SCHEDULE OF TALKS

NOTE: Daylight Savings Time ends November 1, 2020. Times listed below for October 29-31 are Eastern Daylight Time; times for November 1 are Eastern Standard Time.

Graduate School Fair Sessions: a schedule and the names of the graduate programs and their representatives is on the last page of this outline.

Thursday, October 29
4:00-5:00pm Graduate School Fair, Session I

Friday, October 30
3:30-4:30pm Pre-conference Talk: Volker Grimm. Modeling honeybees under stress with BEEHAVE: Lessons for theory and practice

5:00-7:00pm Graduate School Fair, Session II

Saturday, October 31 (Times Eastern Daylight Time)
11:00-11:10am Room 1: Welcome – Lou Gross, NIMBioS Director

11:15am-12:10pm Room 1: Keynote Lecture – Gerardo Chowell. The Power of Mathematical and Statistical Modeling Tools to Combat the COVID-19 Pandemic

12:25-12:40pm
Room 1: Jacob Summers. Mathematical Modeling of *Mycobacterium tuberculosis* Dynamics in Macaques
Room 2: Emily Petroni and Ethan Ashby. Comparison and Application of Sigmoid Model Fitting Algorithms to Time Course RNA-Sequencing Data in *Escherichia coli*

12:45-1:00pm
Room 1: Vivek Jadhav. Effects of Stochasticity and Variable Speed on the Collective Dynamics of Finite Fish Schools
Room 2: Victoria A. Lucero. Application of Fractals in Branching Patterns in Nature

1:05-1:20pm
Room 1: Doménica Garzón. The Transmission Dynamics of COVID-19 in Close-Contact Facilities
Room 2: Charlotte Beckford, Elliott Smith, and Amy Tian. Where's the Buzz? Dispersal Speed as a Limitation to Climate Migration of Bees

1:25-1:35pm Break

1:40-2:25pm Breakout Sessions (in 5 rooms)
Room 1: Dr. Lou Gross – Ecology
Room 2: Dr. Gerardo Chowell – Public Health
Room 3: Dr. Suzanne Lenhart – Infectious Diseases
Room 4: Dr. Albrecht von Arnim and Dr. Tian Hong – Biomedical
Room 5: Dr. Mona Papeş and Dr. Greg Wiggins – Spatial Ecology

2:35-3:25pm Room 1: Featured Speaker – Olivia Prosper. Malaria Dynamics within the Mosquito

3:35-4:25pm Room 1: Panel Discussion (Moderator: Suzanne Lenhart)
Dr. Gerardo Chowell
Dr. Olivia Prosper
Dr. Albrecht von Arnim

4:35-4:50pm
Room 1: Vivek Sreejithkumar. The Evolution of the Identifiable Analysis of the Novel COVID-19 Virus
Room 2: Nathan Tennies. Where will it Grow? Modeling the Distribution of *Nereocystis* Kelp in the Salish Sea

4:55-5:10pm
Room 1: Shruti Sathish and Yu Zhang. Modeling the Effects of HSV-2 Testing on Transmission Dynamics
Room 2: Aarini Panzade. The Effect of TIMP-1 levels, MMP-1 Levels, and Healing Times on the Wound Surface Area

5:15-5:30pm
Room 1: Diksha Satish. Calculating Individual and Population Parameter Values in the Healing of Chronic Wounds through Mixed-Effects Modeling
Room 2: Lief vanSliedrecht. A Computational Approach to Electrostatic Analysis of ATP-Synthase

5:35-5:50pm
Room 1: Alexander Mercier. Contagion-Preserving Network Sparsifiers: Preserving Average Epidemic Dynamics Utilizing Effective Resistance
Room 2: Grace Casarez. An Adaptive Dynamics Approach to Acquired Phototrophy

6:00-7:15pm Poster Session I
Poster rooms: 1 (Bateman), 3 (Brasic), 5 (Crowe), 7 (Dominic), 9 (Guo), 11 (Hsu), 13 (Kingsley), 15 (McAlister), 17 (Ohajunwa), 19 (Queen), 21 (Watanabe)

Sunday, November 1 (Times in Eastern Standard Time)
11:00-11:15am
Room 1: Laurinne Balstad. Privatization of Goods in Biofilms Allows for Successful Cooperation
Room 2: Eileen Figueroa, Michelle Hewson, and James Garrison. The Role of Intercell Coupling in the Development of Rapid Cardiac Rhythm Disorders in the Heart

11:20-11:35am
Room 1: Katie Coe, Marie Neubrander, David Sokolov, and Julie Zhang. Network-Informed Group Testing for Outbreak Surveillance
Room 2: Quenisha Baldwin. The Local Topological Free Energy of Viral Glycoproteins

11:40-11:55am
Room 1: Sarah Wyse. Modeling the Effect of Stochasticity on a Mathematical Predator-Prey System

Room 2: Aisha Seard and Lorhena Antonio. Spatial Structure and Genetic Change in a Northern Pintail Population

12:00-12:20pm Break

12:25-12:40pm
Room 1: Spencer Catron, Sarah Roth, and Francesca Zumpano. Examining Temperature Dependency in Loggerhead Populations
Room 2: Benjamin Brindle. Mathematical Understanding of Red Blood Cell Dynamics

12:45-1:00pm
Room 1: Joseph Drozek. Using Mathematical Models to Predict the Impact of the Coronavirus in the Chicagoland Area
Room 2: Kyle Hart. Lipid Accumulation and Obesogenic Effects of BPA and BPF on *Caenorhabditis elegans*

1:05-1:20pm
Room 1: Matthew Clark, Chelsea Seggern, and Anna Thomas. Integration of Proprioceptive Feedback for Forward Locomotion in *Caenorhabditis elegans* Network Model
Room 2: Patrick Tran. Computational Models of Protein-Protein Phase-Separation on Curved Surfaces

1:25-2:55pm Graduate School Fair, Session III
Rooms in NIMBioS Interactive

3:00-4:15pm Poster Session II
Poster rooms: 2 (Baxter), 4 (Carpenter), 6 (Ding), 8 (Gross), 10 (Ho), 12 (Huang), 14 (Marzen), 16 (Moskal), 18 (Peyton), 20 (Santos), 22 (Westaway)

4:20-4:35pm
Room 1: Emma Brann. Modeling the COVID-19 Outbreak in South American Countries
Room 2: Ilana Goldin. Optimizing a PBPK Model of PFAS for Best Fit

4:40-4:55pm
Room 1: Alex Svetlik and Alexis McDowell. Investigating the Protective Effect of Nicotine on Neurodegeneration in the Model Organism *C. elegans*.
Room 2: Mason McCrury. Evaluating Proteomic Responses to NEK2 Targeted Treatments in DLBCL Cell Lines

5:00-5:15pm
Room 1: Jake Baldauf. Enhancing COVID-19 Transmission Models with Genomic Data
Room 2: Cody Pham. Climate-Mediated Changes in Interactions among Wood Warbler Species

5:20-5:35pm
Room 1: Tamjeed Azad. Recurrent Neural Networks for Covid-19 Prediction: A Cross-Study with Historical Flu Data and Temperature Data
Room 2: Riley Wadehra. Using Simple Models to Examine Pattern Formation on an Alpine Treeline Ecotone

5:40-5:55pm
Room 1: Leah Rolf. Modeling Resistance Emergence in *Aedes albopictus* on a Heterogeneous Landscape
Room 2: Amanda Tran and Aysha Hoang. Modeling the Rates of Genetic Change in Diploid Populations

6:00-6:15pm
Room 1: Jagger Joyner. Modeling Plant-Pollinator Interactions during an Invasion of a Nonnative Plant Species
Room 2: Lauren Mossman and Mei Knudson. Mathematically Modeling the Impact of Adoptive Transfer in Murine Heart Transplant

GRADUATE SCHOOL FAIR SCHEDULE

Lastname	Firstname	Institution	Room Name	Day	Time
Strychalski	Wanda	Case Western Reserve Univ	CWRU	Oct. 29	4:00-5:00pm EDT
Leiderman	Karin	Colorado School of Mines	CSM	Oct. 29	4:00-5:00pm EDT
Samuels-Crow	Kimberly	Northern Arizona Univ	NAU	Oct. 29	4:00-5:00pm EDT
Otani	Niels	Rochester Institute of Technology	RIT	Oct. 29	4:00-5:00pm EDT
Barreiro	Andrea	Southern Methodist Univ	SMU	Oct. 29	4:00-5:00pm EDT
Zhang	Haimeng	Univ of North Carolina Greensboro	UNCG	Oct. 29	4:00-5:00pm EDT
Armbruster	Dieter	Arizona State Univ	ASU	Oct. 30	5:00-7:00pm EDT
Fricks	John	Arizona State Univ	ASU	Oct. 30	5:00-7:00pm EDT
Bewick	Sharon	Clemson Univ	Clemson	Oct. 30	5:00-7:00pm EDT
Pimsler	Meaghan	Department of Justice	DOJ	Oct. 30	5:00-7:00pm EDT
Arciero	Julia	Indiana Univ/Purdue Univ at Indianapolis	IUPUI	Oct. 30	5:00-7:00pm EDT
Davis	Lisa	Montana State Univ Bozeman	MSU	Oct. 30	5:00-7:00pm EDT
Sutich	Katie	Montana State Univ Bozeman	MSU	Oct. 30	5:00-7:00pm EDT
Foxall	Eric	Univ of British Columbia-Okanagan	UBC-OK	Oct. 30	5:00-7:00pm EDT
Tyson	Rebecca	Univ of British Columbia-Okanagan	UBC-OK	Oct. 30	5:00-7:00pm EDT
Kilpatrick	Zachary	Univ of Colorado Boulder	UC-Bould	Oct. 30	5:00-7:00pm EDT
Blinov	Michael	Univ of Connecticut-School of Medicine	UConn	Oct. 30	5:00-7:00pm EDT
Rubin	Jonathan	Univ of Pittsburgh-Math	Pitt-Math	Oct. 30	5:00-7:00pm EDT
Gross	Lou	Univ of Tennessee Knoxville-EEB	UTK-EEB	Oct. 30	5:00-7:00pm EDT
Lenhart	Suzanne	Univ of Tennessee Knoxville-Math	UTK-Math	Oct. 30	5:00-7:00pm EDT
Adler	Fred	Univ of Utah	UUtah	Oct. 30	5:00-7:00pm EDT
Reynolds	Angela	Virginia Commonwealth Univ	VCU	Oct. 30	5:00-7:00pm EDT
Long	Hongwei	Florida Atlantic Univ	FAU	Nov. 1	1:25-2:55pmEST
Gumbart	JC	Georgia Institute of Technology	GIT-Qbio	Nov. 1	1:25-2:55pmEST
William	Ratcliff	Georgia Institute of Technology	GIT-Qbio	Nov. 1	1:25-2:55pmEST
Porter	Kristi	National Institutes of Health (NIH)	NIH	Nov. 1	1:25-2:55pmEST
Matveev	Victor	New Jersey Institute of Technology	NJIT	Nov. 1	1:25-2:55pmEST
Melara	Luis	Shippensburg Univ of Pennsylvania	SUP	Nov. 1	1:25-2:55pmEST
Thomases	Becca	Univ of California Davis	UC-Dav	Nov. 1	1:25-2:55pmEST
Pierce	Kristin	Univ of Pittsburgh-School of Medicine	Pitt-Med	Nov. 1	1:25-2:55pmEST
Hong	Tian	Univ of Tennessee Knoxville-BCMB/GST	UTK-BCMB	Nov. 1	1:25-2:55pmEST
von Arnim	Albrecht	Univ of Tennessee Knoxville-BCMB/GST	UTK-BCMB	Nov. 1	1:25-2:55pmEST
Armentrout	Pam	Univ of Tennessee Knoxville-Math Biology	UTK-MathB	Nov. 1	1:25-2:55pmEST
Childs	Lauren	Virginia Tech	VT	Nov. 1	1:25-2:55pmEST