



Online Ethics Center  
FOR ENGINEERING AND SCIENCE

# **NetEthics: Building Tools & Training to Advance Responsible Conduct in Complex Research Networks Pioneering Novel Technologies**

## **Year**

2022

## **Description**

**The OEC Project Pages are intended to cultivate a community of practice and allow ethics researchers, educators, and practitioners to more effectively disseminate their work. This Project Page provides a detailed overview and relevant resources for an on-going science or engineering ethics project. Once you've explored this project, visit the "Projects" section under "Resources" to see more ethics projects.**

## **Body**

### **Project Summary**

This project on "NetEthics: Building Tools & Training to Advance Responsible Conduct in Complex Research Networks Pioneering Novel Technologies" will make a major advance in the responsible conduct of large, complex engineering research projects such as NSF-funded Engineering Research Centers (ERCs). Engineering research increasingly involves multidisciplinary teams networked across multiple

universities and other institutions to develop new technologies. However, tools to help these teams conduct research ethically and develop technologies for societal benefit are lacking. Instead, current research ethics and tools tend to focus either on the responsibilities of individual researchers or the big societal issues that the new technology will raise. These two ends of the spectrum – the micro level of the individual and the macro level of overall impacts -- leave a troubling gap in the middle by offering little guidance to the leaders of complex research networks. Those leaders regularly face difficult issues such as how to reconcile conflicting ethical approaches across the network, how to ensure ethical and respectful laboratory leadership and mentoring, how to create network-wide processes for resolving disputes, and how to build a network culture valuing inclusion and diversity. Network leaders also face challenges in building community and stakeholder relationships, ensuring responsible commercialization, and making sure that the entire research network fulfills ethical responsibilities such as responsible conduct of research (RCR) with human participants, ethical treatment of animals in research, and avoiding conflicts of interest.

Our NetEthics project will work with a group of national experts to systematically identify key ethical values to guide network ethics. The project will then use an NSF-funded ERC – ATP-Bio -- as a laboratory to study network ethics in action. This ERC is developing technologies to “stop biological time” with advanced techniques for preserving cells, tissues, and organs to transform systems from organ transplantation to conservation biology. Finally, NetEthics will develop training tools that can be used by complex research ethics networks and those who seek to lead these major projects.

## **Project Leadership**

### **Susan M. Wolf, J.D.**

Regents Professor

McKnight Presidential Professor of Law, Medicine & Public Policy

Faegre Baker Daniels Professor of Law

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Director of Convergent Research, ATP-Bio  
Associate Professor of Surgery (Bioengineering), Harvard Medical School  
Deputy Director of Research, Shriners Hospitals for Children  
Director, Cell Resource Core, Massachusetts General Hospital  
Director, Organ Reengineering Lab, Center for Engineering in Medicine & Surgery  
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## **Recipient Institution**

University of Minnesota

## **Start and End Date**

September 1, 2022 - August 31, 2024

## **Contact Information**

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# Project Website

[Click here.](#)

## Contributor(s)

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## Rights

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## Resource Type

Projects

## Parent Collection

STEM Ethics Projects (2017-Present)

## Topics

Collaboration

Interdisciplinary Research

Controversies

Data Management

Diversity

Emerging Technologies

Ethics and Society

Goals of Ethics Education

Governance

Human Subjects Research

Intellectual Property and Patents

Law and Public Policy

Mentors and Trainees

Publication Ethics

Authorship

Reproducibility

Research Misconduct  
Responsible Innovation  
Social Responsibility  
Teaching Ethics  
Case Study Method  
Ethical Decision-Making

## **Discipline(s)**

Computer, Math, and Physical Sciences  
Chemistry  
Physics  
Social Justice, Equity and Inclusion  
Engineering  
Biomedical Engineering and Bioengineering  
Environmental Engineering  
Grand Challenges for Engineering  
Material Science and Engineering  
Life and Environmental Sciences  
Biotechnology  
Cell and Developmental Biology  
Ecology and Evolutionary Biology  
Food Science  
Genetics and Genomics  
Physiology  
Plant Sciences  
Public Health  
Social and Behavioral Sciences  
Psychology  
Public Policy and Public Administration  
Science and Technology Studies  
Teaching Ethics in STEM  
Research Ethics  
Other

## **Publisher**

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