



## IN THIS ISSUE

### Featured Announcements

- Monthly joke!
- **Upcoming Events**
- August 30-31 | Fall 2022 MDS-Rely Meeting: REGISTER NOW - Attendance is limited!

### Faculty Featured Projects

- Laura Bruckman: netSEM Modeling for Service Life Prediction of Polymers

### MDS-Rely Member Spotlights

- NIST
- US Army Armaments

### Member Connections

- Electroninks Offers a Full Suite of Metal Complex Conductive Ink Solutions

### Latest News

- MDS-Rely Exchange Event Report
- CWRU-Tohoku Data Symposium Report
- Visit to US Army Armaments

### Job Openings and Opportunities

- Open Position at NSF
- Pitt Career Fair: Register your company for a spot!
- CWRU Engineering, Technology, and Science Career Fair

## FEATURED ANNOUNCEMENTS

### Joke of the Month!



## UPCOMING EVENTS



We cordially invite you to attend our Fall MDS-Rely Center Meeting on August 30-31, in-person on the Case Western Reserve Campus. Our welcome reception is on Monday, August 29th at the **Marble Room** in downtown Cleveland. Dinner Tuesday night will be at the **Albatross**. The meeting will include faculty project pitches, a poster session, and networking with Pitt and Case faculty and graduate students.

Center members will have an opportunity to vote on projects. Please get in touch with us now if you are interested in creating a project with faculty. Find more information about the Fall 2022 meeting [here](#).

**Register Now! Attendance is limited! Only two weeks away.**

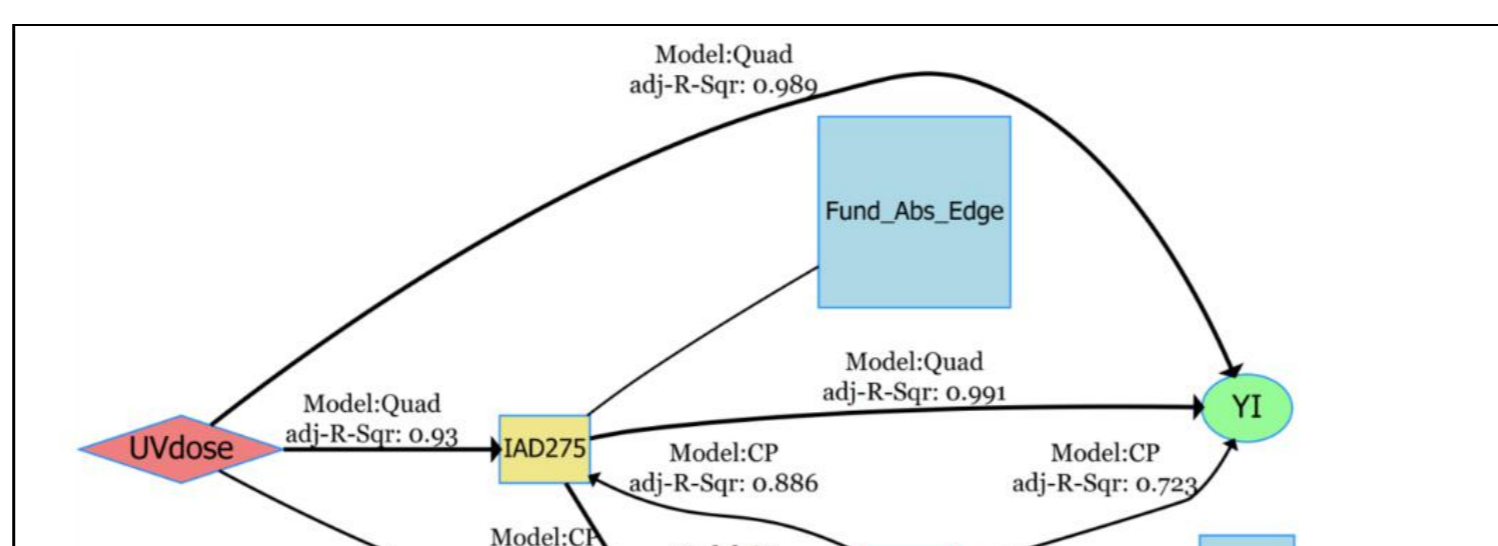
## FACULTY FEATURED PROJECTS

### netSEM Modeling for Service Life Prediction of Polymers

Laura Bruckman | Associate Professor | Case Western Reserve University

Professor Laura Bruckman and Hein Htete Aung's (MS student) project, "netSEM Modeling for Service Life Prediction of Polymers" consists of utilizing a technique called netSEM (network structural equation modeling) to predict service lifetime of polymers. Using poly(methyl methacrylate) (PMMA) as a sample polymer, the team implemented a lifetime and degradation science approach to predict the service lifetime.

Network structural equation modeling (netSEM) is a data-driven modeling technique that has been developed at the SDLE Research Center and with a public version available as a R software package to the public on CRAN.



The team is utilizing netSEM to generate degradation pathway to give insights into degradation mechanisms and predict service lifetime.

[Read Full Article](#)

## MDS-RELY MEMBER SPOTLIGHTS

### National Institute of Standards and Technology (NIST)



James Warren | Director, Materials Genome Program | Material Measurement Laboratory | National Institute of Standards and Technology

The National Institute of Standards and Technology (NIST) was founded in 1901 (as the National Bureau of Standards) and is now part of the U.S. Department of Commerce. Today, NIST has a mission to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

James Warren, Director of the Materials Genome Program at NIST, says,

"Given MDS-Rely's focus on the application of data science-informed research to better understand the reliability and lifetime of essential materials, the opportunities for collaboration to achieve our mutual goals is self-evident, and we are excited to be involved with the MDS-Rely program."

[Read Full Article](#)

### US Army Armaments

Wesley Wang | US Army Armaments

The **US Army Armaments Center** leads the research, development and engineering of systems solutions to arm those who defend the nation against all current and future threats, both at home and abroad. The U.S. Army has long given the Armaments Center the immense responsibility of being its primary research and development center for new and existing armament systems, which are used by U.S. service members around the world.



The center partners with a wide variety of organizations, including industry, academia and other government agencies to accelerate the development and transition of new technologies for the Warfighter, with focuses including, but not limited to:

- Integrated, Multi-Mission Armament System
- Smart Sights
- Battlefield Digitization & Software
- Counter Terrorism Technologies
- Homeland Defense Technologies

[Read Full Article](#)

## MEMBER CONNECTIONS



### Electroninks Offers a Full Suite of Metal Complex Conductive Ink Solutions

Melbs LeMieux | Co-Founder and President of Electroninks

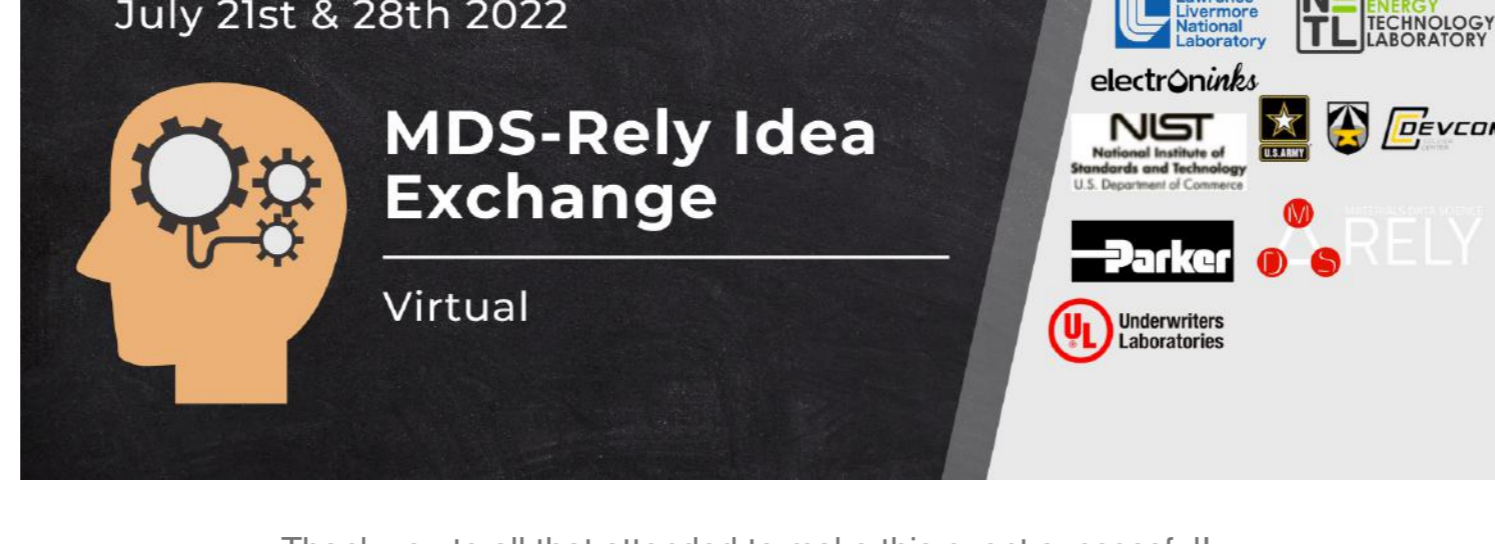
Customer-centric inks accelerate hardware innovations, eliminate need for traditional deposition methods, reduce costs, and are eco-friendly.

**Electroninks Inc.** provides high-performance, advanced materials that customers use to turn promising ideas into profitable new products. This Austin, TX-based company offers solutions based on its proprietary metal complex particle-free conductive metal inks and are designed for applications in semiconductor packaging, consumer electronics, and medical devices. The company is the first to provide metal complex inks in silver, gold, platinum, nickel, and copper.

[Read Full Article](#)

## LATEST NEWS

### MDS-RELY IDEA EXCHANGE EVENT REPORT



Thank you to all that attended to make this event successful!

MDS-Rely/interested members held a virtual ideation exchange event, with over 20 companies and 30 attendees present to facilitate conversations between faculty, industry, and government labs. The event was held over two weeks and included short introductions and one-on-one discussions, with an emphasis on creating white papers for the August 30th-31st Fall Meeting.

### CWRU-TOHOKU 8th ANNUAL DATA SCIENCE IN ENGINEERING AND LIFE SCIENCES SYMPOSIUM REPORT

August 8-9, 2022

Thank you to all that attended the symposium!



This jointly hosted international symposium was part of the ongoing educational and research collaboration between Tohoku University of Sendai, Japan and Case Western Reserve University, with over 70 attendees present throughout the two days of technical sessions and poster presentations, including attendees from a diverse set of organizations including Lawrence Livermore National Laboratory, the Polymer Competence Center Leoben GmbH in Austria, and the University of Pittsburgh.

The symposium provided a broad, exciting look at advances in data science at CWRU and Tohoku University, including Materials Data Science, Computational & Structural Biology, Big Data Analytics & Modeling, Machine/Deep Learning & AI, and reliability and degradation

### US ARMY ARMAMENTS VISIT July 26, 2022



Our Directors, Roger French, Paul Leu, and Laura Bruckman, had a great visit out to Pocatiny New Jersey for a day to meet with Bill Sharpe, Wesley Wang, Gregory Roehrich, Harshad Shah, and others.

The team had stimulating conversations with many subject matter experts and tours of the US Army Armaments Electronics Additive Manufacturing Lab, Metals Additive Manufacturing Lab, and other facilities.

## JOB OPENINGS AND OPPORTUNITIES

### Open Position at NSF

The National Science Foundation (NSF) is currently looking for an Engineering/Science Analyst to join their team. The analyst will employ data science, data analytics, visualization, and an array of multimedia communication tools to justify and support recommendations and decisions in support of promoting the progress of science. [Find out more and apply here!](#)



The Pitt Fall 2022 Career & Internship fair is coming up! If you would like to register your company to have a spot in the fair, click the "Register" button below.

- Dates:**
- \*Computing & Information  
Wednesday, September 28th 2022, 11:00 am - 3:00 pm
  - \*Engineering  
Thursday, September 29th 2022, 11:00 am - 3:00 pm
  - \*Arts & Sciences  
Friday, September 30th 2022, 11:00 am - 3:00 pm

**Location:** The William Pitt Union (in-person)

[Register a spot for your company here!](#)

### CWRU Engineering, Technology, and Science Career Fair

Monday, September 26  
11AM-3PM

Case Western Reserve University will be hosting a Career Fair to recruit CWRU students and alumni seeking careers in the fields of engineering, computer science, natural sciences, and more. [Find more information here.](#)

\*Note: The Engineering, Technology and Science Career Fair is waitlisted at capacity for employer registration. To inquire about the waitlist, please contact their team at [employers@case.edu](mailto:employers@case.edu).



### Submit News

[Fill out a news form here!](#)

### Submit Job Openings

\*For MDS-Rely members only  
[Fill out a job opening form here!](#)

### Interested in partnering with Case Western or Pitt Professors?

Please contact [Dr. Roger French](#) or [Dr. Paul Leu](#) for more information!

## CONNECT WITH US!

