



# MultiFACETed Research at TU

FACULTY RESEARCH CONFERENCE

OCTOBER 29, 2021  
8:30 A.M. - 1:30 P.M

**TU**  
**TOWSON**  
**UNIVERSITY™**

# Welcome

Welcome to the First Annual TU Faculty Research Conference. This conference is intended to bring researchers in different fields and colleges together with the hope of inspiring future scholarly collaborations. Sessions will include Gallery Talks, Lecture Recitals, Panels, Paper Presentations, Performances, Posters, Roundtables, Screenings, and more! Faculty can also learn about internal and external grant opportunities as well as campus resources to support research.



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## Program Overview

**8:30 a.m. – 9:00 a.m.**

Registration and Breakfast

West Village Commons Ballrooms (4th Floor)

**9:00 a.m. – 9:15 a.m.**

Provost's Address

West Village Commons Ballrooms

**9:20 a.m. – 9:45 a.m.**

Paper Presentations, Roundtables,  
High-tops, and Posters

Rooms 304-306, 3rd Floor Lobby

**9:50 a.m. – 10:15 a.m.**

Paper Presentations, Lecture Recital

Rooms 304-307

**9:50 a.m. – 10:45 a.m.**

Panels

Ballrooms A,B, and C

**10:20 a.m. – 10:45 a.m.**

Paper Presentations, Lecture Recital

Rooms 304-306

**11:00 a.m. – 11:25 a.m.**

Screening, Virtual Reality, Lecture Recitals, and Paper Presentations

Ballrooms A,B, and C, Rooms 306-307

**11:00 a.m. – 11:55 a.m.**

Panels

Rooms 304-305

**12:00 p.m. – 12:30 p.m.**

Paper Presentations, Lecture Recitals, Roundtables, High-tops, and Posters

Rooms 304-307, 3rd Floor Lobby

**12:30 p.m.**

Lunch

West Village Commons Ballrooms

**12:45 p.m. – 1:30 p.m.**

Keynote Speaker

West Village Commons Ballrooms (4th Floor)



# Full Schedule

Keynote

Panel

Performance

Hightop

Poster

Paper

Lecture

Gallery

Roundtable

Time	Ballroom A	Ballroom B	Ballroom C	Room 304	Room 305	Room 306	Room 307	3rd Floor Lobby						
9:00 a.m.	<b>PROVOST'S ADDRESS</b> Melanie Perreault													
9:15 a.m.														
9:20 a.m.				<b>Research to Practice: Designing Rigorous Online Courses</b> Mary Slade Stephen Schroth	<b>Fun First?: Board Games, Pandemics, and Jello Biafra</b> Ryan Shelley	<b>Librarians as Disinformation Experts: Is that Fake News?</b> Joyce Garczynski		<b>Developing Equitable, Inclusive, and Cheating-Resistant Online Exams</b> Sonali Raje, Nicole Carbonara, Mile Pacella, Joseph Bushey, Liina Ladon	<b>A Collaborative Project Utilizing Open Educational Resources to Explore Access to Literacy Assessment Resources</b> Maria Liwanag, Lijun Jin, Miriam DesHarnais	<b>Cultural Confluence: Archaeology of the Susquehanna River and its Tributaries</b> Katherine Sterner	<b>Interdisciplinary and Interprofessional Education</b> Jennifer Wingrat, Trish Westerman	<b>Adjunct Faculty</b> Katharine Fernstrom	<b>New Associate Professors</b> Sam Collins	
				<b>Preservice teachers as researchers: A mentorship model</b> Melike Kara Kimberly Corum	<b>Students as Board Game Designers: Developing Cooperative Strategy Games for Training High-Performing Teams</b> Mariana Lebron Gabrielle Swab	<b>Using Machine Learning and Social Network Analysis to Understand the Motives Behind the Spread of "Plandemic" Conspiracy Theory During COVID-19</b> Sushma Kumble		<b>Math Anxiety: The Impact of Targeted Interventions on Preservice Teachers' Attitudes Towards Teaching Mathematics</b> Ming Tomayko	<b>Metformin treatment improves regenerative myogenesis in a mouse model of muscular dystrophy</b> Davi Mazala	<b>Research in Functional Electronic Materials</b> Rajeswari Kolagani, Vera Smolyaninova, Jia-An Yan, Jefferey Simpson, Gary Pennington	<b>Integrating Social Justice into a Mathematics Classroom</b> Kim Corum, Sandy Spitzer, Kristin Frank	<b>1st/2nd year faculty</b> Melanie Morris	<b>Preparing for Promotion and Tenure</b> Kristin Frank, Maria Joao Antunes	<b>New Full Professors</b> Margherita Pampinella
9:45 a.m.														
9:50	<b>Towson Academy of Scholars</b> Rachel Billman Eric Karikari Sushma Kumble	<b>Practice-Based Teacher Education</b> Carla Finkelstein Vicki McQuitty Pamela Hickey Pamela Lottero-Perdue Melike Kara Kandace Hoppin	<b>"I want to talk to people, but it's just so scary": Perspectives from Faculty, Parents, and Autistics on the Impact of the COVID-19 Pandemic on their daily lives</b> Chetna Seth Amanda Jozkowski Aaron Dallman	<b>Analysis of gaze reveals differences in attention allocation between expert and novice music teachers</b> Laura Hicken	<b>Pay Inequity Among Industrial &amp; Organizational Psychologists: Evidence from the 2019 SIOP Salary Survey</b> Nhung Hendy	<b>United States Murals: Anthropology, Art History, and the Communication of Identity Politics</b> Katherine Fernstrom	<b>The Beauty of Korean Art Song</b> Min Jin							
				<b>"A mealy-what now?" Providing middle school teachers with authentic entomology research experiences to enhance student science curriculum</b> Faith Weeks	<b>Influences of Perinatal Cannabis Use: Results of a Pilot Study</b> Kara Skelton	<b>Re-Examining Figures of Speech</b> Russell Hendel								
10:15														
10:20 a.m.				<b>Related Activity Choice: Grading Group Work Without Peer Evaluation</b> Precha Thavikulwat		<b>An Alternative to the Educational Hierarchies for Higher Cognitive Pedagogy</b> Russell Hendel	<b>Songs of a Wayfarer</b> Lori Hultgren Kanyoung Yoo							
				<b>Influence of Outside Employment and Campus Commute on Students' Success in CHEM 131</b> Shannon Stitzel Sonali Raje		<b>Understanding Urban Metabolism to Promote Regenerative Economy</b> Brian Fath								
4 10:45														



# Presentation Summaries

**9:00 a.m. – 9:15 a.m.**

Provost's Address, WVC Ballrooms

*West Village Commons Ballrooms (4th Floor)*

Welcome Address by Melanie Perreault, Provost and Executive Vice President for Academic and Student Affairs

**9:20 a.m. – 9:45 a.m.**

Room 304

**Research to Practice: Designing Rigorous Online Courses**

*Paper Presentation*

Mary Slade, Early Childhood Education

Stephen Schroth, Early Childhood Education

With the rise in the number of courses being delivered in blended and online formats, there is a growing need to document the effectiveness of doing so. Of particular concern is the academic rigor of the more recent course delivery platform. Of secondary importance is the documentation of effective student engagement in online learning formats. Thus, a study was conducted to evaluate the degree of rigor and student engagement in graduate online coursework. When applied to future online course design and implementation, the study findings are transformative.

**Preservice Teachers as Researchers: A Mentorship Model**

*Paper Presentation*

Melike Kara, Mathematics

Kimberly Corum, Mathematics

In this presentation, we will share 1) a mentorship model we developed and implemented while collaborating with pre-service teachers (PSTs) on their Model Eliciting Activity Projects and 2) the outcomes of the mentorship model in terms of PSTs' growth as teachers as well as researchers. For their projects, PSTs designed and developed their own mathematical modeling tasks and later analyzed student work to better understand their students' reasoning as a result of engaging the tasks.

Room 305

**Fun First?: Board Games, Pandemics, and Jello Biafra**

*Paper Presentation*

Ryan Shelley, Art+Design, Art History, Art Education

Tabletop games are in a golden age boom of formal and conceptual diversity. Their legitimacy as a design, art, and storytelling medium has nurtured several branches of nearly opposite expression beyond merely facilitating fun: a punk pranksterism that questions the form's intrinsic intent by emphasizing disruption, and the possibility for a serious-minded didactic experience that prioritizes learning.

**Students as Board Game Designers: Developing Cooperative Strategy Games for Training High-Performing Teams**

*Paper Presentation*

Mariana Lebron, Management

Gabrielle Swab, Management

In this session, participants will design cooperative strategy board games that motivate players to resolve worldly issues, specifically by creating powerful player roles that control valued resources and player actions as key decision-making points. Participants will learn (a) what gamification is and how it can be used to training our multigenerational workforce; (b) how designing board games teach teambuilding skills; (c) how to develop necessary cooperative strategy board game elements; and (d) about the students' experience by viewing video of students' board games.

Room 306

**Using Machine Learning and Social Network Analysis to Understand the Motives Behind the Spread of "Plandemic" Conspiracy Theory During COVID-19**

*Paper Presentation*

Sushma Kumble, Marketing

Individuals are attracted to conspiracy theories to fulfill specific epistemic, existential, and social motives. Utilizing these taxonomies, the present study uses unsupervised machine learning to uncover which of these motives stated in tweets were more prevalent in the spread of this misinformation. Results indicate that themes of existential motives were common. Further, utilizing social network analysis, the present study also looks at which prominent actors within the network aided in dissemination of such information.

**Librarians as Disinformation Experts: Is that Fake News?**

*Paper Presentation*

Joyce Garczynski, Cook Library

Since the term entered the popular lexicon after the 2016 presidential election, U.S. leaders have been grappling with what to do about fake news. Experts across different fields have decried the propagation of fake news and declared a need to address the problem in different ways. This research looks at whose fake news expertise is recognized in the national press and what implications this recognition, or lack thereof, has on how fake news is addressed.

3rd Floor Lobby

**Math Anxiety: The Impact of Targeted Interventions on Preservice Teachers' Attitudes Towards Teaching Mathematics**

*Roundtable*

Ming Tomayko, Mathematics

Kathryn L. Brave., BCPS

Anecdotal evidence indicate a high prevalence of math anxiety and anxiety about teaching math among our preservice early childhood and elementary education majors. Research shows that teacher anxiety can negatively impact math achievement. The proposed study

is designed to: a) measure student attitudes about math and teaching math; b) test a variety of interventions during a math methods course; and c) interview selected students about changes in their attitudes.

### **Developing Equitable, Inclusive, and Cheating-Resistant Online Exams**

#### *Roundtable*

Sonali Raje, Chemistry  
Nicole Carbonara, Chemistry  
Mile Pacella, Chemistry  
Joseph Bushey, Chemistry  
Liina Ladon, Chemistry

The presentation describes some of the challenges faced during online testing and the various strategies we have developed in introductory chemistry, over three semesters to ensure a robust assessment metric, while ensuring academic integrity and continued high standards in assessment, without compromising on catering to the diverse needs of our student population.

### **A Collaborative Project Utilizing Open Educational Resources to Explore Access to Literacy Assessment Resources**

#### *Roundtable*

Maria Liwanag, Elementary Education  
Lijun Jin, Elementary Education  
Miriam DesHarnais, Cook Library

Open educational resources (OER) expand opportunities for scholars to disseminate and share knowledge of texts and digital materials for teaching and learning. Our group collaborated on a project to explore free and openly licensed resources that can be utilized in undergraduate assessment courses. We share in this roundtable presentation the initial findings of our exploratory grant project.

### **High-tops**

#### **3rd Floor Lobby**

Please join us for an open discussion at one of our high-tops. These sessions allow attendees to have a chance to talk briefly or in-depth about a topic of interest. Facilitators will have good ideas to share, and they are eager to learn from you, too. We hope that these conversations may lead to ongoing discussion if there is interest.

### **Interdisciplinary and Interprofessional Education**

Jennifer Wingrat, Occupational Therapy and Occupational Science  
Trish Westerman, Faculty Academic Center of Excellence at Towson (FACET)

### **Adjunct Faculty**

Katharine Fernstrom, Adjunct Faculty in Anthropology and Art History

### **1st/2nd year faculty**

Melanie Morris, Communication Studies

### **Preparing for Promotion and Tenure**

Kristin Frank, Mathematics  
Maria Joao Antunes, Sociology, Anthropology & Criminal Justice

### **New Associate Professors**

Sam Collins, Sociology, Anthropology & Criminal Justice

### **New Full Professors**

Margherita Pampinella, Languages, Literatures, and Cultures

### **Posters**

#### **3rd Floor Lobby**

### **Metformin Treatment Improves Regenerative Myogenesis in a Mouse Model of Muscular Dystrophy**

Davi Mazala, Kinesiology

Duchenne muscular dystrophy (DMD) is a genetic disease caused by mutations in the dystrophin gene, and is characterized by limited muscle regeneration which contributes to the progressive loss of muscle mass and function, and shortened lifespan of patients. Here we used the D2-mdx mouse model of DMD, a model which recapitulates the impaired muscle regeneration as seen in patients, to show that short-term Metformin treatment improves muscle regeneration after a timed-induced injury in their muscles.

### **Cultural Confluence: Archaeology of the Susquehanna River and its Tributaries**

Katherine Sterner, Sociology, Anthropology & Criminal Justice

This summer, my students and I undertook a project focused on making connections in archaeology. We examined two artifact collections from the Lower Susquehanna River Drainage. Our research traces the forked paths of investigation, recordation, and preservation (or not) of archaeological resources based on whether or not they are cataloged by the state. We found that this cataloging procedure is both instrumental in documenting archaeological resources and simultaneously immaterial in their preservation.

### **Integrating Social Justice into a Mathematics Classroom**

Kimberly Corum, Mathematics  
Sandy Spitzer, Mathematics  
Kristin Frank, Mathematics

Mathematics educators and researchers recommend that students have opportunities to participate in mathematical modeling, as well as examine issues of social justice. Our poster describes a mathematics lesson experience designed to engage students in mathematizing the issue of gerrymandering and our interpretations of data collected from the pilot implementation. It will also engage attendees in a consideration of both the mathematical and social implications of gerrymandering and how to integrate social justice into the classroom.

## Research in Functional Electronic Materials

Rajeswari Kolagani, Physics, Astronomy & Geosciences  
Vera Smolyaninova, Physics, Astronomy & Geosciences  
Jia-An Yan, Physics, Astronomy & Geosciences  
Jefferey Simpson, Physics, Astronomy & Geosciences  
Gary Pennington, Physics, Astronomy & Geosciences

This group of research projects include experimental and theoretical research on materials that exhibit novel electronic phenomena that are interesting both for fundamental science and potential applications in a variety of technologies. These materials include superconductors that can carry electric current without energy loss and have exotic magnetic properties, two dimensional (2D) materials which exhibit unique electronic properties, metal oxides which present a diverse range of electrical and magnetic phenomena, and intermetallic alloy mixtures.

**9:50 a.m. – 10:45 a.m.**

## Ballroom A

### Towson Academy of Scholars

*Panel*

The Towson Academy of Scholars program's purpose is to advance TU faculty research as well as guidance from a nationally known scholar in the faculty member's area of study. Each of our presenters in this featured panel session is a Towson Academy of Scholars awardee. After each individual presentation in this session, the Scholar's external mentor will serve as discussant by providing a constructive critique, with a goal of helping the Scholar to move his or her work forward.

### Integrating Online Graphing Calculators into the Mathematics Curriculum for Learners with Disabilities

Rachel Billman, Special Education  
External mentor: Dr. Kelley Regan, Professor, Special Education, George Mason University

### Neoliberal Governance: Translating Organizational Discourse into Public Policy

Eric Karikari, Assistant Professor  
External mentor: Dr. Manuel-Julian R. Montoya, Associate Professor, Organizational Studies, University of New Mexico

### Strategies Used by Advocacy Groups for De-stigmatization of Mental Illness on Social Media: A Content Analysis Approach

Sushma Kumble, Marketing  
External mentor: Dr. Weirui Wang, Associate Professor, Communication, Florida International University

## Ballroom B

### Practice-Based Teacher Education

*Panel*

Carla Finkelstein, Instructional Leadership and Professional Development  
Vicki McQuitty, Elementary Education  
Pamela Hickey, Elementary Education  
Pamela Lottero-Perdue, Physics Astronomy and Geosciences  
Melike Kara, Mathematics  
Kandace Hoppin, Special Education

Practice-Based Teacher Education (PBTE) seeks to disrupt traditional pedagogies that have promulgated theory/practice and university/field divides in teacher preparation. These papers, from across COE and FCSM, describe implementations of a PBTE framework, in which teacher candidates (TCs) learn to teach through intentionally scaffolded opportunities to practice teaching. Faculty will share innovative instructional activities and findings from research work exploring how these activities supported students' growth in the enactments of core teaching practices.

## Ballroom C

### "I want to talk to people, but it's just so scary": Perspectives from Faculty, Parents, and Autistics on the Impact of the COVID-19 Pandemic on Their Daily Lives

*Panel*

Chetna Sethi, Occupational Therapy & Occupational Science  
Amanda Jozkowski, Occupational Therapy & Occupational Science  
Aaron Dallman, Occupational Therapy & Occupational Science

This panel presentation will include perspectives from faculty, parents, and autistics on how COVID-19 has impacted their everyday lives and participation in meaningful activities. Taken in combination, presenters of this panel will encourage the audience to consider the unique circumstances of three participant groups that are often underrepresented in the general dialogue about supportive services.

**9:50 a.m. – 10:15 a.m.**

## Room 304

### Analysis of Gaze Reveals Differences in Attention Allocation Between Expert and Novice Music Teachers

*Paper Presentation*

Laura Hicken, Music

Using eye-tracking glasses, I studied the eye movements and gaze behaviors of flute teachers of different experience levels as they watched music and non-music performance videos. Analysis of gaze behaviors revealed differences in attention and thought processes between expert and novice participants and between the different video categories (music and non-music). Implications for music education and teacher training will be discussed.

## **“A mealy-what now?” Providing Middle School Teachers with Authentic Entomology Research Experiences to Enhance Student Science Curriculum**

*Paper Presentation*

Faith Weeks, Biological Sciences

Maryland middle school science teachers spent four weeks conducting entomological research on the symbiotic relationship between ants and mealybugs. Participants learned about basic entomology, field skills, and best practices in science experimentation while analyzing preserved ant specimens, interacting with top entomologists in the field, and handling live insects. All participants reported an increase in their interest in teaching with live insects, higher student engagement, and feeling more comfortable with entomology and the scientific process.

### **Room 305**

## **Pay Inequity Among Industrial & Organizational Psychologists: Evidence from the 2019 SIOP Salary Survey**

*Paper Presentation*

Nhung Hendy, Management

Diversity, inclusion, and equity have received growing media coverage due to recent events highlighting systemic social injustice. Using the 2019 SIOP Salary Survey data, we shed light on the persistent pay inequity along gender and racial lines of the Society for Industrial and Organizational Psychology members and identified what needs to be done to achieve racial diversity and pay equity along gender and racial lines.

## **Influences of Perinatal Cannabis Use: Results of a Pilot Study**

Kara Skelton, Health Sciences

This session will cover influences of perinatal cannabis use. We will report on results from a pilot study conducted in the Spring of 2021. We will report our findings relating to influences of cannabis use, including variations across sociodemographic characteristics and state-level cannabis policies. These findings will help aid cannabis prevention programs in tailoring programs based on influences of cannabis use and also provide clear areas of foci for future research.

### **Room 306**

## **United States Murals: Anthropology, Art History, and the Communication of Identity Politics**

*Paper Presentation*

Katherine Fernstrom, Sociology, Anthropology & Criminal Justice/Art+ Design, Art History, Art Education

Most studies of US murals focus on specific historical periods or artists. I examine murals as continuous production of communication from prehistory to the present, and discuss American murals as products of different cultures, cities, schools of thought, social movements, ideologies, and government programs. Murals diversify over time and space in terms of topics, surface configurations, artists, and intended audiences. My goal is systematic examination of US murals using interviews and GIS.

## **Re-Examining Figures of Speech**

*Paper Presentation*

Russell Hendel, Mathematics

Classically, figures of speech such as synecdoche and metonymy are defined in terms of immediately verifiable attributes and part-whole relationships. This presentation explores the use of experience to define figures of speech. For example, the synecdochic meaning of honey, as sweet, arises from our collective experience with sweet things which over time shows honey a paradigm of sweetness. The presentation explores application, development, and consequences of this idea.

### **Room 307**

## **The Beauty of Korean Art Songs**

*Performance*

Min Jin, Music

Despite its relatively short history, Korean art song has been a frequent subject for singers and researchers. The vast majority of Korean art songs are compositions based on Western music tradition. However, the songs contain the unique Korean emotions of ‘han’, a deep sense of sorrow and resentment, and ‘uhl’, the spirit of Korea. There are a substantial number of Korean art songs which demonstrate the highest level of artistry written in a variety of compositional styles. This performance is planned to introduce the beauty of Korean Art Songs to the public.

**10:20 a.m. – 10:45 a.m.**

### **Room 304**

## **Related Activity Choice: Grading Group Work Without Peer Evaluation**

*Paper Presentation*

Precha Thavikulwat, Management (Retired Faculty)

Related activity choice (RAC) is an advantageous alternative to summative peer evaluation (SPE) as a method of assigning group members individual credit towards grades for a collective outcome. Whereas SPE asks group members to submit ratings of each other’s contributions to the collective outcome, RAC asks each group member to choose between preferring the member’s own performance in a related individual activity or preferring the average performance of all members in that activity.

## **Influence of Outside Employment and Campus Commute on Students’ Success in CHEM 131**

*Paper Presentation*

Shannon Stitzel, Chemistry

Sonali Raje, Chemistry

This study aimed to address the following research question: What role do non-academic factors such as commute and employment play in student performance in an introductory chemistry course? The initial findings of this study will be discussed, which align with the hypothesis that there is a significant difference in performance between traditional college students (those who live on/near campus with minimal job commitments) and college students who have longer commutes and/or substantial job commitments.

## Room 306

### An Alternative to the Educational Hierarchies for Higher Cognitive Pedagogy

#### *Paper Presentation*

Russell Hendel, Mathematics

Classically, pedagogic challenge is defined through the education hierarchies such as those of Bloom-Anderson, Gagne, or Van-Hiele. However, such an approach i) depends on the hierarchy used, ii) requires training in the particular hierarchy's concepts, and consequently iii) introduces ambiguity in recognizing pedagogic challenge. This presentation explores an alternate unifying approach to the hierarchies, based on psychological processes, and is simple, operational, and immediately usable.

### Understanding Urban Metabolism to Promote Regenerative Economy

#### *Paper Presentation*

Brian Fath, Biological Sciences

This presentation introduces the concepts of urban metabolism and regenerative economics, with applications from ongoing research case studies in Vienna, Austria and Beijing, China. In particular, a network approach, originating from ecological network analysis, shows the important role for indirect flows and connections and highlights the critical need to improve cycling through, e.g., improved recycling, circular economy, or industrial symbiosis.

## Room 307

### Songs of a Wayfarer

#### *Lecture Recital*

Lori Hultgren, Music

Kanyoung Yoo, Accompanist

This song cycle, set to Mahler's own texts, was written in 1884-85. It was originally scored for voice and piano, but was later orchestrated. The songs depict a heartbroken wayfarer, on the day that their true love is marrying someone else. The song texts take inspiration from Mahler's favorite book of German folk poetry, Des Knaben Wunderhorn. Mahler composed these four songs after his own heartbreak following the dissolution of his relationship with Soprano Johanna Richter.

**10:45 a.m. – 11:00 a.m.**

Break

**11:00 a.m. – 11:55 a.m.**

## Room 304

### Internal Funding Fuels Research Success

#### *Panel*

Towson University supports faculty members through a variety of internal funding programs including BTU (Baltimore + Towson University – Partnerships for Greater Baltimore), SET

(School of Emerging Technology) and FDRC (Faculty Development Research Committee) grants. Faculty members Alison McCartney, Professor of Political Science, Joshua Dehlinger, Professor of Computer and Information Sciences, and Michelle Ness, Assistant Professor of Nursing, will share research that was supported through these internal grant programs and how it facilitated their overall research program. In addition, Matthew Durlington (BTU), Suranjan Chakraborty (SET), and Heather Haverback (FDRC) will provide a brief overview of each of the programs.

## Room 305

### Nanoparticles: From Space-Time to Biomedical Applications

#### *Panel*

Vera Smolyaninova, Physics, Astronomy & Geosciences

Mary Devadas, Chemistry

Nanotechnology plays a prominent role in modern society combining achievements from different fields of knowledge. This panel will discuss directions of nanoparticle research, which advance fundamental and applied topics in physics and chemistry, and perhaps reach out to biomedical applications. Application of nanoparticles for enhanced superconductivity, magnetic hyperthermia, superatoms-assisted imaging, light harvesting and optical sensing with plasmonic nanoparticles, and even analogs to gravity in "optical space-time" in ferrofluids will be discussed.

## Ballroom B

### CinematicAmbiX: Cinematic Sound in Interactive Virtual Reality

#### *Virtual Reality Experience*

Adam Schwartz, Electronic Media & Film

CinematicAmbiX is a three-movement piece of interactive virtual reality art that is focused on the exploration of sound for film. The piece separates trailer sounds, foley, and ambience from their standard visual accompaniment, allowing the audience to experience the cinematic sounds in an immersive format, replacing the 2D plane of the cinema screen with a 3D virtual gallery.

**11:00 a.m. – 11:25 a.m.**

## Ballroom A

### Ten Degrees of Strange: Collaborating on an Animated Music Video in a Virtual World

#### *Screening*

Lynn Tomlinson, Electronic Media & Film

In the spring of 2021, Lynn Tomlinson animated Ten Degrees of Strange, accompanying a song by British writer Robert MacFarlane and musician/actor Johnny Flynn. Inspired by the Epic Gilgamesh and responding to the pandemic, figures and landscape in the film are constantly in flux, while the black dog, symbol of depression and worry, follows hard on the heels of its quarry. Tomlinson's screening, clay-painting process presentation, and Q & A, emphasizes her online collaborative process.

## Ballroom C

### Trauma-Informed, Arts- and Yoga-Based Mindfulness Program for Teacher Wellbeing

*Lecture recital*

Ashleigh Cicconi, Music

Combining trauma-informed practices with art, yoga, and mindfulness practices can have positive impacts on teacher wellbeing and also increase accessibility for teacher participation with a multimodal delivery format. Research from focus groups and personal interviews revealed increased self-care practices, mindfulness, and feelings of positivity and community. Increased accessibility was also identified as having positive impacts on teacher participation. This presentation will further include a brief demonstration of the educator wellness program.

## Room 307

### Composers Coming of Age: A Lecture-Recital of Music Written by Composers in Their 20s

*Lecture recital*

Aaron Ziegel, Music  
Leneida Crawford, Music  
Susan Ricci, Accompanist  
Audra Ziegel, Accompanist

This lecture-recital presents a selection of art songs and instrumental pieces (written between 1885 and 1970) that reveal young composers at work defining their own distinctive voice. Covering a broad stylistic spectrum, the program explores composers who imitate their influences and predecessors, who embrace the modern idioms of their time, or who chart previously unheard experimental paths, all as they seek to claim a place in the professional musical world.

## Room 306

### From Alienation to Empowerment: Worker Cooperatives and Social Relations in the Workplace

*Paper Presentation*

Heather Hax, Sociology, Anthropology & Criminal Justice

There has been a great deal of discourse about the ways in which inequality is reproduced in the labor market. One facet of this is how workers are alienated from ownership over their work given the hierarchal nature of the capitalist workplace. Worker cooperatives, workplaces that are owned and controlled by their employees, are said to be one way in which workers may stave off these alienating conditions. This study uses qualitative research to evaluate that role that worker cooperatives play in empowering workers and examines the challenges they face in realizing these aspirations.

## Identifying Circumgalactic Medium Absorption in QSO Spectra: A Bayesian Approach

*Paper Presentation*

Jennifer Scott, Physics, Astronomy & Geosciences

We present a study of absorption lines in Hubble Space Telescope spectra of 44 quasi-stellar objects that arise in the circumgalactic medium of galaxies near the QSO sightline. We find approximately 400 candidate galaxy-absorber pairs using a statistical approach that combines photometric information from the Sloan Digital Sky Survey with known properties of the circumgalactic medium. Our results are consistent with previous measurements of hydrogen extending to 400 kiloparsecs from galaxies.

**11:30 a.m. – 11:55 a.m.**

## Ballroom A

### Improvisation for All

*Performance*

David Ballou, Music  
Will Redman, Music  
John Dierker, Music

This concert will feature three faculty members of the Department of Music; Professor Dave Ballou (trumpet); Assistant Professor George “Will” Redman (percussion) and Adjunct Professor John Dierker (clarinet and saxophone). The music presented in this performance will be entirely improvised. There are no predetermined parameters or discussion about how the music will be created. Improvisation in this context can be considered “instant composition.” There will be a talk back period following the performance.

## Ballroom C

### Fiddling and Folk Elements Found in the McGuire and Kodaly Duos for Violin and Cello

*Lecture recital*

Emmanuel Borowsky, Music  
Frances Borowsky, Lebanon Valley College

Folk music has been an inspiration to classical composers for centuries. In the 1900s, many composers pursued more thorough and systematic research of their musical heritage as a part of the nationalist movement. This session will present riveting selections from Scottish (McGuire) and Hungarian (Kodaly) duos that, while differing in their origins and influence, have an abundance of intersecting idiomatic effects.

## Room 306

### The Developmental Impact of Reflective Practice in Service-Learning

*Paper Presentation*

Mary Slade, Early Childhood Education

Reflection is a high-impact practice that develops undergraduate students' social and academic development. Critical reflection requires active participants in service-learning to continually examine their own potential assumptions and bias in order to make the type of changes necessary to transition into the role of learner. A study was conducted in order to determine the impact of reflective practice on undergraduate students' involvement in service-learning across several courses. Results demonstrate the developmental impact of reflective practice on ability to learn course content, make real-world changes, and to become self-aware.

### Road-side Marriage Trades and Mediated Dating in China

*Paper Presentation*

Ping Fu, Foreign Languages

This paper presents first-hand research on Chinese marriage trades in parks and young people's dating with their parents' participation in Chinese TV reality shows. These shows have won great popularity in the viewing public home and abroad. The paper discusses how and why Chinese media and social media revitalize the banned traditional practices of marriage arraignment by parents to please the viewing public today.

**12:00 p.m. - 12:25 p.m.**

## Room 304

### The Comprehensive Autism Resource Environment Project: Improving Medical Care for Patients with an Autism Spectrum Disorder

*Paper Presentation*

Jennifer Kouo, Special Education

Jinjuan Heidi Feng, Computer & Information Sciences

Ziyang Tang, Computer & Information Sciences

Theodore Kouo, Johns Hopkins Hospital

The innovative Comprehensive Autism Resource Environment (CARE) project is an interdisciplinary collaboration between individuals in special education, medicine, and computer and information sciences, and aims to address these persisting challenges and ensure patient- and family-centered care. The session will present pilot data on the impact of the CARE project on patients at the Pediatric Emergency Department at the Johns Hopkins Children's Center and will examine next steps of the project.

### Challenges Experienced by Parents of Emerging Young Adults With Type 1 Diabetes Mellitus During the Transition to College

*Paper Presentation*

Michelle Ness, Nursing

Parents face unique challenges as their young adult transitions to college. This transition is

an exciting and challenging time for families and can be made even more complicated when coupled with type 1 diabetes mellitus (T1DM). This qualitative study sought to gain a deeper understanding of the challenges experienced by parents of emerging young adults (EYAs) as they transitioned to college with T1DM.

## Room 305

### 3D Models for Remote and Hybrid Learning: Engagement, Access, and Equity

*Lecture Recital*

Jena Burchick, Electronic Media & Film

David Merino, Faculty Academic Center of Excellence at Towson (FACET)

EMF professor Jena Burchick and FACET created an original 3D model of a cinema camera to offer EMF 367 "Narrative Filmmaking" students in response to the COVID-19 pandemic. The lecture introduces the process of 3D model creation (photogrammetry) and integration into Blackboard curriculum through a live demonstration, presentation of grade data and the implications it may have in remote and hybrid learning, student access and equity, and educational emerging technologies.

## Room 306

### Expectancy Violation in a Facebook Group: What's Your Response?

*Paper Presentation*

Stella Tomasi, Business Analytics & Technology Management

Chaodong Han, Business

James Otto, Business

The research focuses Facebook groups, which provides a forum for members to post content and engage with others. However, some members violate the expectations of group members. Grounded in Expectancy Violation Theory, our study built a research framework integrating personal characteristics, relationship characteristics, and group characteristics to predict member responses when faced with either a mild or severe violation in a Facebook group.

## Room 307

### A Secret Imperial Pension, Lost Compositions, and a Hidden Village: The Extraordinary Life of Composer Ella von Schultz Adaiewsky

*Lecture Recital*

Courtney Kalbacker, Music

Aaron Ziegel, Music

Russian composer and pianist Ella von Schultz Adaiewsky (1846 -1926) created a highly unorthodox musical life for herself that deserves attention. This presentation, which will include live performances of her music, will illuminate the exceptional trajectory of Adaiewsky's life involving her commissions by Tsar Alexander II, her receipt of a secret imperial pension for fifty years, her compositional work under a male pseudonym (E. Adaiewsky), and her groundbreaking ethnomusicological research.

## Roundtables

### 3rd Floor Lobby

#### Developing Equitable, Inclusive, and Cheating-Resistant Online Exams

Sonali Raje, Chemistry  
Nicole Carbonara, Chemistry  
Mile Pacella, Chemistry  
Joseph Bushey, Chemistry  
Liina Ladon, Chemistry

The presentation describes some of the challenges faced during online testing and the various strategies we have developed in introductory chemistry, over three semesters to ensure a robust assessment metric, while ensuring academic integrity and continued high standards in assessment, without compromising on catering to the diverse needs of our student population.

#### Library Resources

Carrie Price, Cook Library  
Jennifer Wingrat, Occupational Therapy and Occupational Science  
Aaron Dallman, Occupational Therapy & Occupational Science

A common misconception is that librarians are only available to Towson University students, but did you know that librarians can partner with you for your own research needs? Join our discussion to learn how librarians can support you and your scholarship through comprehensive literature searching, assessing your research impact, and guiding you on where to publish your work.

#### Support for External Grantseeking: Sponsored Programs & Research

Anne Greene (pre-award services)  
Jai-Lyn Elliott (post-award services)  
Brittany Priddy (compliance)  
Nancy Dufau, Assistant Vice President

Do you have questions about grant-seeking or compliance? Or, have you been meaning to contact the Office of Sponsored Programs and Research (OSPR), but just haven't had the time? Staff members Anne Greene (pre-award services), Jai-Lyn Elliott (post-award services), Brittany Priddy (compliance), and Assistant Vice President Nancy Dufau will field your questions and provide information on services available. Stop by to update them on projects and plans that you may have in mind and to ask any and all questions about sponsored research support at Towson University.

## High-tops

Please join us for an open discussion at one of our high-tops. These sessions allow attendees to have a chance to talk briefly or in-depth about a topic of interest. Facilitators will have good ideas to share, and they are eager to learn from you, too. We hope that these conversations may lead to ongoing discussion if there is interest.

### 3rd Floor Lobby

#### Interdisciplinary and Interprofessional Education

Trish Westerman, Faculty Academic Center of Excellence at Towson (FACET)

#### New Full Professors

Margherita Pampinella, Languages, Literatures, and Cultures

#### 1st/2nd Year Faculty

Laura Hicken, Music

#### Preparing for Promotion and Tenure

Kristin Frank, Mathematics  
Maria Joao Antunes, Sociology, Anthropology & Criminal Justice

#### Editorial Boards

Kelly Elkins, Chemistry

#### New Full Professors

Ming Tomayko, Mathematics

## Posters

### 3rd Floor Lobby

#### Cultural Confluence: Archaeology of the Susquehanna River and its Tributaries

Katherine Sterner, Sociology, Anthropology & Criminal Justice

This summer, my students and I undertook a project focused on making connections in archaeology. We examined two artifact collections from the Lower Susquehanna River Drainage. Our research traces the forked paths of investigation, recordation, and preservation (or not) of archaeological resources based on whether or not they are cataloged by the state. We found that this cataloging procedure is both instrumental in documenting archaeological resources and simultaneously immaterial in their preservation.

## Integrating Social Justice into a Mathematics Classroom

Kimberly Corum, Mathematics

Sandy Spitzer, Mathematics

Kristin Frank, Mathematics

Mathematics educators and researchers recommend that students have opportunities to participate in mathematical modeling, as well as examine issues of social justice. Our poster describes a mathematics lesson experience designed to engage students in mathematizing the issue of gerrymandering and our interpretations of data collected from the pilot implementation. It will also engage attendees in a consideration of both the mathematical and social implications of gerrymandering and how to integrate social justice into the classroom.

## Research in Functional Electronic Materials

Rajeswari Kolagani, Physics, Astronomy & Geosciences

Vera Smolyaninova, Physics, Astronomy & Geosciences

Jia-An Yan, Physics, Astronomy & Geosciences

Jefferey Simpson, Physics, Astronomy & Geosciences

Gary Pennington, Physics, Astronomy & Geosciences

This group of research projects include experimental and theoretical research on materials that exhibit novel electronic phenomena that are interesting both for fundamental science and potential applications in a variety of technologies. These materials include superconductors that can carry electric current without energy loss and have exotic magnetic properties, two dimensional (2D) materials which exhibit unique electronic properties, metal oxides which present a diverse range of electrical and magnetic phenomena, and intermetallic alloy mixtures.

### 12:30 p.m.

West Village Commons Ballrooms (4th Floor)

### Lunch

### 12:45 p.m. - 1:30 p.m.

West Village Commons Ballrooms (4th Floor)

### Keynote

## Keynote



### Ideations of Hope: Hip Hop Innovations, Intervention & Outliership in the Face of Black Youth Suicide

Dominic Shodekeh Talifero, COFAC Innovator-in-Residence

Dominic Shodekeh Talifero is a Baltimore-based beatboxer, vocal percussionist, breath artist, and Innovator-in-Residence for TU's College of Fine Arts & Communication. His first innovation capstone project was rooted in international musical ambassadorship and cultural exchange. His next capstone project was anchored in archival studies, collection-based donorship, and shared stewardship. His final capstone project is based on scientific research and exploration. His work, *Ideations of Potential*, can be found in the University Archives. It is the first hip-hop-based collection to enter Towson University's Special Collections, the first living archive of a professional beatboxer anywhere in the world.

In his keynote address, Shodekeh will be addressing and sharing how he has cultivated a unique synthesis of learning approaches from Hip Hop-oriented oral traditions, academic methodologies and performance-based research. The primary example of this from which he will be referencing is his own personal survivorship from suicidal ideation as a child, and how that has recently evolved into a greater life mission of musical inspiration and raising awareness.

# Towson University Educators Summit

## Call for Proposals!

The Towson University Educators Summit Planning Committee seeks proposals that will address the conference theme:

### Collaborating to Enhance Holistic Student Development: Educating Students to be Agents of Change

This conference, sponsored by the Office of the Provost, is designed to enhance faculty and staff collaborations within and across Academic Affairs and Student Affairs to promote student success. The conference will feature tracks in:

- Pedagogy (to include emphasis on lessons learned during the pandemic and teaching tips)
- Research, Scholarship, and Creative Activities
- Diversity, Inclusion, and Equity (to include inclusive curriculum and culturally responsive pedagogy)
- Mental Health, Self-Care, and Resiliency
- Serving the Public Good

Conference date: **January 19, 2022**

Session Proposals must be received no later than **November 15, 2021**.

Ready to share your experience? Submit a proposal!

[towson.edu/facetevents](http://towson.edu/facetevents)

## Faculty Academic Center of Excellence at Towson (FACET)

The Center was created by and for Towson University faculty. We support an inclusive and collaborative faculty community and foster a culture of excellence in scholarship and teaching.

FACET's programs include a Faculty Fellows program, FACET Scholars program, partnerships to promote research, workshops and resources, mentorship for career growth and to refine skills, and emerging technology support. Learn more about what your center has to offer you. Visit us in CK 405 or visit us online at [towson.edu/facetevents](http://towson.edu/facetevents).



# Acknowledgments

## FACET Staff

Patricia Westerman, Assistant Provost  
David Merino, Senior Media Producer  
Tammy Cross, Executive Administrative Assistant

## OSPR

Nancy Dufau, Assistant Vice President

## Office of the Provost

Melanie Perreault, Provost and Executive Vice President for Academic and Student Affairs  
Maggie Reitz, Vice Provost for Academic Affairs and Interim Assistant Vice President for International Initiatives

## FACET Advisory Board

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Adam Zukowski, Metadata Librarian





# MultiFACETed Research at TU

FACULTY RESEARCH  
CONFERENCE

OCTOBER 29, 2021  
8:30 A.M. - 1:30 P.M