



# **ROCHESTER ACADEMY OF SCIENCE**

**45<sup>th</sup> Annual Fall Scientific Paper Session**

**Oral Presentation Schedule**

**Saturday, November 10, 2018**

# **GENESE0**

**Hosted by SUNY Geneseo**

**Rochester Academy of Science  
45<sup>th</sup> Annual Fall Scientific Paper Session Schedule**

**Oral Presentations**

<b>TIMES</b>	<b>TOPICS AND ROOMS</b> (presentations during nearly all times, list of presenters on room doors)
9:30 - 9:45 am	
9:45 - 10:00 am	Session I, Bailey 102    Biology
10:00 - 10:15 am	Session II, Bailey 103    Biology, Molecular Biology, Biological Physics, Virology
10:15 - 10:30 am	Session III, Bailey 202    Bioinformatics, Biochemistry, Zoology
10:30 - 10:45 am BREAK	Session IV, Bailey 203    Chemistry
10:45 - 11:00 am	Session V, Bailey 104    Environmental Science, Geology, Geosystems, Mathematical Modeling
11:00 - 11:15 am	Session VI, Bailey 105    Anthropology, Genetics, Physiology
11:15 - 11:30 am	Session VII, Bailey 204    Computational Chemistry, Mathematics, Geography, Astrophysics, Atmospheric Science
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11:30 am – 12:30 pm	Poster Session, Newton Hall (a circular building, posters around perimeter)
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12:30 – 1:00 pm	Lunch pick-up, Entry to Newton 204A
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1:00 pm	Keynote address, Newton 204 <ul style="list-style-type: none"> <li>• Introduction by SUNY Geneseo President and Geological Scientist Denise Battles</li> <li>• Dick Young, <i>A Newly Recognized Late Glacial Advance in Western N.Y.</i></li> </ul>

# Oral Presentation Schedule – revised 11/6/18

All presentations are in Bailey Hall

## Session I – Biology

Bailey 102

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- 9:30 - 9:45 am     **CHARACTERIZATION OF FSD-1 MUTANT ALLELES IN NEUROSPORA CRASSA.**  
Mark Soto, Elizabeth Hutchison, *SUNY Geneseo*
- 9:45 - 10:00 am   **COELOMOGENESIS IN A BRITTLE STAR VITELLARIA LARVA**  
Jackie Moser, Guy Azriel, Christina Ideman, Taylor Kovar, Melissa Barton, Nasreen Jaff, Hyla Sweet, *Rochester Institute of Technology*
- 10:00 - 10:15 am   **COMPARISON OF THE SYNTHESIS OF CURCUMIN ANALOGS USING MICROWAVE AND TRADITIONAL HEATING METHODS.**  
Kiersten Kennedy, Dr. Joseph Mullins, *Le Moyne College*
- 10:15 - 10:30 am   **DEVELOPMENT OF THE AXIAL COMPLEX IN THE BRITTLE STAR OPHIOPLOCUS ESMARKI**  
Nasreen Jaff, Dr. Hyla Sweet, *Rochester Institute of Technology*
- 10:30 - 10:45 am   **BREAK**
- 10:45 - 11:00 am   **PACS-2 SUMOYLATION IN RESPONSE TO DNA DAMAGE.**  
Patrick Buckley, *SUNY Geneseo*; You Jin Choi, Ph.D., Jonathan Barroso-González, , Laurel Thomas, Gary Thomas, Ph.D., Pittsburg, PA
- 11:00 - 11:15 am   **THE AGE OF ADVENTURE: THE UNIVERSITY OF ROCHESTER AND ITS NATURAL HISTORY ENDEAVORS OF THE 1930'S.**  
Rachel Hammelman, *University of Rochester*
- 11:15 - 11:30 am   **THE ULTRASTRUCTURE OF AMAZON YELLOW-SPOTTED RIVER TURTLE EGG SHELL AND SHELL MEMBRANE.**  
Gigi Niu and Poongodi Geetha-Loganathan, *SUNY Oswego*

## Session II – Biology, Molecular Biology, Biological Physics, Virology

Bailey 103

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- 9:30 - 9:45 am     **IN SITU EXPRESSION ANALYSIS OF STALK EYED FLY TESTES**  
Evan McCabe, *SUNY Geneseo*
- 9:45 - 10:00 am   **WHEN IS THE OAK TWIG PRUNER (ANELAPHUS PARALLELUS) INFECTED WITH WOLBACHIA SP.?**  
Luciana Cursino, Sarah Bresette and William Brown, *Keuka College*
- 10:00 - 10:15 am   **THE WARD PROJECT**  
Robert Minckley, Melissa Mead, *University of Rochester*
- 10:15 - 10:30 am   **GO OR GROW? STUDYING FITNESS OF CELL POPULATIONS USING A MATHEMATICAL MODEL.**  
Noah Reuter, and Moumita Das, *Rochester Institute of Technology*
- 10:30 - 10:45 am   **BREAK**

- 10:45 - 11:00 am **A HOST OF MUTATIONS: GENETIC ANALYSIS OF GIANT SALMONELLA VIRUS SPN3US**  
Zein Haider and Julie Thomas, *Rochester Institute of Technology*
- 11:00 - 11:15 am **MUTAGENESIS OF DE NOVO GENES VIA CRISPR- CAS9 IN DROSOPHILA MELANOGASTER**  
Julia Nicosia and Dr. Josie Reinhardt, *SUNY Geneseo*
- 11:15 - 11:30 am **VESICULAR STOMATITIS VIRUS MATRIX PROTEIN FUNCTIONS OF INHIBITING NF-KB ACTIVATION AND INHIBITING INTERFERON RESPONSE ARE INDEPENDENT.**  
Amanda N. Weiss, Kaitlin A. Marquis, and Maureen C. Ferran, *Rochester Institute of Technology*

### **Session III – Bioinformatics, Biochemistry, Zoology**

Bailey 202

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- 9:30 - 9:45 am **3D MORPHOMETRIC ANALYSIS OF DIVERSIFICATION IN PYGOPODID SKULLS AND CORRELATION WITH HABITAT**  
George Gurgis, Jennifer Olori, *SUNY Oswego*
- 9:45 - 10:00 am **DYNAMICS OF MTDNA POPULATIONS IN MAMMALIAN CELLS**  
Brandon Bogner, Kellianne Kornick, Rebecca Zathang, Leo Sutter, and Moumita Das, *Rochester Institute of Technology*
- 10:00 - 10:15 am **DERMAL BACTERIA OF AMBYSTOMA MACULATUM AND AMBYSTOMA JEFFERSONIANUM**  
Annie M. Stevens, *SUNY College of Environmental Science and Forestry*; Kristen E. Fellows, *University of Delaware*
- 10:15 - 10:30 am **EFFECTS OF THE PARASITE OPHRYOCYSTIS ELEKTROSCIRRHIA ON THE PAINTED LADY BUTTERFLY, VANESSA CARDUI (LEPIDOPTERA: NYMPHALIDAE)**  
Joseph McCarthy, *SUNY Oswego*
- 10:30 - 10:45 am **BREAK**
- 10:45 - 11:00 am **VACCINE DESIGN AGAINST COLORECTAL CANCER ANTIGEN CEACAM-1 USING IMMUNOINFORMATICS TOOLS**  
Andrew Rosato, Aditya Gupta, *Rochester Institute of Technology*
- 11:00 - 11:15 am **PREPARATION OF SMALL LACCASE (SLAC) FOR IMMOBILIZATION VIA CLICK CHEMISTRY AND BIOREMEDIATION APPLICATIONS**  
Bellina Mushala, *Wells College*; Corey M. Johnson, *Samford University*
- 11:15 - 11:30 am **CARBENE LABELING MASS SPECTROMETRY.**  
Ellirose Edwards, Dr. Paul Martino, *Houghton College*

### **Session IV – Chemistry**

Bailey 203

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- 9:30 - 9:45 am **INORGANIC SPECIES IN FINE AND COARSE PARTICULATE MATTER AND GASES MEASURED IN ST.BONAVENTURE, NY.**  
Tanya Gupta, *St. Bonaventure University*
- 9:45 - 10:00 am **ORIENTATION OF AMYLOIDOGENIC PEPTIDES OVER NANO-GOLD PARTICLES**

Kazushige Yokoyama, *SUNY Geneseo*

10:00 - 10:15 am **PREPARATION OF A HETEROBIMETALLIC PHOSPHINE-PYRIDINE COMPLEX WITH THE POTENTIAL FOR METALLOPHILIC INTERACTIONS**

Kevin Clark, *SUNY Oswego*

10:15 - 10:30 am **RENEWABLE ALIPHATIC-AROMATIC POLYESTERS.**

Daniel Verrico, Dr. Massoud J. Miri, *Rochester Institute of Technology*

10:30 - 10:45 am **BREAK**

10:45 - 11:00 am **THERMAL PROPERTIES OF SUSTAINABLE POLYMERS**

William Charbonneau, Dr. Massoud J. Miri, *Rochester Institute of Technology*

11:00 - 11:15 am **STUDIES TOWARD THE TOTAL SYNTHESIS OF NOVEL CROSS-MEMBRANE FLUOROMETRIC PROBES.**

LauraAnne Hirschler, Ana Cartaya, Tyler Zimmermann, Danielle Raymond, and Dr. Christina Goudreau Collison, *Rochester Institute of Technology*

## **Session V – Environmental Science, Geology, Geosystems, Mathematical Modeling**

Bailey 104

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9:30 - 9:45 am **DOES COMMUNITY ENGAGEMENT IMPROVE ECOSYSTEM RESTORATION OUTCOMES?**  
Sydney VanWinkle, *Rochester Institute of Technology*

9:45 – 10:00 am **MODELING US FRESHWATER MACROINVERTEBRATE COMMUNITIES AND ECOLOGICAL HEALTH**

Sofie Christie, Kaitlin Stack Whitney, *Rochester Institute of Technology*

10:00 - 10:15 am **BEAVER FORAGING PREFERENCES AND IMPACTS ON FOREST STRUCTURE IN NEW YORK'S ADIRONDACK MOUNTAINS**

Michael J. Mahoney, John C. Stella, *SUNY College of Environmental Science and Forestry*

10:15 - 10:30 am **A PHYLOGENETIC ANALYSIS OF DARRIWILIAN GRAPTOLITES, SUBORDER AXONOPHORA**

Michael R. Grenier, *SUNY Buffalo*

10:30 - 10:45 am **BREAK**

10:45 - 11:00 am **GEOTECHNICS OF EARTHWORM LOCOMOTION: AXIS SYMMETRIC TESTS**

Vivia Amanda Fastiggi, *Wells College*; Rodrigo Bolera, Prashanth Vangla, Dr. David Frost, Atlanta, GA

11:00 - 11:15 am **MATHEMATICAL MODEL OF THE VITREOUS GEL AND ITS MECHANOBIOLOGY: LINEAR AND NONLINEAR RESPONSES OF THE COMPOSITE NETWORK OF COLLAGEN AND HYALURONIC ACID NETWORKS.**

Pancy Lwin, Scott Franklin, George Thurston, David Ross, Moumita Das. *Rochester Institute of Technology*

## **Session VI – Anthropology, Genetics, Physiology**

Bailey 105

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9:30 - 9:45 am **BITE FORCE ANALYSIS OF THE HUMAN MANDIBLE.**

Harrison Moses, *SUNY Geneseo*

- 9:45 - 10:00 am **CHARLES LYELL'S VISIT TO WESTERN NEW YORK - MASTODON, FOREST AND SOCIETY.**  
Russell Judkins, *SUNY Geneseo*
- 10:00 - 10:15 am **THE RELATIONSHIP OF FECAL CORTISOL LEVELS, PERSONALITY TRAITS AND SOCIAL BONDS IN FREE-RANGING JUVENILE RHESUS MACAQUES.**  
Katharine C. Burke, Carol M. Berman, *University at Buffalo*
- 10:15 - 10:30 am **THE INITIATION AND DEVELOPMENT OF TRICHOMES ON DEVELOPING TOMATO FRUITS**  
Joseph Dyson, *Wells College*; Qian Shen, Jocelyn Rose, *Cornell University*
- 10:30 - 10:45 am **BREAK**
- 10:45 - 11:00 am **VISUALIZING SMALL PROTEINS OF MYCOBACTERIUM SMEGMATIS AND M.TUBERCULOSIS WITH WESTERN BLOTTING.**  
Katherine Cotten, Jill Canestrari, Matt Champion, Keith Derbyshire, Todd Gray, *NYS Department of Health and University of Notre Dame*
- 11:00 - 11:15 am **DEVELOPING AND TESTING AN EXPERIMENTAL SYSTEM FOR SMOOTH MUSCLE WOUNDING AND RECOVERY.**  
Keegan Frenya, Ransom H. Poythress, *Houghton College*

## Session VII – Computational Chemistry, Mathematics, Geography, Astrophysics, Atmospheric Science

Bailey 204

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- 9:45 - 10:00 am **ENTANGLED TRAJECTORIES HAMILTONIAN DYNAMICS FOR TREATING QUANTUM NUCLEAR EFFECTS** WITHDRAWN  
Brendan Smith, Alexey V. Akimov, *SUNY Buffalo*
- 10:00 - 10:15 am **MODELING COMPOSITE BIOPOLYMER NETWORKS USING EFFECTIVE MEDIUM THEORY.**  
Jacob Wales, Moumita Das, *Rochester Institute of Technology*
- 10:15 – 10:30 am **FALSE CONCEPTS AND FAILING APPROACHES: AN ANALYSIS OF POVERTY IN THE DEVELOPING WORLD**  
Alexander Findeis, *SUNY Geneseo*
- 10:30 - 10:45 am **BREAK**
- 10:45 - 11:00 am **A STUDY OF THE RR LYRAE-AB VARIABLE STARS IN THE SMC AND LMC.**  
Brett Meerdink, Matthew Sodano, Shashi Kanbur, *SUNY Oswego*; Susmita Das, Harinder Singh, *University Enclave, Delhi, India*; Anupam Bhardwaj, *Peking University, Beijing, China*
- 11:00 - 11:15 am **DIFFERENCES IN MOISTURE PROFILES BETWEEN FIELD AND FOREST MICROCLIMATES.**  
Kristine M. Chen, *University of Oklahoma*; Adrianna N. Kremer, *SUNY at Brockport*; and Neil F. Laird, *Hobart & William Smith Colleges*
- 11:15 - 11:30 am **LONG-DISTANCE LAKE-EFFECT SNOW BANDS IN THE GREAT LAKES REGIONS.**  
Neil Laird, *Hobart and William Smith Colleges*