

**College of Natural Science  
Annual Meeting  
November 18, 2022**

**Annual Meeting and Awards Ceremony**  
STEM Teaching and Learning Facility, Rm. 2130

**AGENDA**

Friday, November 18, 2022

3:00 p.m. Annual meeting

Items:

- Approval of Agenda for November 18, 2022
- Approval of Minutes from November 19, 2021
- State of the College—Phillip M. Duxbury
- Other Business
  - ✓ Bylaws updates

Awards Ceremony  
(Reception immediately following)

**College of Natural Science  
NatSci Annual Meeting/Awards Ceremony  
Meeting Minutes  
November 19, 2021**

**Items of Business:**

- Approval of Minutes:
  - The minutes of the Nov. 18, 2020, meeting were approved as distributed.
  
- State of the College
  - Dean Duxbury presented the State-of-the-College address.

**Awards Ceremony:**

- The NatSci Awards Ceremony followed the annual meeting.
- Award recipients were presented certificates acknowledging their award.

The meeting was adjourned at 4:00 pm.

# Advancement Update

## **FY 21/22 - Raised \$8,060,384**

- Exceeded \$6.5M goal!
- The ongoing pandemic continued to make engaging with alumni challenging but the advancement team did start traveling more this fiscal year which helped close some lingering gifts.

## **Created 9 new endowments, including:**

- 6 supporting student success
- 1 new endowed faculty position

# Advancement Update (con't.)

## Current Priorities:

1. Continue to fundraise for Student Success
  1. Undergraduate Scholarships
  2. Graduate Fellowships
  3. Undergraduate Research
  4. Dean's Research Scholars Program

## Advancement Update (con't.)

2. Continue to fundraise for faculty support:
  - ✓ Endowed Professorships
  - ✓ Endowed Chairs
  - ✓ Research
3. Continue to work toward developing a new comprehensive stewardship plan for the college and with the individual departments.
4. Explore philanthropic opportunities and develop a fundraising plan around collaborative interdisciplinary research themes.

# Advancement Engagement

**Goal** is to continue to connect and engage in a meaningful way with NatSci's 63,000 alumni via:

- NatSci/MSU Connect
- Regional Green and White events hosted by University Advancement
- Alumni events have been hybrid when appropriate:
  - ✓ Dean's Board of Advisor Meetings (October 2021 and April 2022)
  - ✓ Classes without Quizzes (April 2022)

## MSU/NatSci Enrollment Fall 2022

**MSU overall – 50,023** students (39,021 undergrad)

**NatSci Fall 2022 undergraduate majors** 5,737

**NatSci Fall 2022 incoming freshmen** 1,372

**NatSci Fall 2021 graduate students** 1,027

(889 Ph.D. students, 138 M.S. students)



## College of Natural Science (FY22)

- General fund allocation: **\$82M** (\$1,486M): **5.5%**
- Tenure stream faculty FTE: **273** (1,925): **14.2%**
- **Tuition dollars generated: \$195M** (\$1,010M): **19.3%**
- IDC from Grants: **\$19.9M** (\$104M): **18.6%**
- Federal Grant Income: **\$58.7M** (\$469M): **12.5%**
- Endowment: **\$111.5M**

From an ROI perspective, NatSci is a top performer at MSU!

# NatSci 2022-23 Budget

## Recurring Budget: \$73.5M – up 1.9%

\$ n/a	Salary increases provided after budget for FY23
\$ n/a	1% program efficiency reduction ended in FY22
\$ n/a	No % base budget reduction for FY23
\$ 1.4M	University allocation (new funding) (\$0.1m program support and \$1.3m position support)

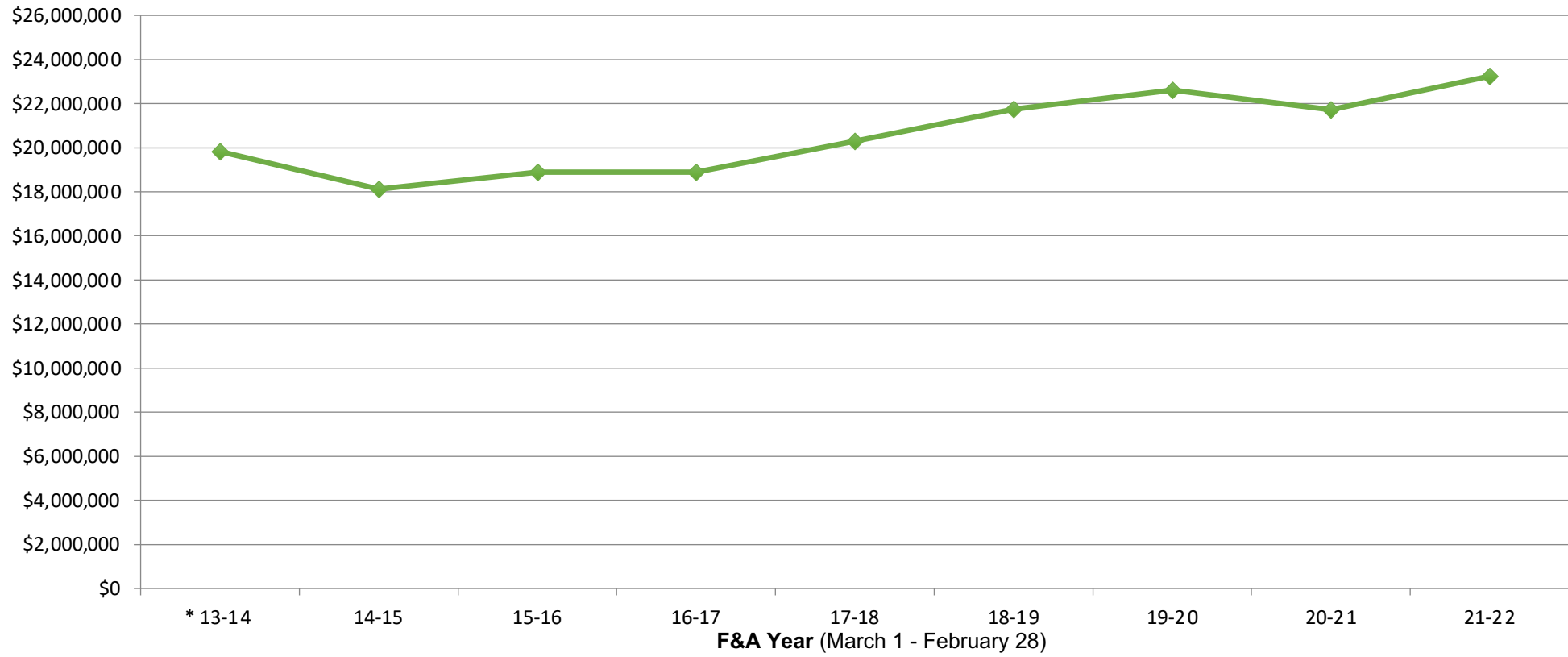
## Non-Recurring Budget: \$11.1M – up 16.8%

\$ 2.7M	Program allocations (enrollment pressure, spousal salaries, retention support)
\$ 4.3M	Off-campus & online instruction (no change) \$1.7M lost due to “revenue freeze”
\$ 4.1M	F&A (up \$0.1M)

# F&A Generated

## 13/14 through 21/22

(Bv NatSci Departments under all MAUs)



\* 13-14 through 19-20 have been reconciled to RFA trend and exclude FRIB and GLBRC



# Department Leadership Changes

**Tim Zacharewski**

Interim Chair

Department Biochemistry and  
Molecular Biology



# Department Leadership Changes

**Jeff Freymueller**

Chair

Department of Earth and  
Environmental Sciences



# Department Leadership Changes

**Jeff Schenker**

Chair

Department of Mathematics



# Department Leadership Changes

**Karl Olson**

Interim Chair

Department of Physiology



# Program Leadership Changes

**Albert Cohen**

Director

Actuarial Science Program





# Program Leadership Changes

**Beth Herbel-Eisenmann**

Director

Program in Mathematics  
Education



# Program Leadership Changes

**Jianping Hu**

Director

Molecular Plant Sciences



# Program Leadership Changes

**A.J. Robison**

Director

Neuroscience Program



# Program Leadership Changes

**Claire Vieille**

Director

Genetics and Genome Sciences

# Leadership Changes NatSci Dean's Office



**Gemma Reguera**  
Associate Dean,  
Faculty Affairs and  
Development



**Amy Ralston**  
Associate Dean,  
Graduate Studies

# Leadership Changes NatSci Dean's Office



**Danielle Flores Lopez**  
Interim DEI Assistant  
Dean



**Heather Eisthen**  
Faculty Excellence  
Advocate

# NatSci Dean's Office Promotions



**Val Osowski**  
Senior Communications  
and Marketing Director



**Kanchan Pavangadkar**  
Assistant Director,  
Student Success



**Kaitlin Peterson**  
Assistant Director of  
Pre-Health & Human  
Biology

# New Staff in NatSci Dean's Office



**Lisa Backus**  
Research Administrative  
Assistant, Office of  
Research Support



**Raychel Meyer-Payne**  
Human Biology and Pre-  
Health Advisor



**Holly Wright**  
Human Biology and  
Pre-Health Advisor



# NatSci Faculty & Academic Staff (31)

## Biological Sciences Program

- **Sara Garnett**, Instructor-Fixed Term
- **Jenn Kirk**, Instructor-Fixed Term
- **Kevin McCormick**, Instructor-Fixed Term

## Chemistry

- **Steven Hurney**, Specialist-Teaching
- **Elizabeth McGaw**, Specialist-Teaching
- **Tian (Autumn) Qiu**, Assistant Professor
- **Tuo Wang**, Associate Professor
- **Weiwei Xie**, Associate Professor

# NatSci Faculty and Academic Staff (cont.)

## Computational Mathematics, Science and Engineering

- **Longxiu Huang**, Assistant Professor
- **Kevin Miloshoff**, Specialist-Advisor

## Earth & Environmental Sciences

- **Anthony Kendall**, Assistant Professor

## Integrative Biology

- **James Moran**, Associate Professor

## Kellogg Biological Station

- **Alisha Shah**, Assistant Professor

# NatSci Faculty and Academic Staff (cont.)

## Mathematics

- **Kevin Lawrence**, Instructor-Fixed Term
- **Konstantin Matetski**, Assistant Professor
- **Michail Papparizos**, Instructor-Fixed Term

## Microbiology & Molecular Genetics

- **Andrew Crawford**, Specialist-Research
- **Yu Zhang**, Assistant Professor

## Physics & Astronomy

- **Kerim Gulyuz**, Assistant Professor Fixed Term
- **Kirtimaan Mohan**, Assistant Professor, Lyman Briggs

# NatSci Faculty and Academic Staff (cont.)

## Physiology

- **Byron Gipson**, Assistant Professor Fixed Term
- **Cameron Prigge**, Assistant Professor Fixed Term
- **Theodore Towse**, Associate Professor Fixed Term
- **Charlotte Vanacker**, Assistant Professor Fixed Term
- **Jennifer Doherty**, Assistant Professor Lyman Briggs
- **Shahnaz Masani**, Assistant Professor Lyman Briggs

## Plant Biology

- **Lauren Sullivan**, Assistant Professor

# NatSci Faculty and Academic Staff (cont.)

## Plant Research Laboratory

- **Stefan Schmollinger**, Assistant Professor Research-Fixed Term
- **Daniela Strenkert**, Assistant Professor

## Program in Mathematics Education

- **Kristen Vroom**, Assistant Professor Lyman Briggs

## Statistics and Probability

- **Hyokyoung Hong**, Associate Professor Fixed Term

# 2022 Faculty Honors

# National Academy of Inventors, Senior Member



## **Christoph Benning**

Director, MSU-DOE Plant Research Laboratory  
University Distinguished Professor  
MSU Foundation Professor  
Biochemistry & Molecular Biology/Plant Biology

Benning, internationally known for his research on plant lipid metabolism, was one of only 83 academic inventors elected to this group in 2022.

# U.S. Fulbright Scholar (2022-23)



## **Gregg Howe**

University Distinguished Professor  
MSU Foundation Professor  
Biochemistry & Molecular Biology

Howe, internationally known for his work on plant resilience and how plants respond to insect attacks, will head to Japan to apply cutting-edge genetic technologies to the development of crop plants that will contribute to sustainable agriculture and food security.



# 2022 Lifetime Achievement Awards



**Cheryl Sisk**

Professor, Neuroscience and  
Psychology

**Daniel S. Lehrman Lifetime  
Achievement Award, Society for  
Behavioral Neuroendocrinology**

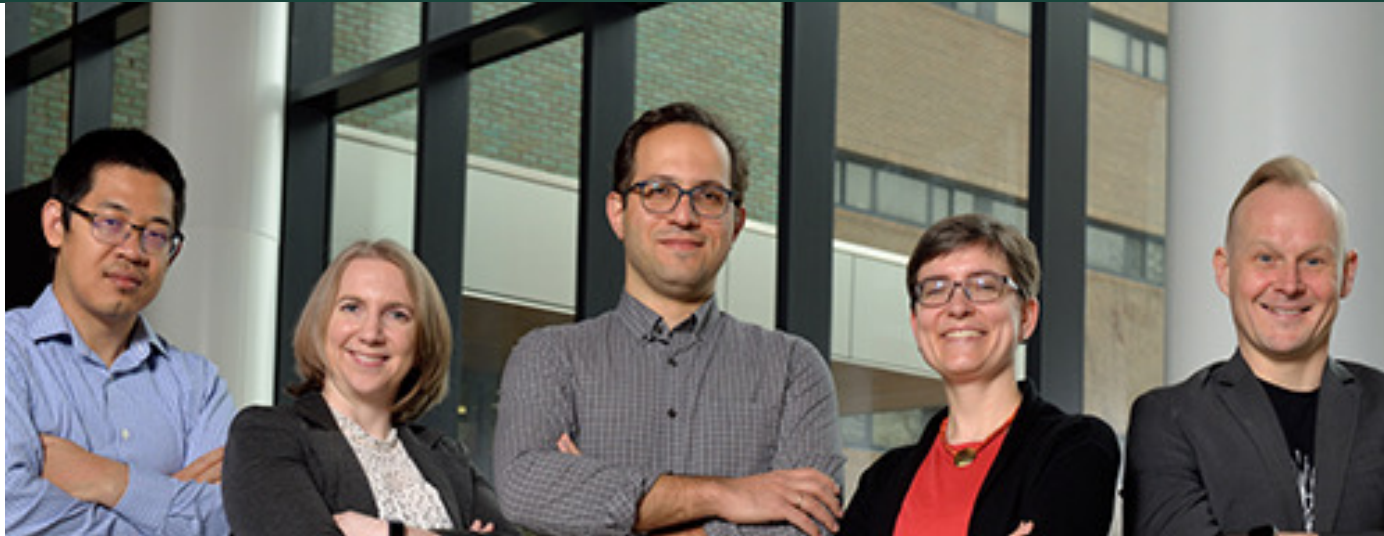


**James Tiedje**

Professor Emeritus,  
Microbiology & Molecular Genetics

**Lifetime Achievement Award,  
American Society of Microbiology**

# 2022 NSF Early CAREER Award Winners



(L to R): **Huan Lei** (CMSE, Statistics & Probability), **Elizabeth Munch** (CMSE, Mathematics), **Mohammad Maghrebi** (Physics & Astronomy), **Julia Ganz** (Integrative Biology), and **Johannes Pollanen** (Physics & Astronomy), received 2022 NSF Early CAREER Awards. Collectively, over the next 5 years, they will receive more than \$3.7 million in NSF funding.

**There are currently 24 Early CAREER grants in effect in NatSci!**

# Foundation/Agency/Organization Awards

## North American Cohort, Earth Leadership Program

- **Sarah Evans**, Microbiology & Molecular Genetics/KBS

## Alfred P. Sloan Fellowship

- **Dalton Hardisty**, Earth & Environmental Sciences
- **Ilya Kachkovskiy**, Mathematics

## Iota Sigma Pi – National Honorary Member

- **Angela K. Wilson**, Chemistry

## Organization of Biological Field Stations – Advancing Equity Award

- **Kellogg Biological Station**

# Professional Society Awards

## American Chemical Society – Ahmed Zewail Award

- **Marcos Dantus**, Chemistry/Physics & Astronomy

## American Physical Society Fellowship

- **Danny Caballero**, Physics & Astronomy
- **Huey-Wen Lin**, Mathematics/CMSE

## American Physical Society – Excellence in Education Award

- **Danny Caballero**, Physics & Astronomy

## American Physical Society – Award for Improving Undergrad Physics Education

- **Department of Physics & Astronomy**

# Professional Society Awards

## American Society for Plant Biologists Awards

- ASPB Fellows: **Erich Grotewold**, Biochemistry & Molecular Biology; and **Jiming Jiang**, Plant Biology
- Early Career Award: **Emily Josephs**, Plant Biology
- Robert Rabson Award: **Berkley Walker**, Plant Biology/PRL

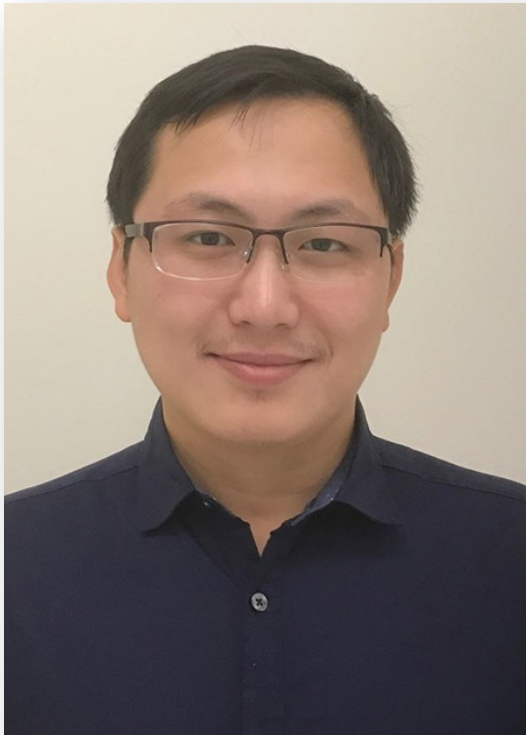
## American Statistical Association Fellowship

- **Yuehua Cui**, Statistics and Probability

## Society for Industrial and Applied Mathematics

- **Keith Promislow**, Mathematics

# Endowed NatSci Faculty



Carl H. Brubaker, Jr. Professor

**Tuo Wang**

Chemistry

Lappan-Phillips Professor of  
Computing Education

**Aman Yadav**

CMSE



# William J. Beal Outstanding Faculty Awards



**Jeffrey Conner**  
Plant Biology



**Gemma Reguera**  
Microbiology & Molecular  
Genetics



**Jetze Tepe**  
Chemistry



**Christopher Waters**  
Microbiology & Molecular  
Genetics

# Other Universitywide Honors



## **Victor DiRita**

Rudolph Hugh Professor  
Microbiology & Molecular Genetics

**Simmons Chivukula Award for  
Academic Leadership**



## **Jetze Tepe**

Chemistry

**Innovator of the Year,  
MSU Innovation Center**



# Recent Grants



College of Natural Science  
MICHIGAN STATE UNIVERSITY

# Some Recent Grants

## DOE

*Mathematical Multifaceted Integrated Capability Center (MMICC) grant (CHaRMNET) PI: Andrew Christlieb, CMSE, Mathematics, \$15 million (2022-2027)*

*The Center for Catalysis in Biomimetic Confinement (Energy Frontier Research Center) PI: Cheryl Kerfeld, Biochemistry & Molecular Biology/PRL, \$10.65 million (2022-2026)*

*A systems framework to enhance the potential of camelina as oilseed crop PI: Erich Grotewold, Biochemistry & Molecular Biology, \$2.07 million (2022-2025)*

## NIH

*Revealing pathways and kinetics of molecular recognition with advanced molecular simulation algorithms PI: Alex Dickson, Biochemistry & Molecular Biology, \$1.32 million (2022-2026)*

*Folding and degradation of membrane proteins (NIGMS) PI: Heedoek Hong, Chemistry, \$1.54 million, (2022-2027)*

# Recent Grants

## NIH (con't.)

*Examining PHGDH-mediated activation of sialic acid metabolism to drive triple-negative breast cancer metastasis (RO1) PI: **Sophia Lunt**, Biochemistry & Molecular Biology, \$2.02 million (2022-2027)*

*Structural basis of antimicrobial peptide sensing and resistance PI: **Ben Orlando**, Biochemistry & Molecular Biology, \$1.87 million (2022-2027)*

*Understanding the role of testosterone in how males and females experience depression PI: **A.J. Robison**, Physiology/Neuroscience, \$3 million (2022-2026)*

*AI-based platform for predicting emerging vaccine-escape variants and designing mutation-proof antibodies (NIH RO1) PI: **Guowei Wei**, Mathematics, \$2.7 million (2022-2027)*

## NSF

*Harnessing the data revolution to enable predictive multi-scale modeling across STEM PI: **Daniel Appelo**, CMSE, Mathematics \$3 million (2022-2027)*

# Recent Grants

## NSF (cont.)

*Lipid derived signaling involving chloroplasts (RC1) PI: Christoph Benning, PRL/Biochemistry & Molecular Biology, \$1.07 million (2022-2026)*

*U.S. Atlas Operations: Discovery and Measurement at the Energy Frontier PI: Wade Fisher, Physics & Astronomy, \$3 million (2022-2027)*

*Evaluating Effects of automatic feedback aligned to a learning progression to promote knowledge-in-use PI: Kevin Haudek, CREATE for STEM, \$2.04 million, (2022-2026)*

*Atlas Great Lakes Tier-2 Center (AGL-T2) PI: Daniel Hayden (MSU), Physics & Astronomy, \$1.86 million (2022-2027)*

*Algebraic and Geometric Topology at Michigan State (RTG) PI: Matt Hedden, Mathematics, \$1.93 million (2022-2027)*

# Recent Grants

## NSF (con't.)

*Collaborative Research: Frameworks: Interoperable high-performance classical, machine learning and quantum free energy methods in AMBER* **PI: Kenneth Merz**, Chemistry, \$2.66 million (2022-2026)

*Using problem-based learning analytics to investigate individual and collaborative mathematics learning in a digital environment over time* **PI: Elizabeth Phillips**, PRIME, \$1.62 million (2022-2026)

## W.M. Keck Foundation, Science and Engineering Program

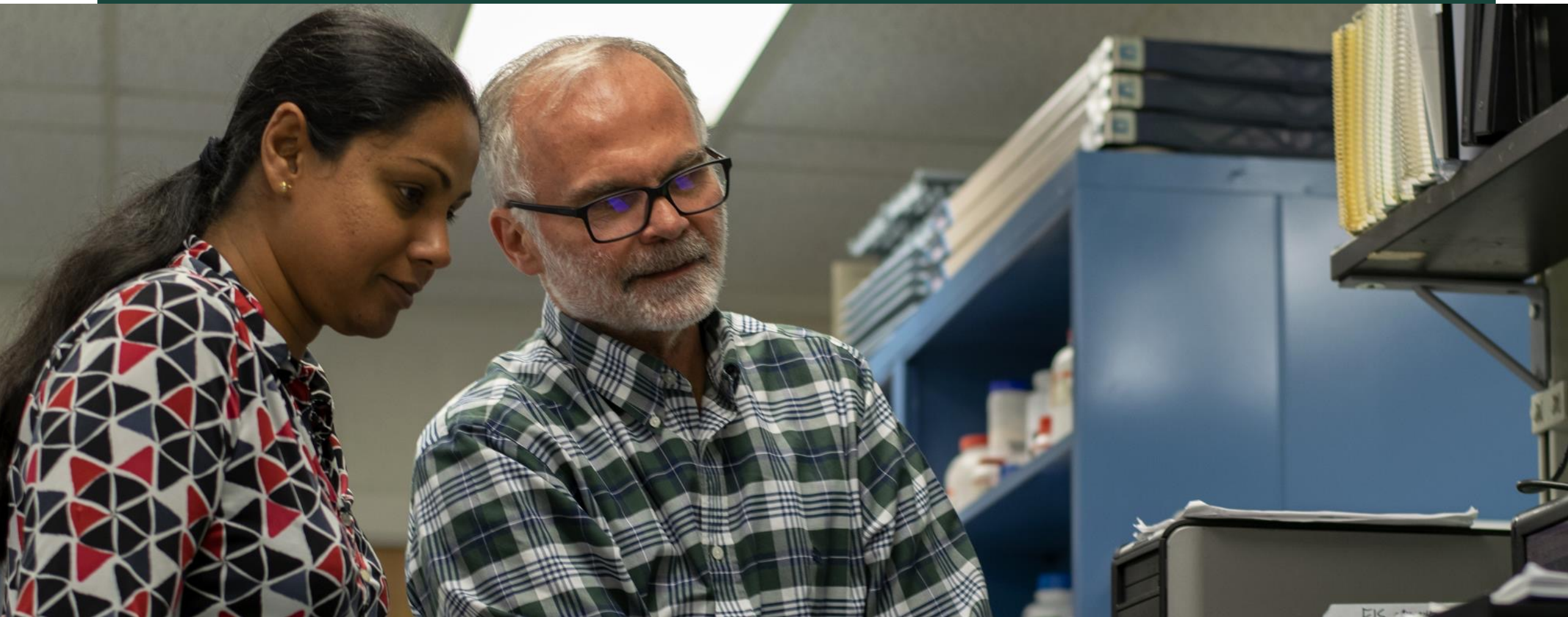
*Gradient Reconstruction Imaging: Achieving diffraction-less imaging on living systems* **Pis: Marcos Dantus, Elad Harel**, Chemistry, \$1.3 million (2022-2025)

# NatSci Strategic Priorities and Initiatives

## Implementing the Strategic Plan: Some Metrics



# Graduate Training Program Grants AY22 Baseline: 7, Current: 9, AY27 metric: 14



# Diversity Hiring Processes Leadership; TS faculty; NatSci community





# Student Success

## Reduce DFW rates, increase learning, expand career options



# Cross-College Themes

Climate, Environmental Sciences, Plant Sciences  
Data Science, AI, Quantum Computing, Cybersecurity, Gaming  
Biomedical and One Health Scholarship  
Chemical, Mathematical and Physical Sciences  
STEM Education Research





**THANK YOU!**

# College of Natural Science Awards 2022-23

# NatSci Outstanding Faculty Award 2022-2023

These awards go primarily to senior faculty members in recognition of outstanding contributions in scholarly research and teaching to the college and the university.



# **NatSci Outstanding Faculty Award**

**2022-2023**

**Robert Maleczka**  
Chemistry



# **NatSci Outstanding Faculty Award**

**2022-2023**

**Frances Trail**  
Plant Biology



# **NatSci Outstanding Faculty Award**

**2022-2023**

**Jie Wei**  
**Physics & Astronomy/FRIB**





# **NatSci Outstanding Faculty Award**

**2022-2023**

**Angela Wilson**

**Chemistry/Dean's Office**

# NatSci Research Leadership Award 2022-2023

Research Leadership Awards are given each year to recognize NatSci tenured full professors for outstanding, impactful research and internationally recognized leadership in the field.



# Research Leadership Award

**2022-2023**

**B. Alex Brown**

Physics & Astronomy



# Research Leadership Award

**2022-2023**

**Jiming Jiang**  
Plant Biology

# 2022-23 Mid-Career Award Winner

Mid-Career Research Awards are given each year to recognize NatSci tenured faculty for outstanding research. The award is based on success and impact of publications, funding, and other criteria that demonstrate excellence in the awardee's field



# Mid-Career Research Award

**2022-2023**

**Shannon Manning**

Microbiology & Molecular  
Genetics



# Mid-Career Research Award

**2022-2023**

**Shinhan Shiu**  
Plant Biology

# 2022-23 Early Career Research Award

Early Career Research Awards are given each year to recognize NatSci tenure-track faculty for outstanding research. The award is based on success in publications, funding, and other criteria that signify excellence





# Early Career Research Award

**2022-2023**

**Kendall Mahn**

Physics & Astronomy



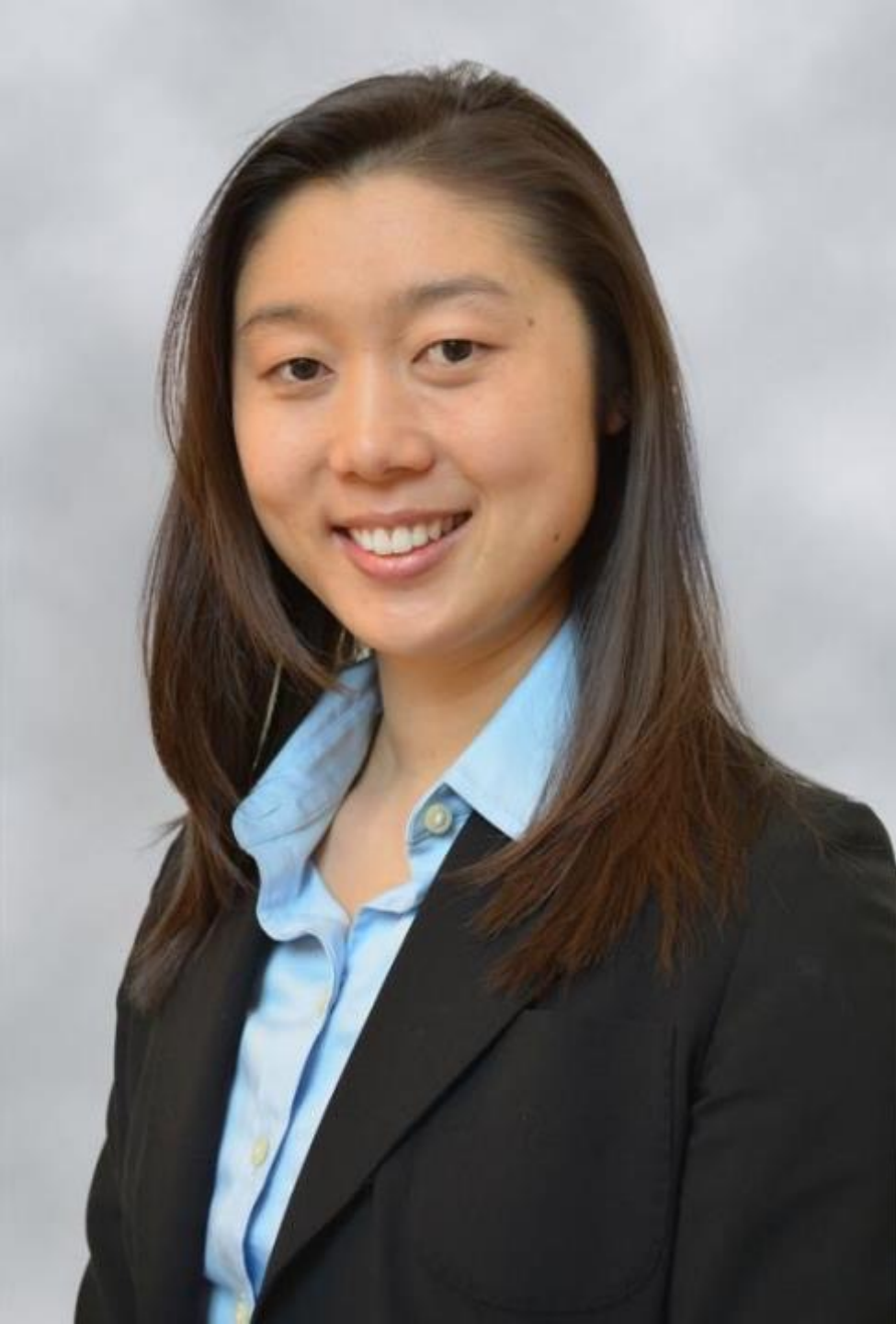
# Early Career Research Award

**2022-2023**

**Phoebe Zarnetske**  
Integrative Biology

# NatSci Teacher-Scholar Award 2022-2023

These awards go to assistant and associate professors for their outstanding contributions to teaching and scholarly research.



# **NatSci Teacher-Scholar Award**

**2022-2023**

**Sophia Lunt**

**Biochemistry & Molecular  
Biology**



# **NatSci Teacher-Scholar Award**

**2022-2023**

**Brent Nelson**  
Mathematics

# NatSci Undergraduate Teaching Award 2022-2023

These awards go to faculty members who have demonstrated outstanding contributions to, and continuing involvement in, creative and engaging ways to foster student learning and instruction.



# **NatSci Undergraduate Teaching Award**

**2022-2023**

**Kevin Haudek**

**Biochemistry & Molecular  
Biology**



# **NatSci Undergraduate Teaching Award**

**2022-2023**

**Jaideep Singh**

**Physics & Astronomy/FRIB**



# NatSci Junior Faculty Mentoring Award 2022-2023

This award goes to faculty members who have made outstanding contributions to mentoring junior faculty members throughout their academic career.



# NatSci Junior Faculty Mentoring Award

**2022-2023**

**Amy Ralston**

Biochemistry & Molecular  
Biology/Dean's Office

# NatSci Postdoctoral Mentoring Award 2022-2023

This award goes to faculty members who have made outstanding contributions to the effective mentoring of postdoctoral researchers in both professional development and holistic balance.



# NatSci Postdoctoral Mentoring Award

**2022-2023**

**Diane Ebert-May**

Plant Biology

# NatSci Distinguished Academic Staff Award 2022-2023

This award goes to academic staff members for outstanding contributions to improving the success of students in the college.



# **NatSci Distinguished Academic Staff Award**

**2022-2023**

**Kathryn Severin**

**Chemistry**

# Undergraduate Academic Advisor Award 2022-2023

This award goes to faculty members or academic staff for their outstanding service as advisors. It is awarded by the NatSci Student Advisory Council.



# **Undergraduate Academic Advisor Award**

**2022-2023**

**Sheba Onchiri**  
Chemistry



# Graduate Academic Advisor Award 2021-2022

This award goes to faculty members or academic staff for their outstanding commitment and dedication to student success. It is awarded by the NatSci Student Advisory Council.



# **Graduate Academic Advisor Award**

**2022-2023**

**Remco Zegers**

**Physics & Astronomy**

# NatSci Support Staff Award 2022-2023

These awards go to staff members who have exceptional job performance and contributions that have improved the university's ability to fulfill its missions.



# **NatSci Support Staff Award**

**2022-2023**

**Julie Pozega**

Center for Integrative Studies  
in General Science



# **NatSci Support Staff Award**

**2022-2023**

**Tiphani Scott**

**Chemistry**

# NatSci Excellence-in-Teaching Citation 2022-2023

These awards go to instructors and teaching assistants who have distinguished themselves in undergraduate classroom teaching.



# **NatSci Excellence-in-Teaching Citation**

**2022-2023**

**S. Kevin McCormick**

**Integrative Biology/BioSci**



# **NatSci Excellence-in-Teaching Citation**

**2022-2023**

**Joseph Riedy**  
Integrative Biology



# NatSci Undergraduate Learning Assistant Award 2022-2023

This award is given in recognition of the care given and the skill shown in meeting classroom responsibilities in the College of Natural Science.



# **NatSci Undergraduate Learning Assistant Award**

**2022-2023**

**Ava Bassett**  
Neuroscience



# NatSci Undergraduate Learning Assistant Award

**2022-2023**

**Christina Liu**  
Integrative Biology

# NatSci Faculty Teaching Prize 2022-2023

**NatSci Faculty Teaching Prizes** are made to fixed term and tenure system faculty in recognition of excellent teaching. Nominations are made by department chairs during the annual faculty raise process.



# NatSci Faculty Teaching Prize

2022-2023

**Michael Brown**  
Mathematics



# **NatSci Faculty Teaching Prize**

**2022-2023**

**Corrine Higley**

Biological Science Program



# **NatSci Faculty Teaching Prize**

**2022-2023**

**Krystyna Kijewska**  
Chemistry



# NatSci Faculty Teaching Prize

2022-2023

**Dola Pathak**

Statistics and Probability



# CISGS Awards 2022-2023

The next four awards are given by the college's  
**Center for Integrative Studies in General Science:**

# Lorena V. Blinn Endowed Teaching Award 2022-2023

This award goes to faculty members who exhibit expertise in teaching and in advancing pedagogy and the education offered by CISGS.



# Lorena V. Blinn Endowed Teaching Award

**2022-2023**

**Matt Oney**

Center for Integrative Studies  
in Science

# James D. Hoeschele Endowed Teaching Award 2022-2023

This award recognizes outstanding teaching in integrative studies.



# **James D. Hoeschele Endowed Teaching Award**

**2022-2023**

**Scott Winterstein**

Department of Fisheries and  
Wildlife

# Ronald W. Wilson Endowed Teaching Award 2022-2023

This award goes to a faculty or staff member for outstanding contributions to teaching and scholarship in integrative studies.



# Ronald W. Wilson Endowed Teaching Award

**2022-2023**

**Rachael Lund**  
Mathematics

# Harlo Mervyn Mork Memorial Excellence in Teaching Award 2022-2023

This award is given to teaching assistants in recognition of outstanding contributions to the improvement of undergrad education in integrative studies.





# Harlo Mervyn Mork Memorial Excellence-in- Teaching Award

**2022-2023**

**Sierra Casten**

Physics & Astronomy



# Harlo Mervyn Mork Memorial Excellence-in- Teaching Award

**2022-2023**

**Jack Schulte**

Physics & Astronomy

# Norman L. and Olga K. Fritz Excellence in Teaching Award 2022-2023

This award is open to teaching faculty of any rank, fixed term or tenure, and recipients are selected by the College of Natural Science award committee with student input. The Fritz Award was established to honor and encourage individuals who have exhibited excellence in teaching in the college, especially in physics and mathematics, at Michigan State University.



# **Norman L. and Olga K. Fritz Excellence-in-Teaching Award**

**2022-2023**

**Devin Silvia**

Computational Mathematics,  
Science and Engineering





THANK YOU!

College of Natural Science  
Annual Meeting  
November 18, 2022

