academic Affairs, Murray State University
- 2:00-2:50pm *Plenary Talk, Freed Curd Auditorium*  
*From Cell Population Models to Tumour Control Probability Curves: Introduction to Models in Radiation Biology*  
Gerda de Vries, University of Alberta
- 3:00-3:30pm *Coffee Break*
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- 3:30-5:30pm **Contributed Session 1-A, Freed Curd Auditorium**
- 3:30-3:50pm *Backward bifurcation in drug-resistant SIR models*, Ruijun Zhao, Purdue University
- 4:00-4:20pm *Sensitivity of a Size-Structured Population Model*, Stacey L. Ernstberger, North Carolina State University
- 4:30-4:50pm *Mathematical Model for Wound Healing*, Rebecca Segal, Virginia Commonwealth University
- 5:00-5:20pm *A model for the spread of an invasive species*, Seth F. Oppenheimer, Mississippi State University
- 3:30-5:30pm **Contributed Session 2-A, Room 237**
- 3:30-3:50pm *Principal Eigenvalue for a Quasilinear Elliptic Problem in an Unbounded Domain*, Yechoui Akila, ICTP Centre, Trieste, Italy
- 4:00-4:20pm *Uniqueness of Weak Solutions for the Semilinear Wave Equations with Supercritical Boundary/Interior Sources and Damping*, Lorena Bociu, University of Virginia
- 4:30-4:50pm *Bounded Solutions of Nonlinear parabolic Systems*, Nsoki Mavinga, University of Alabama at Birmingham
- 5:00-5:20pm *Neumann Fixed Boundary Regularity for an Elliptic Free Boundary Problem*, Sarah Raynor, Wake Forest University

## Friday October 19<sup>th</sup>

### 3:30-5:30pm Contributed Session 3-A, Room 229

- 3:30-3:50pm *Error Estimation Using Numerical Smoothing Indicator*, Champike Attanayake, Bowling Green State University
- 4:00-4:20pm *The Role of the Stability Parameter in a Stabilized Finite Element Method*, Denise A. Krueger, College of Mount St. Joseph
- 4:30-4:50pm *A Boundary Layer Basis Method for Fractional Diffusion Equations*, John Paul Roop, North Carolina A & T State University
- 5:00-5:20pm *Numerical Solution of Nonlinear Partial Differential Equations of Gas Dynamics and Their Practical Application*, Dmytro Redchyt's, Institute of Transport Systems and Technologies of National Academy of Sciences of Ukraine

### 3:30-5:30pm Contributed Session 4-A, Room 242

- 3:30-3:50pm *A Second Order Boundary Value Problem with Impulsive Effects on an Unbounded Domain*, Eric R. Kaufmann, University of Arkansas at Little Rock
- 4:00-4:20pm *Third Order Boundary Value Problems on an Unbounded Domain*, Merlin Kamgue, University of Arkansas at Little Rock
- 4:30-4:50pm *Basic and Recent Results in Neutral Differential Equations*, Youssef Raffoul, University of Dayton
- 5:00-5:20pm *Positive Solutions of Singular Second Order Boundary Value Problems on Purely Discrete Time Scales*, Curtis J. Kunkel, University of Tennessee at Martin

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- 5:30pm Shuttle departure from Collins Center parking lot to Miller Memorial Golf Club
- 6:00-8:00pm Reception at Miller Memorial Golf Club
- 8:00pm Shuttle departure from Miller Memorial Golf Club to hotels

## Saturday October 20<sup>th</sup>

7:45am Shuttle departure from hotels to Collins Center

7:45-8:30am Continental Breakfast

8:30-9:20am Plenary Talk, Freed Curd Auditorium  
*Hyperbolic Conservation Laws: More Questions than Answers*  
Barbara Lee Keyfitz, Fields Institute and University of Houston

9:30-10:15am *Future Trends: Differential Equations & SEARCDE*

10:15-10:45am Coffee Break

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### 10:45am-12:15pm Contributed Session 2-A, Freed Curd Auditorium

- 10:45-11:05am *Optimal Control applied to a Thoraco-Abdominal CPR Model*, Suzanne Lenhart, University of Tennessee
- 11:15-11:35am *Optimal control applied to native-invasive population dynamics*, Rachael Miller, University of Tennessee
- 11:45-12:15pm *Blasting Neuroblastoma Using Optimal Control of Chemotherapy*, Craig Collins and Molly Williams, Murray State University

### 10:45am-12:15pm Contributed Session 2-B, Room 237

- 10:45-11:05am *Elliptic Equations with Nonlinear Boundary Conditions*, M. N. Nkashama, University of Alabama at Birmingham
- 11:15-11:35am *On Compact Support Property of Solutions of Hyperbolic Stochastic Partial Differential Equations*, Oleksiy Ignatyev, Michigan State University
- 11:45-12:15pm *Lower Bounds for Blow-up Time in Parabolic Problems*, P. W. Schaefer, University of Tennessee

### 10:45am-12:15pm Contributed Session 2-C, Room 229

- 10:45-11:05am *Error Estimates for Multiscale Finite Element Methods*, Kirsten J. Boyd, Austin Peay State University
- 11:15-11:35am *Approximation of Large Scale Riccati Equations*, Miroslav Stoyanov, Virginia Tech
- 11:45-12:15pm *The additional Dynamics of Least Squares Completions for Linear Differential Algebraic Equations*, Irfan Okay, North Carolina State University

**10:45am-12:15pm**      **Contributed Session 2-D, Room 242**

10:45-11:05am      *Stabilization of a nonlinear Schrodinger equation with inhomogeneous boundary value*, Turker Ozsari, University of Virginia

11:15-11:35am      *Controllability and conditioning of POD based models for an optimal control problem*, Lizette Zietsman, Virginia Tech

11:45-12:15pm      *Time Periodic Solution of the Korteweg-de Vries Equation on a Bounded Domain and Its Stability*, Muhammad Usman, University of Dayton

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12:15-2:00pm      Lunch Break

2:00-2:50pm      Plenary Talk, Freed Curd Auditorium  
*Nonlinear Model Reduction: Methods and Applications*  
Jeff Borggaard, Virginia Tech

3:00-3:30pm      Coffee Break

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**3:30-5:30pm**      **Contributed Session 3-A, Freed Curd Auditorium**

3:30-3:50pm      *Nonexistence Results For Classes Of  $3 \times 3$  Elliptic Systems*, Jinglong Ye, Mississippi State University

4:00-4:20pm      *Optimal control of a simple species augmentation model*, Erin N. Bodine, University of Tennessee

4:30-4:50pm      *Optimal Control of an ODE Model for Rabies in Raccoons with a Birth Pulse*, Tim Clayton, University of Tennessee

5:00-5:20pm      *Optimal Control on Hybrid ODE Systems with Application to a Tick Disease Model*, Wandu Ding, Middle Tennessee State University

**3:30-5:30pm**      **Contributed Session 3-B, Room 106**

3:30-3:50pm      *Positive solutions for a class of  $p$ -Laplacian systems with multiple parameters*, Jaffar Ali ShahulHameed, Mississippi State University

4:00-4:20pm      *Solution Matching for a Second Order Boundary Value Problem on Time Scales*, Ana M. Tameru, Alabama State University

4:30-4:50pm      *Blow-up of the Solution for Nonlinear Parabolic Problems*, W. Y. Chan, Southeast Missouri State University

5:00-5:20pm      *Spectrum of a function and regularity of solutions to differential equations on Banach spaces*, Lan NguyeuN, Western Kentucky University

**3:30-5:30pm**      **Contributed Session 3-C, Room 229**

3:30-3:50pm      *Boundedness Properties of Solutions of Nonlinear Volterra Integral Equations*, Jeffrey Neugebauer, University of Dayton

4:00-4:20pm      *Integral equations and initial value problems for nonlinear differential equations of fractional order*, Nickolai Kosmatov, University of Arkansas at Little Rock

4:30-4:50pm      *Liapunov's method and  $L^p$  properties of Volterra integral equations*, Muhammad Islam, University of Dayton

**3:30-5:30pm**      **Contributed Session 3-D, Room 242**

3:30-3:50pm      *Existence of Solutions for a Nonlinear Fractional Order Differential Equations*, Kouadio David Yao, University of Arkansas at Little Rock

4:00-4:20pm      *Fractional Difference Equations*, Ferhan Atici, Western Kentucky University

4:30-4:50pm      *Fredholm Integral Equations on Time Scales with Separable Kernels*, Billur Kaymakcalan, Georgia Southern University

5:00-5:20pm      *Energy balance for dynamic contact with Signorini's condition and slip rate dependent friction*, Ted Wendt, The University of Iowa

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5:45pm      Shuttle departure from Collins Center to hotels