



JOHN & MARSHA RYAN BIOETHICIST-IN-RESIDENCE

MARCH 20 • 5 P.M.

SIU School of Law
Lesar Law Building Courtroom
Carbondale, Illinois

“Artificial Intelligence in Medicine: Does Accountability Require Explainability?”

The lecture is free and open to the public.

Individuals with disabilities are welcomed.
Call 618-453-5738 to request accommodations.

Breakthroughs in machine learning are enabling artificial intelligence (AI) to perform a wide range of diagnostic and predictive tasks in medicine. This prospect has prompted utopian hype, as well as dystopian hysteria, dramatizing the importance of ensuring that systems involved in life-and-death decisions merit public trust. Essential to securing such trust are clear practices and procedures to ensure accountability and respect for the freedom of stakeholders.

A common proposal for achieving these goals imposes requirements like explainability or interpretability that seek to lay out the operation of such systems to human inspection. Because the most powerful AI systems are often opaque “black-boxes,” these requirements may be purchased at the price of reduced predictive accuracy.

Professor London will argue that such requirements are misguided in domains—such as medicine—where our knowledge of fundamental causal relationships is precarious and under-developed. Instead, we should promote trust and accountability by clearly defining the tasks such systems can perform, the conditions necessary to ensure acceptable system performance, and rigorously validating their accuracy under those well-defined conditions.



2018-2019

John & Marsha Ryan
Bioethicist-in-Residence
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ALEX JOHN LONDON, Ph.D., is the Clara L. West Professor of Ethics and Philosophy and Director of the Center for Ethics and Policy at Carnegie Mellon University. He is an elected Fellow of the Hastings Center whose work focuses on ethical and policy issues surrounding the development and deployment of novel technologies in medicine, biotechnology, and artificial intelligence. He is co-editor of *Ethical Issues in Modern Medicine*, one of the most widely used textbooks in medical ethics and has published more than 85 papers in leading philosophy journals (such as *Mind* and the *Philosopher's Imprint*), high-impact science and medical journals (such as *Science*, *eLife*, *JAMA*, *The Lancet*, and *PLoS Medicine*), as well as numerous other journals and collections. Professor London's work on ethics and AI examines the nature of algorithmic bias, how to encode alternative models of moral decision making in formal systems, social trust, and the nature and source of uncertainty in AI systems.

For more than a decade Professor London has helped to shape key ethical guidelines for the oversight of research with human participants. From 2012-2016, he was a member of the Working Group on the Revision of CIOMS 2002 *International Ethical Guidelines for Biomedical Research Involving Human Subjects*. Prior to that, he was an expert commentator at three World Medical Association meetings for the revision of the 2013 Declaration of Helsinki. From 2007-2018, he was a member of the ethics working group of the U.S. HIV Prevention Trials Network where he was part of the group that drafted the *HIV Prevention Trials Network Ethics Guidance for Research*. From 2016-2017, he was part of the U.S. National Academy of Medicine Committee on Clinical Trials During the 2014-15 Ebola Outbreak, and, from 2016-2018, he was a member of the U.S. Health and Human Services Advisory Committee on Blood and Tissue Safety and Availability. He has served as an ethics expert in consultations with numerous national and international organizations, including: the U.S. National Institutes of Health, the World Health Organization, the World Medical Association, and the World Bank.

For more information about the Ryan Bioethicist-in-Residence, visit: law.siu.edu/academics/center-programs/health-law-policy/ryan-bioethicist.html.