

# MD4SG

Mechanism Design for Social Good

## NEWSLETTER #4 FALL SEMESTER 2022



# MD4SG

## Mechanism Design for Social Good

Dear MD4SG community,

It is our immense pleasure to share with you highlights from the past semester. We'll start by summarizing the second annual (but first in-person!) ACM Conference on **Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '22)**. Outside of EAAMO, our community has continued to be active with socials, six working groups, colloquium talks, and other activities aimed to help improve equity and access to opportunity.

Our Community Engagement team has organized a lot of social events, including four region-specific socials, an introduction to working groups for potential new members, an in-person meetup at the INFORMS 2022 conference, a session to help future scholars apply to PhD programs, and the first **MD4SG mentorship program**. In addition, the Conversation with Practitioners Working Group has published several **Medium articles**.

MD4SG aims to **improve equality, ensure diversity and inclusion, and spark collaboration and responsible human-centered research**. The events we organize—which include virtual social events, colloquium talks, workshops, and conferences—bring together researchers and practitioners across disciplines to discuss how to shape and achieve our community's goals.

None of these activities would be possible without consistent work, engagement, and support from all of you. We sincerely thank you.

We hope you enjoy the MD4SG newsletter!

MD4SG Organizers

# EVENTS

Impressions from the

## ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '22)

The second annual ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '22) was held at George Mason University, in Arlington, Virginia, US, on October 6–9, 2022. The conference attracted a lot of interest, with **220 (144 in-person and 76 virtual) researchers and practitioners** from a variety of disciplines, including computer science, operations research, economics, social work, law, policy, and sociology. In addition, EAAMO '22 brought together people from twenty-five countries, including Australia, South Africa, and India.

EAAMO '22 received **more than one hundred and fifty submissions** from **more than twenty countries** around the world, of which forty were accepted as full papers and fifty-six were accepted for poster presentations. From the full papers, twenty-one were accepted in the archival track of the conference. Each contributed paper was rigorously peer-reviewed by members of a program committee, who were chosen from fields related to the topics of the conference. We thank our Area Chairs and Program Committee for ensuring that high-quality papers were selected for presentation.

The conference provided many opportunities for interdisciplinary conversation and connections between researchers and practitioners. The program was very diverse, including three keynote speakers and a panel discussion on state-of-the-art work in areas related to civic participation, mechanisms for allocation and service delivery, computational social choice, and algorithmic fairness.

The conference-related social events, poster sessions, doctoral consortium, and faculty network helped scholars to meet their peers and connect for further research.



# EAAMO '22

Please find videos from EAAMO '22 on the [YouTube playlist](#) published on the ACM account and read the papers in the proceedings published on the [ACM Digital Library](#).



We would like to highlight our keynote talks and the panel session, all of which raised meaningful discussions. Marcella Alsan presented "Representation and Extrapolation: Evidence from Clinical Trials"; Karen Smilowitz presented "Emerging Trends and New Research Directions in Volunteer Management"; and Sello Mokwena presented the "Factors Influencing Low Adoption Rate of Technologies in Developing Countries". The panel discussion, "Opportunities and Barriers in Bridging Research and Practice," was moderated by Sera Linardi, and included Emanuela Galasso, Rebecca Johnson, and Sello Mokwena as panelists.



MARCELLA ALSAN



KAREN SMILOWITZ



PANEL  
DISCUSSION



SELLO MOKWENA



# EAAMO '22

A huge thanks to our sponsors: the Sloan Foundation, the MacArthur Foundation, PIT-UN, ACM SIGAI and SIGecom, GMU IDIA, and the government of Mexico, whose financial and organizational support enabled us to provide financial assistance for forty-five in-person and thirty-nine virtual registrations, sixteen travel grants, and twenty-three accommodation grants. The Registration and Grants Cochairs tried their best to ensure diversity, equality, and inclusion while giving grants, so students, researchers, and practitioners from a variety of countries and fields could have an opportunity to participate at EAAMO '22.



## PITCASES



Association for  
Computing Machinery



# EAAMO '22

We are thrilled to share the following awards given at EAAMO '22:



## **Best Paper Award:**

- Bias, Consistency, and Partisanship in U.S. Asylum Cases: A Machine Learning Analysis of Extraneous Factors in Immigration Court Decisions by Vyoma Raman, Catherine Vera, and CJ Manna

## **Best Paper with Student Presenter Award:**

- Improving Access to Housing and Supportive Services for Runaway and Homeless Youth: Reducing Vulnerability to Human Trafficking in New York City by Yaren Bilge Kaya, Kayse Maass, Geri Dimas, Renata Konrad, Andrew Trapp, and Meredith Dank
- On Meritocracy in Optimal Set Selection by Thomas Kleine Buening, Meirav Segal, Debabrota Basu, Anne-Marie George, and Christos Dimitrakakis

## **New Horizons Award**, recognizing a paper that pushes the frontiers of AI research:

- Dimensions of Diversity in Human Perceptions of Algorithmic Fairness by Nina Grgić-Hlača, Gabriel Lima, Adrian Weller, and Elissa M. Redmiles

The Area Chairs of each track were previously asked to combine rankings of papers within each track. The papers with the top review scores from each track were collected, re-ranked, and voted upon with additional considerations.



# EAAMO '22

The success of the EAAMO '22 conference relies on the contributions of many individuals and organizations. The biggest thanks goes to all the authors who submitted work to the conference. We thank our organizers, listed below:

## Program Co-Chairs:

- Elena Falcettoni, Federal Reserve
- Dina Machuve, Nelson Mandela Institute
- Bryan Wilder, Harvard University & Carnegie Mellon University
- Angela Zhou, University of California, Berkeley & University of Southern California

## General Chair:

- Sanmay Das, George Mason University

## Executive Committee:

- Rediet Abebe, University of California, Berkeley & Harvard Society of Fellows
- Kira Goldner, Boston University
- Maximilian Kasy, University of Oxford
- Jon Kleinberg, Cornell University
- Illeenin Kondo, Federal Reserve Bank of Minneapolis
- Sera Linardi, University of Pittsburgh
- Irene Lo, Stanford University
- Ana-Andreea Stoica, Columbia University

## Area Chairs:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Nikhil Garg, Cornell Tech</li><li>• Elisabeth Paulson, Harvard University</li><li>• Milena Almagro, University of Chicago, Booth School of Business</li><li>• Neha Bairoliya, University of Southern California, Marshall School of Business</li><li>• Michael Best, Columbia University</li><li>• Sam Taggart, Oberlin College</li><li>• Eric Chan, Babson College</li></ul> | <ul style="list-style-type: none"><li>• Fernando Delgado, Cornell University</li><li>• Moritz Hardt, Max Planck Institute for Intelligent Systems, Tübingen</li><li>• Allison Koenecke, Cornell University</li><li>• Jack Hessel, Allen AI</li><li>• Matthew Olckers, UNSW</li><li>• Alex Teytelboym, University of Oxford</li><li>• Jose Correa, Universidad de Chile</li><li>• Maria Rodriguez, University of Buffalo</li><li>• Rebecca Wexler, University of California, Berkeley</li></ul> |
|---|--|



# EAAMO '22

A huge thanks goes to the people behind the scenes who made EAAMO '22 joyful for everyone.

- Mir Masood Ali, University of Illinois at Chicago—Social Media Chair
- Jose M. Alvarez, Scuola Normale Superiore, Pisa—Social Media Chair
- Hamsa Bastani, Wharton School, University of Pennsylvania—Doctoral Symposium Chair
- Alex DiChristofano, Washington University in St. Louis—Social Media Chair
- Jessie Finocchiaro, Harvard University—Proceedings Chair
- Nikhil Garg, Cornell Tech—Faculty Network Chair
- Sara Kingsley, Carnegie Mellon University—Accessibility Chair
- Francisco Marmolejo-Cossio, Harvard University—Fundraising Chair
- Tasnia Mashiat, George Mason University—Local Chair and Poster Chair
- Faidra Monachou, Harvard University—Faculty Network Chair
- George Obaido, University of California, Berkeley—Virtual Chair
- Chinasa Okolo, Cornell University—Registration and Grants Chair
- Gourab Patro, IIT Kharagpur—Proceedings Chair
- Gaurab Pokharel, George Mason University—Local Chair
- Aviva Prins, University of Maryland—Poster Chair
- Sandro Radovanović, University of Belgrade—Social Media Chair, Registration and Grants Chair, and Virtual Chair
- Rhea Tibrewala, Refeyn—Social Media Chair
- Lily Xu, Harvard University—Social Chair
- Roozbeh Yousefzadeh, Yale University—Social Chair
- Juba Ziani, Georgia Institute of Technology—Doctoral Symposium Chair



# **SELECTED MD4SG RESEARCH**

# SELECTED PROJECT

## INTERNATIONAL SUMMER RESEARCH PROGRAM COPOCYT-MD4SG 2022



**COPOCYT**  
CONSEJO POTOSINO DE CIENCIA  
Y TECNOLOGÍA

**MD4SG**  
Latin America and Caribbean

The government of the state of San Luis Potosí, Mexico, through the San Luis Potosí Council for Science and Technology (COPOCYT) has organized an international summer research program in coordination with the MD4SG Latin America and Caribbean Working Group (MD4SG-LAC). These efforts promote **high-quality education and training, with an emphasis on vulnerable groups.**

The COPOCYT-MD4SG 2022 Summer Research Program is designed to **support Indigenous women in San Luis Potosí who are pursuing postgraduate studies by leading the creation of research projects with a social impact for Indigenous peoples.** The program aligns with COPOCYT's efforts to promote STEM studies among Indigenous women in the Huasteca region of San Luis Potosí, especially through its successful ADA scholarships for graduate studies in STEM.

The ADA scholars were invited to make proposals for potential interdisciplinary projects with an emphasis on access to opportunity for Indigenous communities in Mexico. Volunteer mentors from MD4SG-LAC used these proposals as a starting point to create summer research projects with the ADA scholars, who met with their mentors virtually on a regular basis from June to August to prepare reports and poster presentations to share with participants at EAAMO '22. The program provided support for these students to travel to EAAMO and participate in the conference in person.



# SELECTED PROJECT

## COPOCYT AT EAAMO'22

As part of a doctoral consortium at EAAMO '22, COPOCYT students had an opportunity to present their work, discuss it with other scholars and practitioners, and get valuable feedback. Please find their posters below:

- [Idalia Rojas Martinez: Degree of Knowledge about Humanized Childbirth in Pregnant Women Holders to Basic Community Hospital of Aquismon, San Luis Potosí](#)
- [Leydi Rojas Martinez: Factors Associated with Malnutrition in Older Adults in an Indigenous Community of Tancanhuitz, San Luis Potosí](#)
- [María Teresa Santiago Marcelino: Lenguas Indígenas y Derechos Lingüísticos en México: Percepción y Conocimiento de Derechos Lingüísticos en las Juventudes Tének](#)
- [Eira Krystel González Pérez, Edna Marlene Martínez Hernández, Francisco Javier Marmolejo Cossío: Contextualizing Tuberculosis Medication Adherence in Indigenous Communities of the Huasteca Potosina: A Roadmap to Adequate AI-Facilitated Approaches](#)
- [Nancy Santiago Santos: Adequate Housing for Indigenous Teenek Population](#)
- [Xóchitl Rosales Terán: Adequate Housing, the Case of Fraud Against Indigenous Women in Xilitla, San Luis Potosí](#)



# WORKING GROUPS

## ALGORITHMS, LAW, AND POLICY

Ayse Gizem Yasar and Fernando Delgado, organizers of the Algorithms, Law, and Policy Working Group, center the group so every member seeds knowledge and collaborations.

- One of the highlights of the Algorithms, Law, and Policy Working Group activities was a guided reading of Mireille Hildebrandt's "[Algorithmic Regulation and the Rule of Law](#)." Having members from different areas of research led to a wide and meaningful discussion on the distinction between cybernetic and legal regulation of algorithms and the boundaries between code-driven and data-driven algorithmic regulation.
- Another discussion the working group had was on the interesting and important topic of regulation of algorithmic decision-making. To make the discussion "fair," both the [EU AI Act](#) and the recently published [White House blueprint for an AI Bill of Rights](#) were presented. Beatriz Botero Arcila provided a short overview of the White House Blueprint, while Matt O'Shaughnessy outlined the EU AI Act. These presentations provided fodder for a lively comparative discussion of how AI governance is shaping up in these regions.
- The Algorithms, Law, and Policy Working Group also hosted a forumlike discussion on Marxist thought and its relationship to algorithmic decision-making and policy making in general. More specifically, we discussed how the algorithms, law, and policy community could be inspired by Marxist thought in shaping the notion of fairness and understanding the social implications of digitalization, as well as how we might situate algorithms, law, and policy in the context of global capitalism.



# WORKING GROUPS

## ENVIRONMENT AND CLIMATE

Matthew vonAllmen and Andrew Roberts emphasized applications of Algorithmic Game Theory, AI/ML, optimization, and remote sensing to the fields of environmental conservation and planning this semester. They have especially been focused on an area known as “systematic conservation planning” and are hoping to help build better bridges between theory and practice in this space. To do so, they organized the following presentations and discussions:

- Olivia Muza presented “Disruptive Innovation for Inclusive Renewable Policy in Sub-Saharan Africa: A Social Shaping of Technology Analysis of Appliance Uptake in Rwanda.” The talk highlighted how ICT-driven solutions and cleaner cooking fuel are key for inclusive renewable policy, as well as how the policy pathways are derived using disruptive innovation for green growth at a grassroots level.
- Richard Schuster talked about his methodological work “Supporting Conservation and Land Use Planning with Prioritization Software,” which considers optimization for spatial planning and conservation, as well as applications that are utilizing these methodological advances.
- Bryce Ferguson discussed how self-interested decision-making can lead to the over-utilization of shared resources (e.g., natural resources, highways, or electric power). In particular, he showed the model of congestion games—which have been well studied in economics, sociology, and computer science—to capture this unwanted behavior and investigate some of the tools and obstacles that exist in trying to improve system performance.
- Professor Paul Armsworth showed how to bring together tools from mathematics, statistics, economics, and ecology to improve the effectiveness of conservation strategies. He is one of the rare few who holds a double doctorate in mathematics and biological sciences. His talk ranged over a broad array of topics but focused on the development of software used by conservationists to help determine how they should allocate their limited resources, how it can be misused, and how it is currently used in the field.



# WORKING GROUPS

## DISCRIMINATION AND EQUALITY

Richard Lanas Phillips and Samuel Galler organized a great working group in Spring 2022 related to tackling unwanted discrimination and promoting equality in algorithmic decision-making. The following discussions and presentations took place:

- Corinna Hertweck presented an exciting work on the incompatibility of fairness criteria, published at AAAI 2022. The paper explores the compatibility of different fairness measures (independence, separation, sufficiency) simultaneously. By formulating an information-theoretic set of definitions of the aforementioned fairness criteria, this paper presents some unexplored theoretical relationships between the three fairness measures, finding conditions for when they can be simultaneously satisfied.
- Kate Donahue discussed fundamental considerations in federated learning, presenting recent work on fairness criteria and their compatibility with equilibrium conditions in federated learning. The group discussed equity considerations in federated learning and in health applications specifically.
- Violet Chen presented her paper "Balancing Fairness and Efficiency in a Optimization Model," which proposes a principled and practical method for balancing fairness and efficiency criteria in an optimization model. More specifically, the paper defines a set of social welfare functions that combine Rawlsian leximax fairness and utilitarianism, showing conditions for their compatibility in decision-making.
- Gourab Patro presented a position paper related to fairness concerns in ranking, written with a MD4SG members and published at FAccT 2022. The paper surveys methods in fair ranking based on supervised learning and underlines existing flaws as well as future directions in the area of fair ranking.
- In addition, members of the working group had a series of discussions regarding equality of welfare and equality of resources, with John Roemer's Theories of Distributive Justice as a baseline. They discussed specific applications and characterizations of justice notions (e.g., relational, institutional, intergenerational considerations), and they put these notions into conversation with some of the technical work being discussed.



**MD4SG**

**COMMUNITY BUILDING**

# SOCIAL EVENTS

The MD4SG Community Engagement team organizes events on a regular basis to include and encourage discussion between junior and senior MD4SG members.

## MD4SG GLOBAL TOUR

To start community building this semester, the Community Engagement team organized a MD4SG Global Tour, with socials taking place across four consecutive weeks throughout July, held in different languages.

We'd like to recognize all our fantastic discussion facilitators, who made this series possible:

- Europe
  - English: Corinna Hertweck
  - Spanish: Michelle González Amador, Jose Alvarez
  - French: Juba Ziani
- Asia/Pacific
  - English: Matthew Olckers
  - Mandarin: Wendy Xu, Xuenan Cao
- Africa and the Middle East
  - English: Rozbeh Yousefzadeh
- Latin America and the Caribbean
  - Portuguese: Gustavo Dias, Matheus V. X. Ferreira
  - Spanish: Francisco Marmolejo



A huge thank you to **Rozbeh Yousefzadeh** from our Community Engagement team for leading this series!

# SOCIAL EVENTS

## MD4SG SOCIAL FOR WORKING GROUPS!



To prepare for the start of a new academic year, the Community Engagement team helped the working groups gear up and recruit new members. On August 29, 2022, the Community Engagement team organized a social event introducing the working groups of MD4SG. A Discord event helped people who are interested in joining a working group chat with existing members, learn about the working groups and the types of involvement and expected outcomes, and meet others in the MD4SG community.

## APPLYING TO PHD PROGRAMS—SOCIALS

The Community Engagement team organized an informal discussion this fall to support students who are thinking about or currently applying for PhD programs. A couple of PhD students per geographic region (North America, Latin America and the Caribbean, Africa and the Middle East, Europe, Asia/Pacific) gave participants insights about PhD applications in general and answered specific questions about their geographic regions. This was an excellent opportunity to get advice on applications from PhD students from different regions around the globe, and we will surely continue having these events. A special thanks to **Corinna Hertweck**, who organized this event and to the current PhD students who helped us with this event.

- Xudong Shen (National University of Singapore)
- Alyssa Columbus (Johns Hopkins University)
- Eugenia Iofinova (Institute of Science and Technology, Austria)
- Corinna Hertweck (University of Zurich)
- Shubham Singh (University of Illinois Chicago)
- Sean Sinclair (Cornell University)



# SOCIAL EVENTS

## MD4SG MENTORSHIP PROGRAM

We're piloting the first long-term MD4SG mentorship program this academic year, matching mentors to small groups of mentees to discuss topics like how to find the right graduate program, maintain a healthy work-life balance, and more. These small groups touch base about once per month so that mentors and mentees can learn from one another throughout the year. In the end, we were able to match **thirty-seven mentees with twelve mentors** and would like to thank everyone who applied to the program for their participation and excitement. None of this would be possible without **Renzhe Yu, Sakina Hansen, and Jessie Finocchiaro** from the Community Engagement team for setting up the mentorship program

## MD4SG @INFORMS

MD4SG organized a second annual in-person MD4SG dinner social at INFORMS. People from a variety of research areas met and discussed their research and other hobbies.



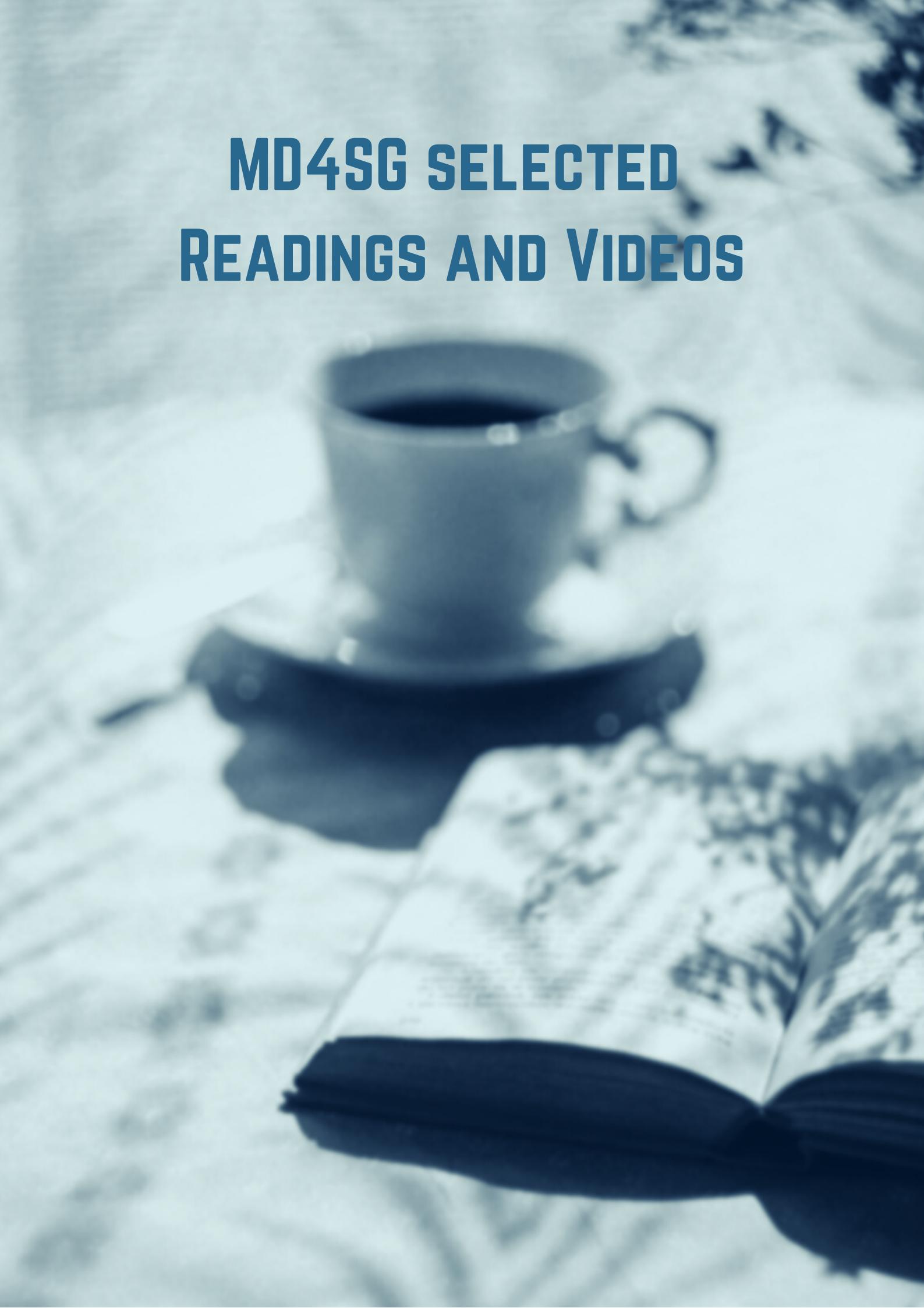
# SOCIAL EVENTS

We host community-wide socials bimonthly on Discord, as well as affinity socials, book clubs, movie screenings, and more. [Join us!](#)

We welcome and encourage feedback from the MD4SG community about additional steps we can take to make social events accessible to persons with disabilities. Please email [community@md4sg.com](mailto:community@md4sg.com) with any questions or recommendations. We hope to have you join us at our next event!



# **MD4SG SELECTED READINGS AND VIDEOS**



# MD4SG COLLOQUIUM TALKS



EDWARD J. "KINGFISH" LADA JR.

PRESIDENT AND CHIEF EXECUTIVE OFFICER AT GOODWILL

## GOODWILL AND AI: A CHAT ABOUT WORKFORCE DEVELOPMENT FOR THE FUTURE AND MODERNIZING A 100-YEAR-OLD BRAND

Ed "Kingfish" Lada Jr., president and CEO for Goodwill Keystone Area and Goodwill Keystone Area Foundation in central and southeastern Pennsylvania, discusses how AI (in particular, computer vision machine learning) has been explored within his nonprofit organizations to modernize operations while also creating pathways to the future of workforce development. Goodwill, a \$7 billion federated nonprofit in North America, is the original social enterprise. In this session, Ed shares his journey doing R&D, Goodwill's path forward, and why it is imperative that technology is viewed as an augmentation of—not a replacement for—the human experience.

Ed Lada is recognized throughout the Goodwill movement for his work to revolutionize the traditional nonprofit by utilizing powerful technologies like robotics, AI by way of computer vision, machine learning, and virtual and augmented reality. Ed continues to grow Goodwill's tremendous legacy by leveraging technologies to augment the human experience, not replace it, and to create truly integrated and inclusive work environments. Ed is passionate about giving those who are disenfranchised a head start in an increasingly evolving technological world and, in doing so, creating a pathway to generational wealth and breaking the cycle of poverty.

[YouTube link](#)



# MD4SG COLLOQUIUM TALKS



ELISSA REDMILES

MAX PLANCK INSTITUTE FOR SOFTWARE SYSTEMS

## SEX, WORK, AND TECHNOLOGY: LESSONS FOR INTERNET GOVERNANCE & DIGITAL SAFETY

Dr. Elissa M. Redmiles is a faculty member and research group leader at the Max Planck Institute for Software Systems and a visiting scholar at the Berkman Klein Center for Internet & Society at Harvard University. She uses computational, economic, and social science methods to understand users' security, privacy, and online safety-related decision-making processes and to remedy inequities in those processes.

Sex workers sit at the intersection of multiple marginalized identities and make up a sizable workforce: the UN estimates that at least forty-two million sex workers are conducting business across the globe. Sex workers face a unique and significant set of digital, social, political, legal, and safety risks, yet their digital experiences have received little study in the CS and HCI literature. In this talk, we review findings from a two-year-long study examining how sex workers who work in countries where sex work is legal (Germany, Switzerland, UK) use technology to conduct business and how they have developed digital strategies for staying safe online and offline. We then describe how these findings can inform broader conversations around Internet governance, digital discrimination, and safety protections for other marginalized and vulnerable users whose experiences bisect the digital and physical.

[YouTube link](#)



# INTERVIEW WITH TIASIA O'BRIEN

TAYO FABUSUYI AND THE CONVERSATIONS WITH  
PRACTITIONERS WORKING GROUP



TIASIA O'BRIEN

The Conversations with Practitioners Working Group had the pleasure of interviewing Tiasia O'Brien. In 2018 Tiasia started Seam Social Labs to transform community voices into a valuable data source for equitable design outcomes.

Tiasia O'Brien gave an example of a community where data showed a lack of affordable housing and the solution given by policymakers was to build more affordable housing. Engagement with the community, however, found that the core issues were not affordable housing, but a lack of jobs and public transportation to those jobs. In other words, **community voices can reveal root causes**.

Her company, Seam Social Labs, developed a cloud-based platform called co:census that allows institutions to import and analyze qualitative data from surveys, interviews, meetings, and social media. Only by using both quantitative and qualitative data for policy design—a mixed-methods, multichannel data gathering approach—can one **make sense of free-form data**. By analyzing free-form data with several approaches—including sentiment analysis (positive, negative, neutral), topic modeling (for example, inductive looking for patterns or themes, then going back to the community for verification), and emotion detection—co:census does a behavioral analysis, looking at humans' behaviors and experiences, along with the condition of the environment.

In every civic public application, one should remember the **human element of data modeling**. Data models are typically made by people who may have very different life experiences, and the models are trained on data that teaches an entire tool how to work. Thus, data modeling and analyzing is focused on the tools and the best practices on how to use those tools that leaves out the human side.

[Read the article](#)



# FIGHTING FIRE WITH FIRE: A CONVERSATION WITH KRISTINA KOENIG

LORENN RUSTER AND THE CONVERSATIONS WITH PRACTITIONERS WORKING GROUP

*The Conversations with Practitioners Working Group had the pleasure of interviewing Kristina Koenig on her role managing carbon abatement programs with Indigenous people in the Kimberley region of western Australia.*

Wildfires cause enormous carbon emissions, but these emissions can be reduced by using controlled burning to clear dry undergrowth and create firebreaks. In western Australia, Indigenous people have used controlled burning for centuries, but their traditional fire practices were mostly halted when they were removed from their lands during colonization.

Carbon's rising price causes benefits and pressures for Indigenous groups and their carbon abatement activities. While the price increase has a lot of benefits, it also encourages the involvement of players in the market who are primarily economically motivated, creating pressure for Indigenous people to accept projects being registered on their lands. This is where the work of Kristina Koenig and others becomes so important: a part of her activities is giving communities relevant information to assist in their decisions when faced with developers wanting to put carbon projects on their land. This includes making it clear that, unlike with mining interests, they have a right to refuse. She also assists communities in understanding what alternatives may exist for carbon abatement projects.

All of the projects that Kristina is a part of are 100% Indigenous-owned. While the monetary benefit of carbon abatement is important for the sustainability of these activities, it is not the primary motivator for most Indigenous communities; the benefits of carbon abatement programs are often more important.

[Read the article](#)



# INTERVIEW WITH LUKE HOHMANN

JEREMY VOLLEN AND THE CONVERSATIONS WITH  
PRACTITIONERS WORKING GROUP



LUKE HOHMANN

*The Conversations with Practitioners Working Group had the pleasure of interviewing Luke Hohmann in March 2022. Luke is the founder and CEO at FirstRoot, a start-up that implements participatory budgeting processes in schools to help students “learn core life skills in financial literacy, civics, and design thinking.”*

Before founding FirstRoot, Luke Hohmann employed collaborative techniques to help organizations make budgeting decisions in a variety of contexts, beginning in the private sector. He developed a market research technique wherein groups of about eight customers were asked to collaborate to decide how to allocate budget toward helpful features and projects. The insights gained from this process helped companies make informed investment decisions—**wisdom through small group collaboration**.

Luke was asked to bring his approach to the public sector, where interested citizens were directly engaged in the process of funds allocation for the City of San Jose. Luke **highlighted a disconnect between academic assumptions and his own observations in the real world**. Specifically, he has consistently found that participants' opinions and preferences are not set in stone. From his experience applying this technique in the public sector, he finds that citizens are often happy to leave base-level concerns like infrastructure to those in the public sector with more expertise, but they want their voices heard regarding measures that intertwine with their everyday lives.

The goal he wants to keep at the forefront of his efforts toward participatory budgeting in schools is that of helping the development of a healthy and flourishing democracy. In an effort to accomplish this objective, Luke hopes academic research will work to incorporate more realistic models of human behavior in investigations of deliberation and participatory democracy.

[Read the article](#)



# INTERVIEW WITH YEUKAI CHIDEYA

MATTHEW OLCKERS AND THE CONVERSATIONS WITH  
PRACTITIONERS WORKING GROUP



YEUKAI CHIDEYA

*The MD4SG Conversations with Practitioners Working Group had the pleasure of interviewing Yeukai Chideya, a social worker with eight years of experience at the Trauma Centre for Survivors of Violence and Torture in Cape Town, South Africa. Yeukai also founded the Ruremekedzo Project, a nonprofit organization that delivers emergency packs to women and children facing a humanitarian crisis.*

The Trauma Centre originates from an initiative by the Anglican Church in Cape Town, South Africa, to provide accommodation for people who were visiting political prisoners on Robben Island during the Apartheid era. After the end of Apartheid, the Trauma Centre became part of the reconciliation process led by the Truth and Reconciliation Commission and provided counseling to civilians and soldiers impacted by Apartheid. The organization currently focuses on providing psychosocial services to victims of violence.

In the interview, Yeukai Chideya explained the challenges in providing refugees with timely support. Her training focused on providing counseling, but she soon realized that refugees in South Africa also have other pressing needs, such as food, shelter, and safety.

Most refugees enter South Africa through Limpopo or KwaZulu-Natal, where they are granted an asylum seeker permit. The permit only provides limited rights and needs to be renewed every few months. Often refugees don't have the resources to travel back to their port of entry to renew their permit. Yeukai explained that a common difficulty to become legally recognized as a refugee is that some refugees don't feel comfortable sharing the true reason they left their home country at the time they entered South Africa.

[Read the article](#)



# INTERVIEW WITH SU WANG

WENDY XU AND THE CONVERSATIONS WITH PRACTITIONERS WORKING GROUP

The MD4SG Conversations with Practitioners Working Group had the pleasure of interviewing Su Wang, the cofounder of SEED for Social Innovation in China. Founded in 2012, SEED is a nonprofit organization that discovers, trains, and connects China's young social innovators. In SEED's ten-year journey, the organization has evolved into a community network of more than 400 social entrepreneurs in China.

The journey of SEED started with a reading group of students by the Charles River in Boston. The reading group was called North Shore, which, in Chinese, shared the spirit of the Left Bank of the River Seine in Paris (the gathering place of influential thinkers in the 1940s). SEED's initial purpose was to study social science with a keen eye on applications to China.

To provide insight into the program, Su Wang shared the story of an early SEED fellow who has a day job as a dentist but is also involved with coordinating aid for natural disasters. In response to the damage caused by an earthquake in southwest China in 2008, he traveled to Sichuan to help. During the flight, he started to think about what he could do after landing and began to talk with everybody else on the flight. He learned about people's skills and abilities (who was a medical doctor, therapist, etc.) and gathered information on which resources were in shortage in each area. When he landed, he discovered that what he learned on the plane was crucial and in greater need than expected. While many resources, donations, and volunteers flew to the area, the rescue efforts were haphazard due to a poor match between skills and need.

After this experience, the man founded a social organization, Zhuoming Disaster Information Center for publicizing and sharing information during major natural disasters in China. The organization's footprint goes beyond China, with involvement in natural disaster rescues in other parts of Asia.

The interview offers a short glimpse into the ten-year journey of SEED, rapidly innovating in programs that keep their community of SEEDers and their values at heart: social responsibility, empathy, empowerment, and dedication (SEED). The past ten years also saw a rapidly changing Chinese society and social sector, with many developments and much more to come.

[Read the article](#)



# INTERVIEW WITH CLEMSON ALL-IN RECOVERY

DI NGUYEN AND THE CONVERSATIONS WITH PRACTITIONERS  
WORKING GROUP

Clemson All-In Recovery (CAIR), formerly Clemson & Sober, is a student organization aiming to support anyone affected by addiction, allies of recovery, and students interested in recovery. The organization, led by Gretchen Schober, Benjamin Martin, and Kelly Bollinger, aims to create a safe and healthy peer support environment to discuss problems and find solutions.

Clemson All-In Recovery hosts meetings and activities, maintaining a support network and community for students with A-SUD. When Gretchen and Ben got involved with CAIR, there were official meetings similar to Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). Eventually, they adopted an "all recovery" approach for these meetings to be more welcoming and inclusive to students who struggle with varying types of addictions. CAIR is also working toward establishing a local Collegiate Recovery Program at Clemson. Collegiate Recovery Programs (or Collegiate Recovery Communities) designate a staff member to support students and liaise with the university to create an environment that is conducive to students' recovery.

CAIR is working on improving their visibility to be able to reach more students who could benefit from their help. Systemically, there should be more high-level efforts dedicated to lifting barriers to recovery. Governments and universities can help by making funds and grants more accessible. These funds are needed to educate the population and destigmatize A-SUD, which is necessary to shift the perception of the general population and medical community toward those struggling with A-SUD. In doing so, we as a community can create more opportunities to connect people to resources to recover earlier, such as support groups and treatment programs.

[Read the article](#)





# **MD4SG**

# **ORGANIZERS**

# ORGANIZERS



CHARLES CUI  
\*NEW MD4SG ORGANIZER\*



FRANCISCO  
MARMOLEJO COSSÍO



GEORGE OBAIDO



MATTHEW OLCKERS  
\*NEW MD4SG ORGANIZER\*



ANA-ANDREEA  
STOICA



LILY XU



# ORGANIZERS



THANK  
YOU



REDIET ABEBE



WANYI LI

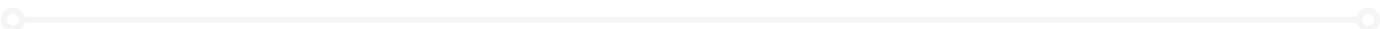
After many years as co-organizers, Rediet Abebe and Wanyi Dai Li have stepped down from this role. Thank you, Rediet and Wanyi!

# MD4SG INITIATIVE-WIDE LEADERS



Jessica Finocchiaro is National Science Foundation Mathematical Sciences Postdoctoral Research Fellow and CRCS Fellow at Harvard University. From March 2020 to August 2021, she was a co-organizer for the Discrimination and Bias Working Group. She is currently a Community Engagement lead.

JESSICA FINOCCHIARO



Nikhil Garg is an assistant professor of Operations Research and Information Engineering (ORIE) at Cornell Tech. He received his PhD from Stanford University in 2020. He has been serving as the co-lead of the MD4SG working groups since November 2020.



NIKHIL GARG



BHUSHAN  
SUWAL

Bhushan Suwal is currently studying for a PhD in computer science at Boston University. He is interested in statistics and computational social science. He is a recent graduate of Tufts University, where he majored in computer science.



# MD4SG LEADERSHIP

## MEMBERSHIP



KEHINDE  
ARULEBA



SRITEJ  
ATTALURI



DANIELA  
CIALFI



GUSTAVO  
DIAS

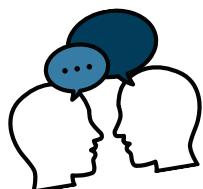


JUDE  
IMUEDE



SANDRO  
RADOVANOVIC

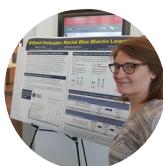
## COMMUNITY ENGAGEMENT



SAKINA  
HANSEN



CORINNA  
HERTWECK



SARA C.  
KINGSLEY



OFENTSE  
RICE



ROOZBEH  
YOUSEFZADEH



RENZHE  
YU

## SOCIAL MEDIA



Medium



MIR MASOOD  
ALI



JOSE  
ALVAREZ



ALEX  
DICHIRSTOFANO



SANDRO  
RADOVANOVIC



AMITA  
SHUKLA



RHEA  
TIBREWALA



# WORKING GROUPS

For better or worse, government policy impacts most large-scale social problems. Because of this, the decision-making processes inside our democratic institutions are crucial: good processes offer paths for effecting positive social change, whereas bad processes may encourage changes that harm parts of the population. Many recent examples show that existing institutions fail to be responsive to needed change or to protect minority rights. Because of this, there is an urgent need to investigate modifications and additions to democratic processes that could improve their performance. Additionally, there is recent concern about the stability of democratic institutions worldwide, and preserving these institutions may require democratic reform. The MD4SG Civic Participation Working Group brings together researchers who are passionate about exploring ways to deepen democracies. Crucially, our group connects mathematical views on these questions with perspectives from social science and practical experience.

## CIVIC PARTICIPATION

ORGANIZERS



PAUL GÖLZ



MANON REVEL

## CONVERSATIONS WITH PRACTITIONERS

ORGANIZERS



KRISTEN  
SCOTT



WENDY XU

The MD4SG community aims to bridge research and practice, but many researchers have few opportunities to connect with practitioners. The aim of the Conversation with Practitioners Working Group is to learn from practitioners. We want to know their story, understand their main challenges, and discover if tools from mechanism design apply to their domain.

For our purposes, we define a practitioner as any person who works with (or on policy related to) marginalized and disadvantaged communities.



# WORKING GROUPS

## DEVELOPMENT

The MD4SG Development Working Group fosters collaboration and discussion among practitioners and academics to understand and tackle issues pertaining to the role and application of technology in addressing challenges in emerging nations and under-resourced settings. We study how techniques from algorithm and mechanism design, computational social science, and optimization can inform and help advance existing development policies and practices.

### ORGANIZERS



ELIZABETH  
BONDI-KELLY



CYNTHIA  
HABONIMANA



ILLEMIN KONDO

## ENVIRONMENT AND CLIMATE

### ORGANIZERS



ANDREW  
ROBERTS



MATTHEW  
VON ALLMEN

The MD4SG Environment and Climate Working Group aims to address environmental challenges, particularly those that exacerbate the climate crisis, through computational and economic lenses. We are a diverse group of researchers from a variety of academic disciplines and geographic locations.



# WORKING GROUPS

## INEQUALITY

### ORGANIZERS



MERYEM  
ESSAIDI



SERA  
LINARDI



SAMUEL  
TAGGART

The MD4SG Inequality Working Group studies how optimization, incentive design, and machine learning can mitigate or magnify social and economic inequality. We are especially focused on the provision and targeting of social programs: When and how should resources be directed specifically to the most vulnerable members of the population? How should these individuals be selected?

## ALGORITHMS, LAW, AND POLICY

### ORGANIZERS



FERNANDO  
DELGADO



AYSE  
GIZEM YASAR

The MD4SG Algorithms, Law, and Policy Working Group focuses on the complex relationship between algorithms and mechanisms on the one hand and law and policy on the other hand. Some of the topics the group will work on include, but are not limited to, free speech, content moderation, antitrust, the use of "black box" machine learning models, data-driven algorithms, and decision-support tools.



IF YOU ARE INTERESTED IN THIS  
MISSION

JOIN US!

For any questions or thoughts, contact us at [organizers@md4sg.com](mailto:organizers@md4sg.com).  
Share your suggestions for future colloquium speakers [here](#).

AND  
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