

Newsletter

APRIL 2024



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JAMIA Call for Papers, deadline July 1:
Interdisciplinary Development and Application of
Computational Methods in Informatics for
Clinical Application
More information can be found [here](#).

Free webinar on Generative AI for Oncology Care,
April 30 1-2PM ET
Register [here](#).

Apply for the Clinical Informatics Fellowship at UVA
Accepting applications for the July 2024 fellowship
class. Open to physicians who are board certified or
eligible in any medical specialty. More information
can be found [here](#).

If you have any opportunities for students
that you would like to share, please let us
know via this [Google Form](#)

Save the date:

AMIA Clinical Informatics Conference

May 21 - 23
Minneapolis, MN

AMIA Annual Symposium

November 9-13
San Francisco, CA



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STUDENT SPOTLIGHT

Can Li

**PhD Candidate in Biostatistics and Data Science
The University of Texas Health Science Center at Houston**

**2024 Informatics Summit Student Paper Competition Winner
FERI: A Multitask-based Fairness Achieving Algorithm with
Applications to Fair Organ Transplantation**



Please describe your research interests.

I am passionate about developing fair predictive modeling algorithms in healthcare and mitigating bias in AI systems. My recent work includes integrating deep neural networks with multitask learning to reduce outcome disparities across demographic groups. Another area of my research interests involves combining statistical concepts such as survival analysis and constraint optimization in predictive modeling to address fairness issues across diverse scenarios.

Please describe your student paper.

Our paper introduced *Fairness through the Equitable Rate of Improvement in Multitask Learning* (FERI) algorithm to address fairness challenges in liver transplantation across subgroups defined by sensitive attributes such as age, gender, and race/ethnicity. By utilizing multitask learning and dynamically adjusting loss function weights, FERI equalizes the loss reduction rate across demographic subgroups, preventing subgroup dominance during the training process. As a result, FERI successfully balances fairness and accuracy, providing an invaluable tool for advancing fairness-aware predictive modeling in healthcare and promoting equitable healthcare systems.

What was your research process? Were there any challenges you faced in your study?

Our research began by recognizing the inequalities among demographic subgroups in liver transplantation and the algorithmic fairness issues from historical data prejudices during model prediction. The main challenges were addressing imbalanced demographic subgroup data and balancing different learning trajectories, which we figured out by calibrating model performance across these subgroups through the multitask learning approach.

What impact do you hope your research will have?

I hope our research will provide an innovative approach to fair predictive modeling in healthcare. By considering a more comprehensive range of features from donors and recipients, FERI aims to improve the efficiency and equity of organ matching while also considering long-term patient outcomes such as quality of life. We expect our research to provide a valuable framework for future efforts to integrate accuracy and fairness objectives in critical healthcare applications.

STUDENT SPOTLIGHT

What advice do you have for students starting in informatics?

For those starting their journey in informatics, I recommend exploring various research areas, starting small, and gradually expanding your knowledge by reading the latest papers from journals and conferences. Supplement your learning with online resources, and don't hesitate to connect with professionals in the field for mentorship and guidance. As everyone begins somewhere, it would be better for growth to step out of their comfort zone to seize new learning opportunities.

How did you get connected with AMIA?

I first learned about AMIA when I started my PhD, recognizing it as one of the largest biomedical and health informatics platforms for researchers to share their thoughts and research. To stay up-to-date with the latest developments, I followed AMIA's news through LinkedIn and read a diverse range of papers published in AMIA. This year, I also had the chance to share my work and attend the AMIA 2024 Informatics Summit, which allowed me to directly engage with the informatics community and reinforced my connection with this influential organization.

What are your recommendations for how students can get the most out of their AMIA conference experiences?

Attending sessions on various topics, actively engaging with speakers and attendees, and sharing one's research are great ways to gain insights from different research areas, build valuable connections, and receive feedback at the AMIA Informatics Summit. AMIA provides the perfect opportunity to expand professional networks, explore potential career direction, and stay updated on the latest trends in informatics.

NEWSLETTER TEAM

2021-2022



Sanya B. Taneja

PhD Candidate

Intelligent Systems Program

University of Pittsburgh

Research interests: knowledge graphs,
NLP, biomedical informatics

LinkedIn: [sanya-bathla-taneja](#)



Mollie Hobensack

Clinical Program Manager

Quality and Informatics

Icahn School of Medicine at Mt. Sinai

Department of Geriatrics and

Palliative Care

Research interests: nursing
informatics, NLP, machine learning,
clinical informatics

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NEWSLETTER TEAM

2022-2024

Danielle Scharp

**PhD Candidate
Columbia University
School of Nursing**

Research interests: nursing informatics, NLP,
lower urinary tract symptoms, older adults



Haris Siddiqui

**Undergraduate Student
Arizona State University**

Research interests: health informatics,
machine learning, epidemiology

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Ryan Chan

**PhD Candidate
Western University**

Arthur Labatt Family School of Nursing

Research interests: digital health, technology
and clinical decision-making; DH education

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Sonish Sivarajkumar

**PhD Candidate
University of Pittsburgh
School of Computing and Information**

Research interests:
clinical NLP, deep learning, EHR



NEWSLETTER TEAM

2024



Sarah E. Harkins

**PhD Candidate
Columbia University
School of Nursing**

Research interests: reproductive health equity, data visualization, nursing informatics



Susan Maloney

**PhD Student
Columbia University
School of Nursing**

Research interests: gender diverse populations, pediatrics, sexual and gender health care, health policy



Marcela Algave

**PhD Student
Columbia University
School of Nursing**

Research interests: fertility preservation in adolescents and young adults with cancer

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