

# Letter from the Editors

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Spring 2021 SoReMo Fellowship Projects - Volume 1 Editorial

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## The SoReMo Context

“SoReMo” stands for **S**ocially **R**esponsible **M**odeling, computation, and design.

The [SoReMo initiative](#) was built from the grassroots during the 2020/21 academic year at Illinois Tech. The guiding principle is to **empower students** to make change they are passionate about. It all begins with a simple question:

“What do **you** want to do?”

This is a question Prof. Chun Liu, the chair of Applied Mathematics, asked Petrović during the year 2020. He said “Think about what you want to do, and what that entails”. This is truly outstanding advice: freeing, liberating, and ... academic! In academia, we are supposed to explore the problems we are passionate about!

Through this initiative, we seek to pass down this question to students at Illinois Tech. Students from all majors and backgrounds, at any level.

Students are invited to imagine problems and seek solutions broadly.

**SoReMo Fellows have the freedom to imagine, create, solve.**

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Students who are interested in becoming SoReMo Fellows are invited to apply by proposing a project. Those most competitive are then selected by a panel of SoReMo core faculty members, who evaluate all submissions based on the quality of the proposed work, potential for interdisciplinary collaboration, and broader impact.

During the course of the semester, through a paid fellowship, Fellows do the following:

- Propose a project to work on - independently of any course or assignment;
  - Stay within or step outside their disciplines;

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- Expose their idea to a diverse group of faculty, advisers, subject matter experts;
- Work with those people who have the tools that can help advance the student's agenda;
- Propose creative solutions identifying future work and share them with the main stakeholders.

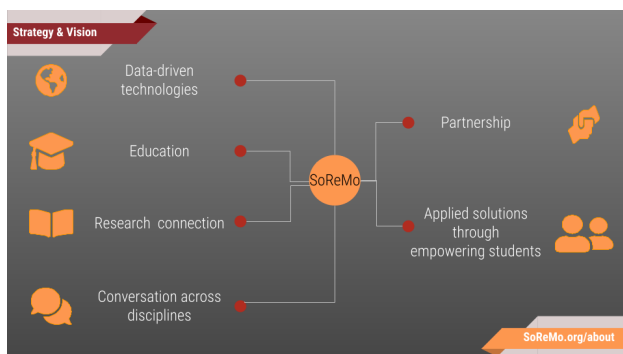


Figure 1: SoReMo's place in higher education: our vision

Finally, to close out their projects, Fellows are required to write a technical report. This publication showcases those reports. Each report has been reviewed by a group of peers and faculty, and has been revised at least once.

The process mimics exactly what happens in formal academic publishing. But the authors retain copyright of their technical reports and may choose to submit them or build on them for future projects or publications.

## More information

Our [homepage](#) has additional information about the initiative, related events, past Fellow projects, and current and upcoming opportunities to get involved.



Figure 2: Spring 2021 events overview. External speakers series (right) coordinated by Matthew Dixon.

## In this first issue

We are thrilled to present to you Volume 1, Issue 1 of the [SoReMo reports](#), containing the final reports of the inaugural class of Fellows in Spring 2021.

Their projects reflect some of the diversity of thought among our student body, and represent a broad, albeit small, representation of the meaning and impact of the phrase “Social responsibility”.



Figure 3: A snapshot of the announcement of the inaugural class of Fellows

- In *Community Risk Mitigation Research: A Study into the Inequalities of Preparedness Education in the Chicago Region*, Ryan Ciminski tackles the issue of preparedness of the Chicago Public School students for emergencies and disasters. Specifically, Ryan conducts a survey to gather data on preparedness resource awareness and preparedness culture in school. He draws parallels between metrics for preparedness and awareness thereof, and specific school information on demographics and socioeconomic factors.
- With a view of student diversity in mind, Alisha Khan takes a closer look into the undergraduate student admissions at Illinois Tech. In *Investigating Algorithmic Decision-Making with Applications to Student Diversity at Illinois Tech*, Alisha looks at the relationship between the algorithm predicting students' first-year GPA at Illinois Tech and the student population breakdown according to metrics of diversity. Her project uses exploratory data analyses and several statistical tests for data broken down by categories of interest.
- In another project that focuses on the Illinois Tech community, *Facilities, amenities, and accommodations for minorities in STEM and the impact on Illinois Tech's community: A Proposal for Free Menstrual Sanitary Products*, Barien Gad discusses the needs to bring about adequate access to free menstrual sanitary products to the campus in order to combat period poverty among its students. After gathering data from various sources, Barien proposes efficient and sustainable methods the university can implement to provide these products and study the impact on the community.
- In *Social Media Users Free Labor in Iran: Influencers, Ethical Conduct and Labor Exploitation*, Leilasadat Mirghaderi investigates labor strategies Iranian Instagram influencers employ to exploit their followers as well as how employed strategies resulted in fame, visibility and monetary gains for the influencers. Relying on context analysis for the publicly available Instagram data she collects on a group of influencers, Leilasadat extract central themes and uses them to provide specific guidelines and recommendations for ethical conduct.

## Reflections

During the inaugural semester, all of us – faculty from across the university and students alike – have learned valuable lessons.

We are equals in our quest for knowledge and our passion for social responsibility. As such, we continue to strive to be equals in asking and trying to answer the question “*What do you want to do?*”; in seeking and providing guidance.

The word “modeling” in our name can mean different things in different fields (mathematical models, statistics, design, architecture, humanities, computer science, engineering, ...). SoReMo is meant to include all of them.

As folklore has it, “*communication is key to success*”. Allow us to expand:

Effective communication between groups of people who do not have conversations on a daily basis and come from different walks of life is key to success.

This is also key to having a welcoming, open society. Growth of this initiative is our mission; it is our hope that it will continue to help us reach across disciplines and empower us all to interpret the key question using new perspectives.

## Acknowledgements

Our team is ever evolving and welcoming new contributors. We gratefully acknowledge everyone who has taken part in the Spring 2021 SoReMo Forum in any form, all the faculty and advisers and external collaborators who have helped the Fellows in a variety of ways in completing their projects. We grow as we learn, and we learn as we grow!



Figure 4: A snapshot of the core SoReMo Faculty & Advisors at the end of Spring 2021

The Galvin library staff, particularly Tim Fluhr, worked with us tirelessly during the production and publication phases.

Finally, SoReMo is grateful to Provost Peter Kilpatrick and Dean Lance Fortnow for sharing our vision and securing the seed fund to kick-start this initiative in 2021, as we prepare our fund raising campaign to support the Fellowships in the long term.

## License

This is an editorial piece accompanying the first issue of the technical reports publication for the [Socially Responsible Modeling, Computation, and Design](#) initiative at Illinois Tech.



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