

MSU PA/FRIB 2nd Annual Career Event 2023

May 9th, 12-6pm

FRIB 1300

Event Schedule

Welcome Speaker: Julie Rojewski

- ☐ PhD Career Development & Networking

Lunch

- ☐ For those attending the full event, please enjoy the complimentary Qdoba bar!

Panel Session 1

- ☐ Jason Gorski, Rhiannon Hutton, Chris Sullivan, Matthew Reese, & Michael Scott

•Coffee Break

- ☐ Return by 3:20pm for Panel 2

•Panel Session 2

- ☐ Richelle Teeling-Smith, Paige Abel, & Zach Constan

•Refreshments

Purpose & Goals



Provide insight into career paths outside of academia for physics students post-degree



Get answers to questions about possible careers, navigating a career path post-PhD, potential obstacles, and more



Get tips for finding your “dream job”, being successful, finding work-life balance, and more



Get networking advice and career development resources from our welcome speaker Dr. Julie Rojewski!

Dr. Julie Rojewski

- ▶ Director of PhD Career Development at MSU
- ▶ Supports career and professional development of graduate students via workshops, fellowship/cohort programs, internship opportunities, and more
- ▶ Collaborates and publishes with STEM partners to develop and assess professional development programs

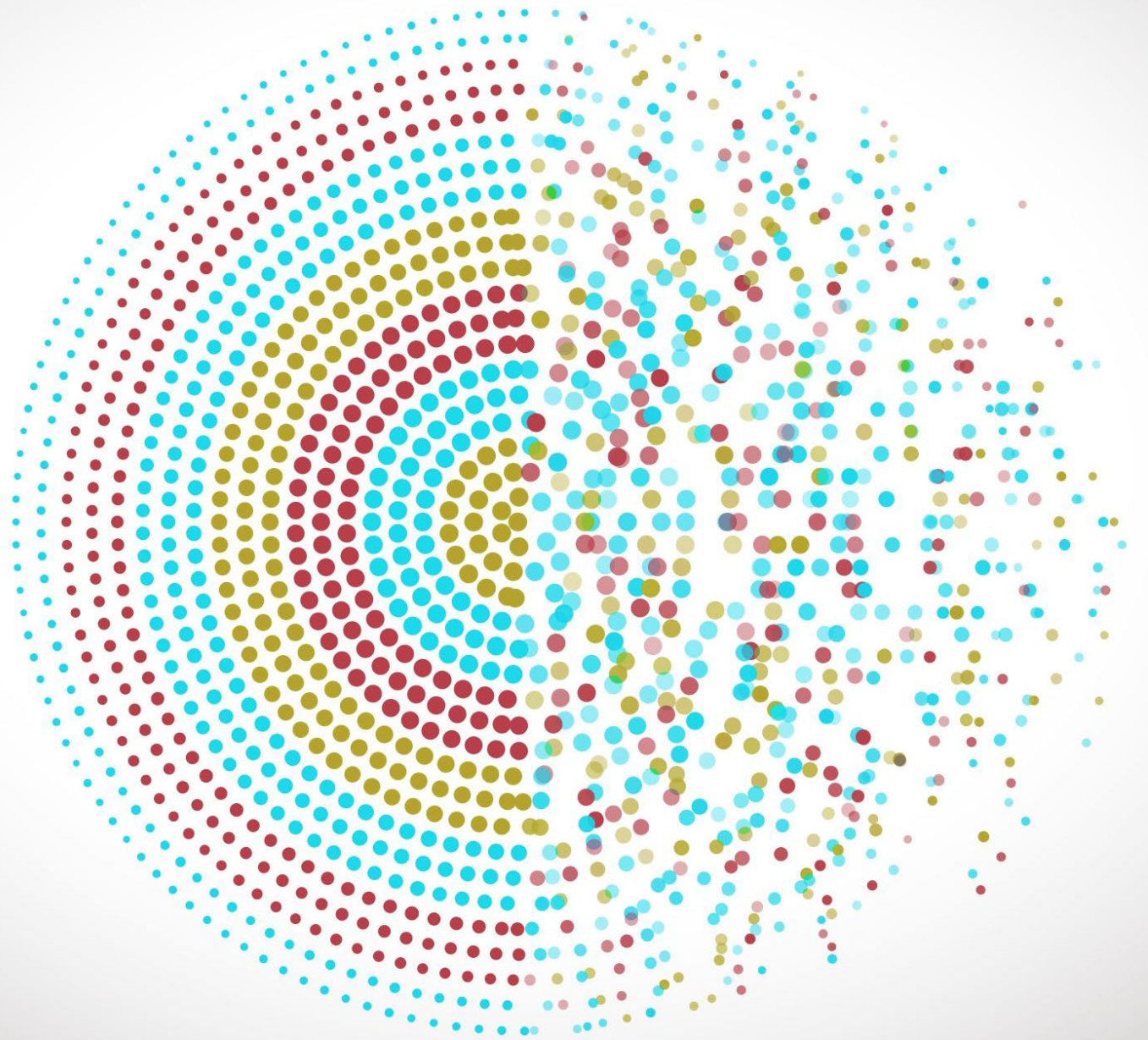
Networking: A Primer
MSU PA/FRIB

Julie Rojewski, PhD

**Director of Graduate Career
Development**

MSU Graduate School

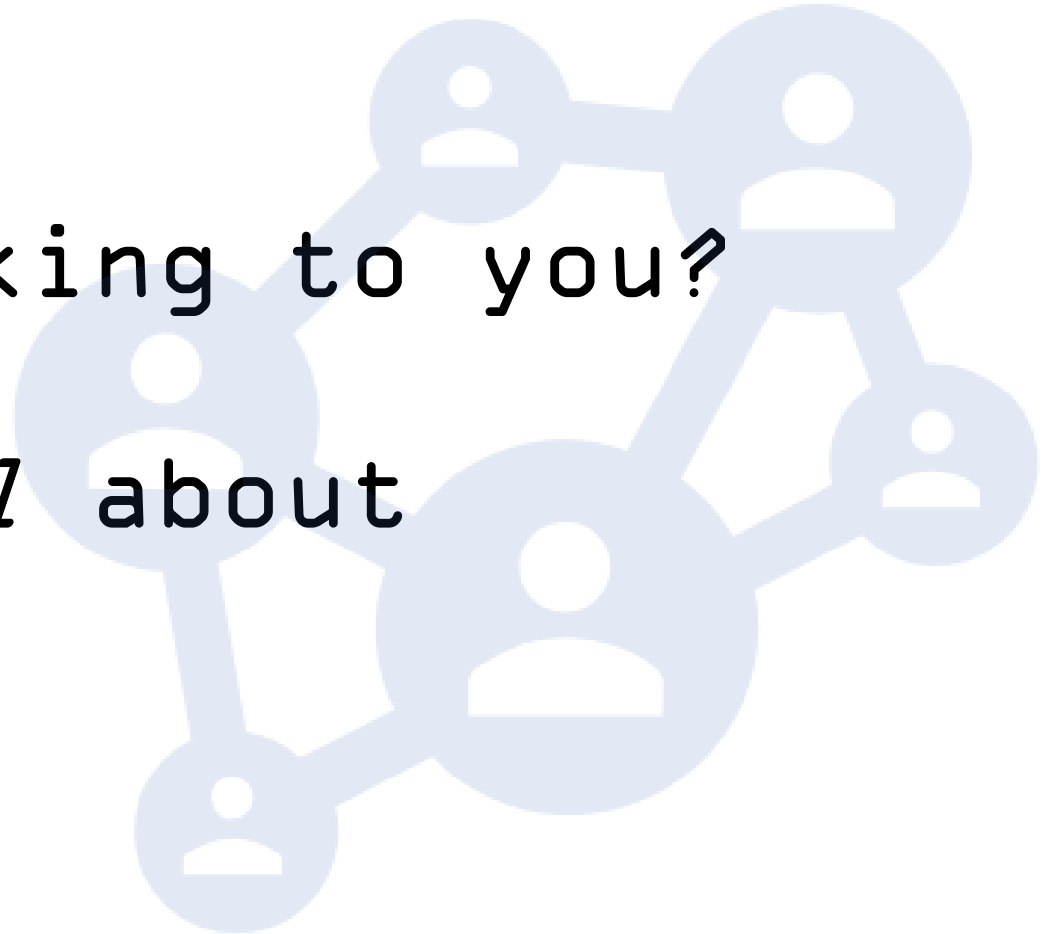
rojewsj@msu.edu





What is networking to you?

How do you *feel* about networking?





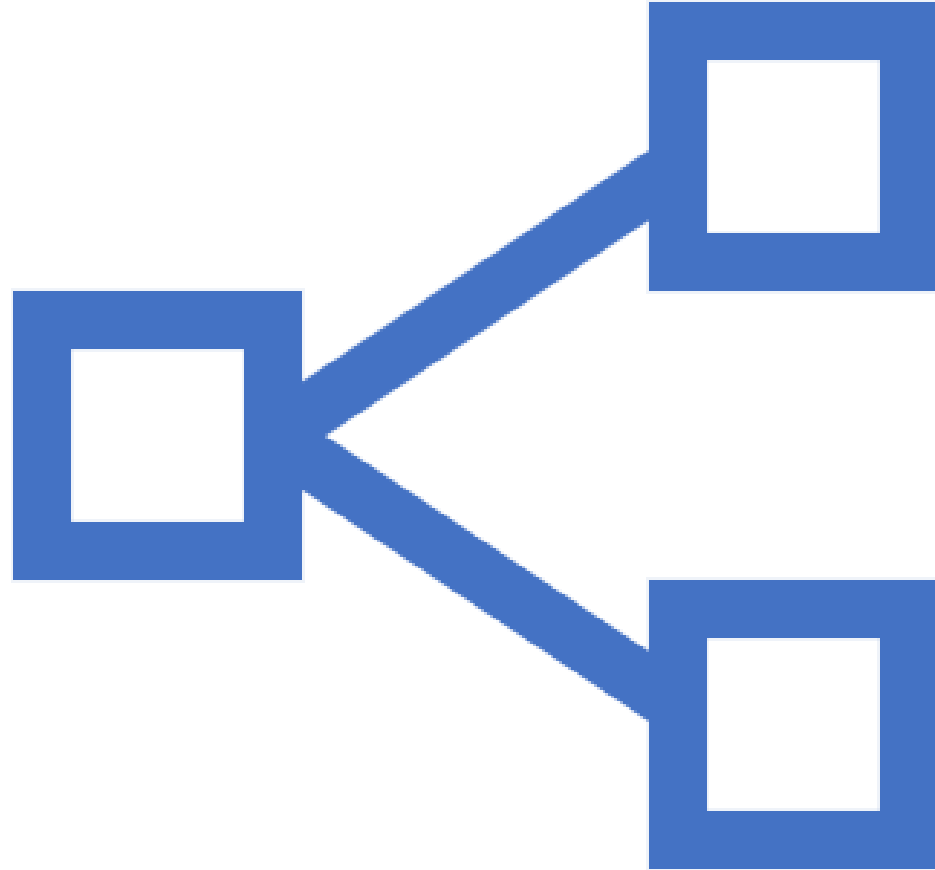
Networking
According to
Julie

It is an essential part of modern graduate training: working alone or with a small cohort of colleagues in a discipline is not ideal.

Networking is a skill that can be taught and learned.

What is Networking?

- Making connections and building relationships with other people.
- It is about curiosity!
- It is a skill to constantly practice and hone. Daily.





Why do it?

- Careers are not built alone.
- Science isn't done alone.
- It's gratifying (maybe, even fun).
- The more you do it, the better you become at it

Two types of networking

Transactional

- I'll find a connection when I need it.
- I'll ask for help if I need it, and then I will return the favor at a later date.
- Temporary and self-serving

Relational

- Connections happen all the time.
- I'll connect with people even if I don't benefit from the connection.
- Reciprocal and ongoing

How to make it relational

Strong relationships take time.

Start with one conversation, and don't see that as the end.

Successful relationships take time.

You may have an urgent need, but you need to consider the needs of the other person as well.

Don't focus on your agenda and the expense of the connection.

Enduring relationships continue to connect.

Focus on meaningful connection points.

Relationships require nurturing, but don't make it weird.

Great relationships require going after it.

Reach out. Make introductions. Put yourself out there.



Two spheres for networking

Organic Networking

Spaces where people expect to engage with new people

Conferences, poster presentations, luncheons, LinkedIn requests, etc.

Intentional Networking

Creating opportunities to connect with someone new

Informational interviews, letters of inquiry, requests to be introduced to someone, etc.



You are going
to start today



How to do it

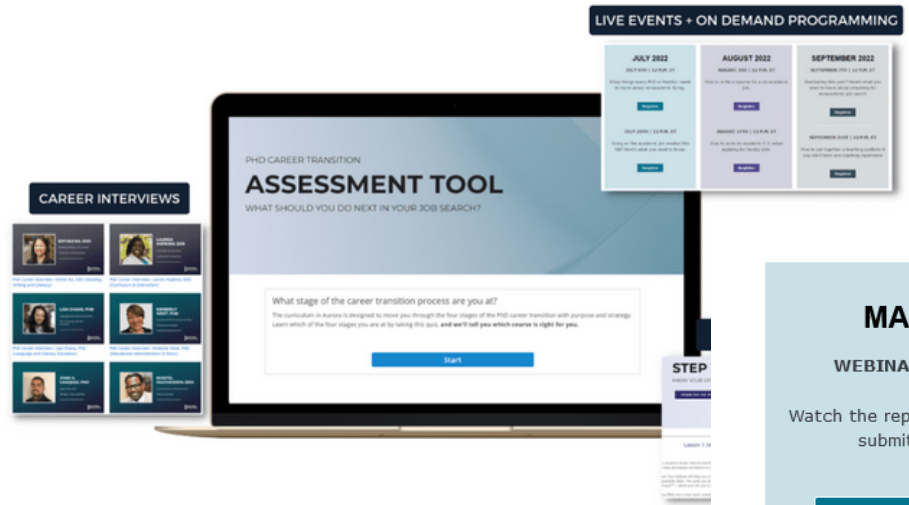
- **Look around:** Sit near someone you don't know that well. Talk about a variety of topics (and think about how you can extend people's interests with your own knowledge and connections)
- Alumni Panel: Send a follow up email. Include details, connection, resources.
- LinkedIn: Keep your profile up to date. Read and connect with people.
- Twitter (and other SM): It's a tool.
- Take advantage of MSU Resources and Events!

EMPOWERING PHDS TO BUILD MEANINGFUL CAREERS

BEYOND THE PROFESSORIATE

PHD CAREER TRAINING PLATFORM

For Individuals For Institutions



MARCH 2023

WEBINAR SERIES REPLAYS

Watch the replays from each week and submit your homework.

- Week 1: Identify Your Skills
- Week 2: Value, Motivators, and Interests
- Week 3: What Will the World Pay You to Do
- Week 4: Phd Career Transition Story
- Week 5: Next Steps: Networking

40,000+ Reached by Beyond Prof products & services since 2017

116+ Hours of training delivered to doctoral students and postdocs every year

92% Of platform users found structured programming helpful

50+ Subscribing partners across the US and Canada





The more
acquaintances
you have, the
more powerful
you are.

-Malcolm Gladwell

A network diagram consisting of approximately 15 white pushpins arranged in a roughly circular pattern on a teal background. Each pushpin is connected to several other pushpins by thin black lines, creating a complex web of connections. A single red pushpin is positioned in the center of the network, standing out from the others.

Go forth and
network!

Thank you!

Lunch!

Be prepared for the 1st Panel
Session to begin at 1:30pm



Panel Session 1

1:30-3:00pm

Moderator: Zarif Rahman

Zoom Moderator: Felix Ndayisabye

Jason Gorski
Rhiannon Hutton
Michael Scott
Chris Sullivan

Dr. Jason Gorski (jason@micro-nova.com)

- ▶ Ph.D. in Systems Engineering from Oakland University
- ▶ Researched reconfigurable computing architectures, high-level synthesis techniques, and wireless energy transfer
- ▶ Dissertation involved developing the FPOA (Field-Programmable Operation Array), a medium-grained reconfigurable computing architecture for the implementation of HLS-generated circuitry
 - ▶ This was awarded US Patent 10,482,209
- ▶ Previous industry roles spent developing mission-critical embedded software as a defense contractor and designing FPGA-based mixed signal circuitry and PCB layouts for scanning probe microscope controllers
- ▶ Founded MicroNova in 2012
 - ▶ MicroNova LLC is an embedded systems research and development company based in Metro Detroit

Dr. Rhiannon Hutton (rhutton@ida.org)

- ▶ PhD Physics, MSU/NSCL 2011
 - ▶ Member of Charge-Exchange Group, Co-Founder of WaMPS
- ▶ Director's Postdoc Fellow, LANL 2011-2014
 - ▶ Part of NIFFTE Collaboration (Fission Measurements), Organized Fission Seminar Series and inaugural FIESTA School and Workshop
- ▶ Research Staff Member, Institute for Defense Analyses (IDA)
 - ▶ System Evaluation Division (SED) 2014-2020
 - ▶ Applied scientific training, data analysis, and modeling/simulation skills to a variety of national security analyses (nuclear weapons, cybersecurity, naval mines, surveillance and reconnaissance...)
 - ▶ Strategy, Forces and Resources Division (SFRD) 2020-Present
 - ▶ Lead interdisciplinary teams of researchers applying academic training, analytic thinking, and data analysis skills to most pressing issues in nuclear enterprise (Department of Defense and Department of Energy) - specifically, focused on force structure and nuclear modernization
 - ▶ Other IDA Activities - Founder/Co-Lead SFRD DEI Team, Founder/Co-Lead Nuclear Issues Cross-Divisional Working Group, Campus Partner (recruiter) for LANL and MSU, Mentor of Summer Associates...
 - ▶ Promoted to Assistant Director in 2022 - in addition to research, now responsible for Talent Management and Staff Development within SFRD

Dr. Michael Scott (scott1mj@gmail.com)

- ▶ B.S. from Central Michigan University in physics and mathematics
- ▶ M.S. and Ph.D. in nuclear physics from Michigan State University, researched isovector giant monopole resonance
- ▶ Experience as a supply chain and project manager with cross functional experience supporting and leading strategic operational and expansion initiatives in the CPG and agricultural sectors
- ▶ History of assembling a multi-departmental group to implement projects and process improvement across production, planning, sales, marketing, finance, shipping, maintenance, capital asset procurement and purchasing.
- ▶ Currently the Associate Director of Supply Chain at POM Wonderful

Dr. Chris Sullivan (chris@sullivan.ai)

- ▶ [2012-2018] Physics and Astronomy & CMSE dual PhD - NSCL/FRIB
- ▶ [2018] Joined Intel as a Deep Learning (DL) Compiler Engineer
 - ▶ Focused on NVIDIA GPU optimizations in Intel's nGraph DL compiler
- ▶ [2019] Switched focus to Intel's Nervana neural processing unit (NPU)
- ▶ [2020.H1] Joined Habana Labs startup during acquisition by Intel
- ▶ [2020.H2 - now] Joined OctoML, technical lead over automatic optimization of DL workloads on a variety of hardware accelerators in the TVM compiler.
 - ▶ Senior Principal Engineer at OctoML



Coffee Break

Be prepared for the 2nd Panel
Session to begin at 3:20pm



Panel Session 2

3:20-4:50pm

Moderator: Zarif Rahman

Zoom Moderator: Felix Ndayisabye

Paige Abel

Zach Constan

Matthew Reese

Richelle Teeling-Smith

Dr. Paige Abel (Emily.Abel@inl.gov)

- ▶ Ph.D. from Michigan State University
- ▶ Worked in Greg Severin's radiochemistry group in October 2016, graduated in December 2020
- ▶ In the last semester of graduate school, worked part time for Niowave, a radiopharmaceutical company in Lansing, MI
- ▶ Post-graduation continued working for Niowave for about 6 months
 - ▶ Worked on process chemistry for radiopharmaceutical production including separation chemistry and verification tests for quality control. I
- ▶ Currently works in the Analytical Lab at Idaho National Laboratory after deciding a different work environment was needed to thrive
 - ▶ Performed a variety of work such as hot cell work, separations chemistry, and analytical measurements to support research into novel nuclear fuel types



Dr. Zach Constan (constan@frib.msu.edu)

- ▶ B.S. in physics from Albion College
- ▶ Ph.D. research in psychoacoustics at Michigan State University
- ▶ Taught college astronomy for three years
- ▶ Currently is the Public Education and Outreach Coordinator for the Facility for Rare Isotope Beams
- ▶ Organizes and conducts events such as tours, talks, camps, open houses, etc.
- ▶ Collaborates with creative partners to develop new and unique ways to tell our story



Dr. Matthew Reese (Matthew.Reese@nrel.gov)

- ▶ B.S. in Physics from Caltech (2001)
 - ▶ Thesis/labwork on microarrays for biophysics and worked for a laser communications company
 - ▶ **Skills Acquired:** programming, plumbing, simple digital circuit design, lasers & optics, custom equipment design, building & automation, Photo-lithography, optical microscopy
- ▶ Ph.D. Applied Physics, Yale University (2006)
 - ▶ Thesis on superconducting nanoelectronic THz sensors
 - ▶ **Skills Acquired:** machining, welding, vacuum, cryogenics, simple analog circuit design, cleanroom, e-beam lithography, evaporation, DC Sputtering, electron microscopy, high frequency & low noise electrical measurements, contact profilometry
- ▶ Post-doc National Renewable Energy Laboratory (2006-2009).
 - ▶ Worked on organic photovoltaics, degradation science, water vapor transmission rate measurements/barriers
 - ▶ **Skills Acquired:** lab design, ink development & deposition via solution processing; vacuum lamination, optical profilometry, UV-Vis-NIR, quantum efficiency, solar simulation, water vapor transmission rate measurements
- ▶ **Currently works at NREL as Cadmium Telluride Photovoltaics Technology Lead**
 - ▶ Story-telling through proposals, papers, & presentations; Train people, Community building, Initiate/maintain collaborations; Design experiments/help others figure out next move, fix/troubleshoot broken equipment, new ideas/directions for research; (Occasionally) do experiments, one-off measurements, design or build new tools & processes
 - ▶ **Skills Acquired:** close-space sublimation, rapid thermal processing, RF sputtering, Hall effect, (time-resolved) photoluminescence

Dr. Richelle Teeling-Smith (teeling.richelle@gmail.com)

- ▶ B.S. in physics from Kent State University in 2009
- ▶ M.S. and Ph.D. in physics from the Ohio State University in 2011 and 2015 with research focused on the study of multi-modal imaging techniques for nanoscale condensed matter and biophysical systems
- ▶ Spent 7 years in post-graduate academia:
 - ▶ Worked as a community college lecturer for 2 years
 - ▶ Secured an Assistant Professorship at the University of Mount Union, held for 5 years
- ▶ Pivoted to an industry role, currently works as a data scientist for JP Morgan Chase on the Consumer Bank Customer Analytics team
 - ▶ Provided the opportunity to leverage almost 15 years of technical expertise to solve complex analytical problems and create solutions that drive the business decisions of the firm.
- ▶ Founding co-PI and current Board Member of STEMcoding Education Ohio, a non-profit organization that develops course content and teacher resources for the integration of computation and data science into high school mathematics and science courses
- ▶ Mom of three children, ages 3, 8, and almost 10 leaving her with no free time, but she imagines if she did have free time, she'd take a nap...



Thank you to:

- ▶ All of our Panelists
- ▶ Julie Rojewski
- ▶ Michigan State University
- ▶ Facility for Rare Isotope Beams
- ▶ All of you attending!
- ▶ Organizing Committee:
 - ▶ Remco Zegers
 - ▶ Kim Crosslan
 - ▶ Ruby Ghosh
 - ▶ Jaideep Singh
 - ▶ Yash Mandlecha
 - ▶ Felix Ndayisabye
 - ▶ Pierre Nzabahimana
 - ▶ Zarif Rahman
 - ▶ Ambar Rodriguez Alicea
 - ▶ Himanshi Singh
 - ▶ Jingyu Zhang
 - ▶ Erin White

*Please enjoy some refreshments
and provide any feedback you
have to improve this event.*

All contact information, slides,
and links for resources can be
found on the event webpage →

