



#### **VISION AND MISSION**

The Institute for Practical Ethics develops and promotes research on ethical issues facing the public based on a number of special strengths:

- UC San Diego is one of the world's greatest producers
  of technology, medical innovations and scientific
  knowledge. We partner with these scientists, offering a
  new model of ethics and science.
- UC San Diego has highly ranked researchers in science, ethics, philosophy of science, social sciences and science studies. We draw upon excellence across multiple fields.
- Our work is relevant to important topics facing individuals and society, and we include in our analysis the social structures that shape how ethics will operate in our society, in natural science and in technology.

With these strengths, the mission of the Institute for Practical Ethics is to develop and promote research on ethical issues in science, technology, engineering and medicine facing the public, with special emphasis on fostering deliberation among ethicists, scientists and policy makers.

#### LETTER FROM THE CO-DIRECTORS

In casual conversation, it's easy to talk about the Institute for Practical Ethics. Everything from its inception, the day-to-day and month-to-month activities, and our larger mission and vision. It's easy to celebrate the big wins — our talented postdoctoral scholars, our thriving Ph.D. fellows program, the impactful visiting scholars we've seen over the years — and to learn from the tougher challenges: COVID-19 and the global pandemic first and foremost. But putting it all down on paper is another story.

This report is an attempt to highlight the first five years of the institute, from late 2017 to near the end of the 2022 academic year. There is no way we could do justice to or include every single initiative, research publication, meeting and event, or thought and idea that has made up our first five years. There is also no way we could completely express our deep gratitude to all the individuals who have worked with us and contributed in some way. People remain the center of the Institute for Practical Ethics, proving that the individual commitment leads to the greater good.

We are especially grateful to Arts and Humanities Dean Cristina Della Coletta, and the school's dedicated and compassionate staff, Helen Olow and Tara Nadeau. Their leadership and support for five years is represented in these pages and much more.

We believe we are making genuine progress toward developing socially responsible science, now and in the years to come. Thank you.

CRAIG CALLENDER

**JOHN H. EVANS** 

Department of Philosophy

Department of Sociology



#### **ADVISORY BOARD**

#### **CRISTINA DELLA COLETTA**

Chancellor's Associates Chair in Italian Literature Dean, School of Arts and Humanities

#### **DAVID DANKS**

Department of Philosophy Halıcıoğlu Data Science Institute

#### **CATHY GERE**

Department of History

#### **LARRY GOLDSTEIN**

Departments of Cellular and Molecular Medicine, and Neurosciences

#### **DANIEL NAVON**

Department of Sociology

#### DANA NELKIN

Department of Philosophy

#### **KIM PRATHER**

Distinguished Chair in Atmospheric Chemistry Departments of Chemistry and Biochemistry Scripps Institution of Oceanography

#### **RAMESH RAO**

Qualcomm Endowed Chair in Telecommunications and Information Technology
Department of Electrical and Computer Engineering Director, Qualcomm Institute

#### SURESH SUBRAMANI

Tata Chancellor's Endowed Professorship in Molecular Biology

# **OUR RESEARCHERS**

#### RESEARCH SCHOLAR



#### RAMYA M. RAJAGOPALAN 2018-2021

Ramya M. Rajagopalan earned her Ph.D. in biology at the Massachusetts Institute of Technology, and completed postdoctoral fellowships in sociology and bioethics at the University of Wisconsin-Madison. Ramya's work uses ethnographic and archival methods to examine the social impacts of genome technologies and big data in biomedicine. In one strand of her research, she has analyzed debates about the meaning and significance of genetic variation for social categories of identity like race.

#### POSTDOCTORAL SCHOLARS



#### **AMY ZHOU 2018-2019**

Amy Zhou earned her bachelor's degree and Ph.D. in sociology from UCLA. She is a medical sociologist interested in health inequalities in the United States and global setting, and is now assistant professor in the sociology department at Barnard College.



#### **DANIEL CALLIES 2018-2021**

Born and raised in Southern California, Daniel Edward Callies received his bachelor's and master's degrees in philosophy from San Diego State University, and his Ph.D. from Goethe University Frankfurt. He is currently in a clinical ethics fellowship with Health Ethics Center at the UCLA David Geffen School of Medicine. His book "Climate Engineering: A Normative Perspective" was published in July 2019.



#### **JACOB SPARKS 2019-2020**

Jacob Sparks earned a bachelor's degree in physics from Tufts University and a Ph.D. in applied philosophy from Bowling Green State University. After his time with the institute, he became an assistant professor in the philosophy department at California Polytechnic State University. At the institute, Jacob worked on ethical issues surrounding privacy and automation.



#### **APRIL HOVAV 2019-2021**

April Hovav earned a Ph.D. in sociology with a certificate in gender studies from the University of Southern California. After her time with the institute, she accepted a postdoc position at Occidental College. In one line of research, she examines the relationship between developments in medical technologies and the emergence of new global markets through which women's bodies are leveraged as a source of capital.



#### ATHMEYA JAYARAM 2019-2021

Athmeya Jayaram earned a bachelor's degree in philosophy at Amherst College and a Ph.D. in political theory at the University of California Berkeley. After his time with the institute, he accepted a Hecht-Levi Postdoctoral Fellow at the Berman Institute of Bioethics at Johns Hopkins University. Athmeya's research concerns the justice and justification of emerging technologies.



#### **BONGINKOSI SHOZI 2021-2023**

Bonginkosi Shozi holds the degrees of Bachelor of Laws (LLB) and Master of Laws (LLM) in Constitutional Law, Theory, and Human Rights Litigation, both obtained from the University of KwaZulu-Natal. He recently completed the requirements for a Ph.D. in Law at the same institution. Bonginkosi conducts research on the legal, ethical and human-rights implications of novel technologies.

Announcing: **ZINHLE MNCUBE**, **2022-2023** postdoctoral scholar. Zinhle Mncube will receive a Ph.D. in History and Philosophy of Science from the University of Cambridge. Their current research concerns the epistemology and ethics of personalizing medicine.

#### UC SAN DIEGO PH.D. FELLOWS

# 2018-2019

# 2019-2020

# 2020-2021

# 2021-2022

JiMin Kwon

Riley I. Taitingfong

Colin M. Burke

Davide Carpano

Eugene Chua

Daniel Driscoll

Ross Graham

Mohammad Khamsya

Bin Khidzer

Cami Koepke

Chuncheng Liu

Edward Randolph

Sarah Stembridge

Ann Thresher

Jada Wiggleton-Little

**Bolun Zhang** 

Samantha Berthelette

Tarun Kalluri

Elizabeth Mayes

Ke Nie

**Eddie Yang** 

Keyao Yang

Jacob Zellmer

Alec J. Calac

Keng-Chi Chang

Giulia Corno

Ross Graham

Milana Kostic

Shirley (Xingyu) Liu

Kennedy Pitcher

Joe Riley

Katherine Rittenhouse

Caryn K. Rubanovich

Akshita Sivakumar

Matthew Soleiman

**Udayan Tandon** 

# **VISITING SCHOLARS**

- SOFIA EFSTATHIOU (2018), postdoctoral research fellow in the Department of Philosophy and Religious Studies at the Norwegian University of Science and Technology
- BRYAN CWIK (2019), assistant professor in the Portland State University Department of Philosophy
- **CEDRIC WHITNEY (2019-2020),** senior partnership manager at Owkin, a health AI start-up
- SAVEETHA MEGANATHAN (2019-2021), research scientist at the Tata Institute for Genetics and Society
- MEGAN BLOMFIELD (2020), professor in The University of Sheffield Department of Philosophy
- AUSTIN CHOI-FITZPATRICK (2020-2021), associate professor, University of San Diego

- ELLIOTT SOBER (2020), Hans Reichenbach Professor and William F. Vilas Research Professor in the Philosophy Department at the University of Wisconsin—Madison
- ERIC WINSBERG (2020), professor in the University of South Florida Philosophy Department
- **S. ANDREW SCHROEDER (2020-2021)**, associate professor of philosophy at Claremont McKenna College
- THILO HAGENDORFF (2021), postdoctoral scholar at the University of Tuebingen
- DANIEL TRUSILO (2022), Ph.D. candidate at the University of St. Gallen, Switzerland

# **RESEARCH & ACTIVITIES**

#### THE ETHICS AND SOCIAL IMPLICATIONS OF ACTIVE GENETICS



Recent breakthroughs in gene editing — including gene drive technology — make it clear there are both powerful opportunities to alter genes for the common good and substantial ethical considerations that must be addressed.

In collaboration with the UC San Diego Tata Institute for Genetics and Society, the Institute for Practical Ethics supports a research program on the ethics of active genetics. This program includes the formation of the Ethics of Active Genetics Working Group, workshops on the ethics of active genetics, and the training of scientists.

#### UNDERSTANDING THE ETHICS OF GENETIC ENGINEERING

The UC San Diego Institute for Practical Ethics hosted its inaugural conference on the ethics and social implications of gene drives May 2019, bringing together leading scientists and ethicists working toward a better understanding of what happens when genetic engineering becomes increasingly commonplace. The two-day conference began with a public presentation and discussion led by Ronald Sandler, chair of Northeastern University's Department of Philosophy and Religion and director of their Ethics Institute. Sandler focused on the use of gene drives as a means to pursue environmental conservation.



### THE ETHICS AND SOCIAL IMPLICATIONS IMPACTING THE ENVIRONMENT

Climate change, biodiversity loss, pollution and more all raise ethical, philosophical and social questions. What does justice demand in the face of climate change? What do we value in biodiversity? How can we better achieve environmental justice? New technology and knowledge allow novel possibilities for dealing with some of these problems, from geoengineering the climate to using genetic engineering in conservation.

# "WHEN EXTINCTION IS WARRANTED: INVASIVE SPECIES, SUPPRESSION-DRIVES AND THE WORST-CASE SCENARIO" BY ANN THRESHER IN ETHICS, POLICY & ENVIRONMENT

Most current techniques to deal with invasive species are ineffective or have highly damaging side effects. To this end suppression-drives based on clustered regularly inter-spaced short palindromic repeats (CRISPR/ Cas9) have been touted as a potential silver bullet for the problem, allowing for a highly focused, humane and cost-effective means of removing a target species from an environment. Suppression-drives come with serious risks, however, such that the precautionary principle seems to warrant us not deploying this technology. The focus of this paper is on one such risk — the danger of a suppression-drive escaping containment and wiping out the target species globally.



#### THE ETHICS AND SOCIAL IMPLICATIONS OF DATA SCIENCE

Information on all members of society now exists in various databases, and the ability to analyze enormous amounts of data is reshaping how governments, businesses and other entities made decisions. However, ethical standards for data designed for a pre-computer age are of limited utility, and the use of "big data" raises a host of social and ethical questions.

The program includes the Working Group on Data Analytic Governance and Accountability to understand how these powerful tools work and to ensure that they are applied in ways that enhance rather than curtail human agency, social justice, democracy and economic development, we must articulate and investigate how data analytics govern and transform social life.



#### UNDERSTANDING THE ETHICS OF ALGORITHMS AND BIG DATA

In conjunction with the Halicioğlu Data Science Institute and Division of Social Sciences, the Institute for Practical Ethics sponsored an inaugural workshop in February 2019: Ethics and Policy Implications of Algorithms and Big Data. The workshop brought together social and computer scientists, academics, activists, and practitioners interested in the ethics and policy implications of algorithms and big data. The purpose of the workshop was to explore the state-of-the-art and immediate horizons of algorithms, big data, and automation, and their interface with the social sciences and ethical issues. The panels facilitated lively and wide-ranging discussion.

### SCIENCE AND DEMOCRACY

The Science and Democracy project at the Institute for Practical Ethics brings scholars together to research both how science is done, and how it ought to be done, in a democracy. Topics include freedom of inquiry and its limits, justifications for the public funding of science, and the ethics of science and technology policy. Visiting scholar S. Andrew Schroeder, an associate professor in philosophy at Claremont McKenna College won a prestigious ACLS fellowship to research this topic with us.

# "DRIVERS OF CARBON PRICE ADOPTION IN WEALTHY DEMOCRACIES: INTERNATIONAL OR DOMESTIC FORCES?" BY DANIEL DRISCOLL IN SOCIUS: SOCIOLOGICAL RESEARCH FOR A DYNAMIC WORLD

Is carbon price adoption in wealthy democracies driven more by international or domestic forces? Event history analyses reveal that carbon price adoption is more likely in countries with less fossil fuel energy use (and, by proxy, less powerful fossil fuel business-elite actors) and with less encumbered democratic institutions (i.e., fewer institutional veto points). These findings are triangulated through cross-sectional comparisons and case studies. In short, wealthy democracies enact carbon prices according to the degree to which domestic actors or costs constrain or enable enactment and implementation.



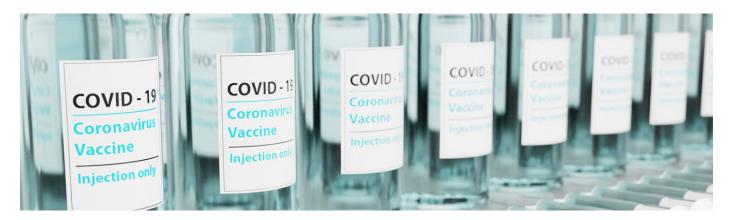
# SELECT PUBLICATIONS

# JUSTIFYING THE RISKS OF COVID-19 CHALLENGE TRIALS: THE ANALOGY WITH ORGAN DONATION

By ATHMEYA JAYARAM, JACOB SPARKS and DANIEL CALLIES in Bioethics (June 2021)

In the beginning of the COVID pandemic, researchers and bioethicists called for human challenge trials to hasten the development of a vaccine, explain former Institute for Practical Ethics postdoctoral scholars Athmeya Jayaram, Jacob Sparks and Daniel Callies in the journal Bioethics.

"[E]thical objections to challenge trials may have slowed the progress of a COVID vaccine, so it is important to evaluate their merit," they write. The researchers conclude — as new variants of COVID are being discovered — that if the medical community accepts the risks and benefits of organ donation, they can safely accept the same for COVID challenge trials.



#### THE ETHICAL GENE

By **REUVEN BRANDT** in Bioethics (January 2022)

Abstract: In this paper I argue that current law and policy governing germline genetic modification are overly broad and in fact prohibit medical interventions normally considered unobjectionable. The root of the problem lies in the fact law and policy tend to espouse a near categorical ban on medical interventions that alter germline DNA.

However, if we pay close attention to the biological mechanisms at play we see that many

standard medical interventions result in alterations to DNA that can be transmitted to future

generations. The correct focus of policy and regulation thus ought to be determining which kinds of transmissible genetic modifications ought to be permitted, and not whether they should be permitted at all.

Given that the scientific classification of biological structures involved in the inheritance of traits is unlikely to be in itself ethically significant, ethicists ought to develop a definition of 'gene' fit for ethical purposes.

#### **PUBLISHED RESEARCH**

- "Justifying an Intentional Species Extinction: The Case of Anopheles gambiae" by Daniel Callies and Yasha Rohwer in Environmental Values (April 2022)
- "The ethical gene" by Reuven Brandt in Bioethics (Jan 31, 2022)
- "Rule by Automation: How Automated Decision Systems Promote Freedom and Equality" by Jacob Sparks and Athmeya Jayaram in Moral Philosophy and Politics (Jan 6, 2022)
- "On the Horns of a Dilemma: Let the Northern White Rhino Vanish or Intervene?" by Craig Callender in Ethics, Policy & Environment (2021)
- "Setting ethical limits on human gene editing after the fall of the somatic/germline barrier" by John H Evans in Proceedings of the National Academy of Sciences (volume 118, 22)
- "Assessing Climate Policies: Catastrophe Avoidance & the Right to Sustainable Development" by Daniel Callies and Darrel Moellendorf in Politics, Philosophy & Economics (volume 20, issue 2)
- "Making sense of algorithms: Relational perception of contact tracing and risk assessment during COVID-19" by PhD fellows Chuncheng Liu and Ross Graham in Big Data & Society (volume 8, issue 1)
- "Drivers of Carbon Price Adoption in Wealthy Democracies: International or Domestic Forces?" by PhD fellow Daniel Driscoll in Socius: Sociological Research for a Dynamic World (volume 7)
- "Insights on Vaccine Hesitancy from Religious People's View of Science" by John H Evans for the Berkley Center for Religion, Peace & World Affairs (Feb 16, 2021)
- "Justifying the Risks of COVID Challenge Trials: The Analogy with Organ Donation" by Athmeya Jayaram, Jacob Sparks and Daniel Callies in Bioethics (June 27, 2021)
- "Political Liberalism and Public Health" by Athmeya Jayaram and Michael Kates in The American Journal of Bioethics (volume 21, issue 9)
- "Gene Editing and the War Against Malaria" by Ethan Bier and Elliott Sober in American Scientist (volume 108, number 3)
- "Making Science Better: Lessons From the COVID-19 Front" by Craig Callender in Issues in Science and Technology (June 11, 2020)
- "Bednets or Biotechnology: To Rescue Current Persons or Research for the Future?" by Daniel Callies in Fudan Journal of the Humanities and Social Sciences (Aug 13, 2020)
- "Revising, Correcting, and Transferring Genes" by Bryan Cwik in The American Journal of Bioethics (volume 20, issue 8)
- "The Human Gene Editing Debate" by John H Evans published by Oxford University Press (September 2020)
- "Who Doesn't Trust Fauci? The Public's Belief in the Expertise and Shared Values of Scientists in the Covid-19 Pandemic" by John H Evans and Eszter Hargittai in Socius: Sociological Research for a Dynamic World (volume 6)

- "Cutting out the Surrogate: Caesarean Sections in the Mexican Surrogacy Industry" by April Hovav in Social Science & Medicine (volume 256)
- "Empowering Marginalized Communities" by Athmeya Jayaram in The American Journal of Bioethics (volume 20, issue 5)
- "For the People, By the Viewpoints? Realism and Idealism in Public Reason" by Athmeya Jayaram in Journal of Moral Philosophy (Aug 8, 2020)
- "Climate and Coronavirus: the Science is not the Same" by Eric Schliesser and Eric Winsberg in New Statesman (March 23, 2020)
- "When Extinction Is Warranted: Invasive Species, Suppression-Drives and the Worst-Case Scenario" by Ann Thresher in Ethics, Policy & Environment (November 2020)
- "The Ethical Landscape of Gene Drive Research" by Daniel Callies in Bioethics (Volume 33, issue 9)
- "The Slippery Slope Argument against Geoengineering Research" by Daniel Callies in Journal of Applied Philosophy (Volume 36, Issue 4)
- "Climate Engineering: A Normative Perspective" by Daniel Callies, published by Lexington Books (2019)
- "Producing Moral Palatability in the Mexican Surrogacy Industry" by April Hovav in Gender & Society (Volume 33, Issue 2)
- "Science, Values, and Science Communication: Competencies for Pushing Beyond the Deficit Model" by Sherry Seethaler, John H Evans, Cathy Gere and Ramya M Rajagopalan in Science Communication (Volume 41, Issue 3)
- "You Give Love A Bad Name" by Jacob Sparks in Business Ethics Journal Review (Volume 7, Issue 2)
- "Islands as Laboratories: Indigenous Knowledge and Gene Drives in the Pacific" by Riley Taitingfong in Human Biology (Volume 91, Issue 3)
- "Therapeutic citizens and clients: Diverging practices in Malawi's healthcare facilities" by Amy Zhou in Sociology of Health & Illness (Volume 41, Issue 4)
- "Institutional Legitimacy and Geoengineering Governance" by Daniel Callies in Ethics, Policy & Environment (Volume 21, issue 3)
- "Solar Geoengineering and Democracy" by Joshua Horton, Jesse Reynolds, Holly Jean Buck and Daniel Callies in Global Environmental Politics (Volume 18, number 3)
- "The Potential for Climate Engineering with Stratospheric Sulfate Aerosol Injections to Reduce Climate Injustice" by Toby Svoboda, Peter Irvine, Daniel Callies and Masa Sugiyama in the Journal of Global Ethics (Volume 14, issue 3)

# RESEARCH GRANTS

Specifically for internal UC San Diego faculty or researchers, the Institute for Practical has supported projects that are distinct from other faculty grants during its first three years. These projects brought a Nobel Prize winner to campus, funded empirical studies of ethics, connected with public health workers in the community, and much more.

#### **HIGHLIGHTS**

# PERSPECTIVES ON HEALTH BIG DATA PRIVACY AMONG MEMBERS OF AN INDIGENOUS COMMUNITY AT A LARGE STEM INSTITUTION

- CINNAMON BLOSS, associate professor Department of Family Medicine and Public Health
- BURGUNDY FLETCHER, graduate student Department of Ethnic Studies and UC San Diego American Indian Graduate Student Association chair
- LUCILA OHNO-MACHADO, professor Department of Medicine

Privacy-related concerns frequently emerge as a barrier to the equitable access of biomedical research and its associated benefits to Indigenous communities. The ultimate goal of this work is to identify practices that will make the collection and use of health big data more trustworthy and transparent for Native and Indigenous participants now and in the future.

#### AI AND THE FUTURE OF SOCIETY

• **ULRIKE SCHAEDE**, School of Global Policy and Strategy The Japan Forum for Innovation and Technology launched a research program on "The Digitalization Disruption and the Future of Society," with the goal to analyze the ongoing changes associated with AI, IOT, industry 4.0 and society 5.0, using the social-science perspective and global comparison.



#### **EVIDENCE AND SCIENTIFIC METHOD: RIGOR VS. USE**

• NANCY CARTWRIGHT, Department of Philosophy
The Institute for Practical Ethics sponsored an
interdisciplinary workshop winter 2019 exploring the tradeoff between epistemic and use values among varying usevalues themselves, in the construction of scientific research
in the human sciences, broadly conceived (including
economic, social, medical and public health sciences).

# ETHICS AND POLICY IMPLICATIONS OF ALGORITHMS AND BIG DATA

• AKOS RONA-TAS, Department of Sociology
The two-day workshop brought together social and
computer scientists, other academics, activists, and
practitioners interested in the ethics and policy implications
of algorithms and Big Data. The first panel focused on the
implications of algorithms and Big Data for knowledge and
culture; the second on inequality and fairness; the third on
power and privacy; and the fourth on regulation and policy.
The main achievement of the workshop was the creation of
a new conversation on this topic that integrated multiple
approaches.

### PROGRAM DEVELOPMENT

#### DAVID DANKS APPOINTED TO NATIONAL AI ADVISORY COMMITTEE

UC San Diego Halicioğlu Data Science Institute and Department of Philosophy professor David Danks has been invited to serve as a member of the National AI Advisory Committee (NAIAC) as an inaugural appointee. NAIAC is tasked with providing advice to the President and the National AI Initiative Office about AI in the United States. The advice and recommendations will include not only technical and research priorities but also the ethical, legal, and societal issues that arise through the use of AI.



"It is an honor to serve as an advisor for the national strategy on AI research, development, and use," said Danks, an advisory board member of the Institute for Practical Ethics. "AI is transforming modern society, and we need to ensure that AI works for the benefit of all, not only the few. The NAIAC provides an opportunity to help guide the ways that AI is impacting our lives."

#### **BUILDING OUR FACULTY**

Aligned with campus' strategic hiring plan, the Institute for Practical Ethics proposed a joint hire in Data Ethics and Social Impact to be housed between Halicioğlu Data Science Institute and the Department of Communication. Hired as a Practical Ethics scholar, Stuart Geiger joined UC San Diego as an assistant professor in the 2020-2021 year. The following year, David Danks (see feature above) — who specializes in data ethics — joined Halicioğlu Data Science Institute and the Department of Philosophy.

#### **NEW COURSE DEVELOPMENT**

The Institute for Practical Ethics led the development of two courses in data ethics for the campus' data science major: one in Sociology and one in Philosophy. The institute has expanded the conversation to Earl Warren College administration and the Jacobs School of Engineering for their systems engineering master's degree, as well as the School of Biological Sciences.

#### **SPECIALIZED TRAINING**

With the Department of Philosophy, the institute proposed a two-week summer program in bioethics to Strategic Academic Program Development. In partnership with philosophers and bioethicists at Kyoto University, institute directors held a one-day introductory training at UC San Diego, followed by additional outreach in subsequent years in Kyoto. The institute produced a successful, five-week course that trained postdoctoral scholars in molecular biology from UC San Diego and TIGS-India in the ethics and social impact of emerging molecular biology.



#### **EXTERNAL OUTREACH**

- Kyoto University
- Centre for the Study of Existential Risk
- Centre for the Future of Intelligence, Cambridge University
- Stanford Stem Cell Clinical Center
- Center for Ethics in Science and Technology

# **EVENTS**

#### SHOULD WE BRING BACK THE WOOLLY MAMMOTH?

As scientists get closer and closer to being able to bring extinct animals back to life, big questions emerge. What led to extinction in the first place? What would be the impacts on other species or the environment? Just because we can do it, does that mean we should? To help answer these questions and celebrate the inaugural year of the UC San Diego Institute for Practical Ethics, guest speaker Beth Shapiro — a world-renowned professor of ecology and evolutionary biology at UC Santa Cruz-spoke to a packed house of researchers and students from across campus and the greater community on April 19, 2018.





Practical Ethics Gene Drive Working Group series starts

Boundaries of Research with Human Embryos

Lectureship series

Perspective

The Human Contexts of Computation and Data

Data Science and Society series

Putting Genomics in Context to Promote Health

Skepticism and open-mindedness in Science workshop

Institute for Practical Ethics soft launch

Biomedical Ethics series starts

As UC San Diego official Earth Month celebrations continue, the university's Institute for Practical Ethics welcomes environmental journalist and author Emma Marris for a unique and optimistic talk — one where "rewilding" is a reality, assisted migration is possible and the romantic notion of pristine wilderness is tossed out.

Marris is the author of "Rambunctious Garden: Saving Nature in a Post-Wild World" and will give the second keynote address in what is a yearly series for the institute, this year held April 24, 2019.

Inaugural keynote: "Can We, Should We and Will We Clone Using Theatre to Foster Ethics and Science Conversations

Genetic Manipulation in the Age of Biocapitalism: Commerce,

Consumers and CRISPR

May We Make the World? Religious and Ethical Questions, Burke Where do Religion and Biomedical Research Meet? An Islamic World Bioethics conference, Bangalore, India UC San Diego undergraduate Ethics Bowl

Conference: Ethics and Policy Implications of Algorithms and Big Data, with HDSI

Deregulation by Code

Evidence and Scientific Method: Rigor vs. Use

Bioethics Bootcamp, with TIGS-India

Keynote: "The Future of Nature: Conservation in the Anthropocene" featuring Emma Marris The Ethics of Using Gene Drives in Conservation, our plenary address Conference: The Ethics and Social Implications of Gene Drives

Data Analytics Working Group series starts

Conference: Brain Organoids, with the Stanford Stem Cell Clinical

**Empowering Dying Patients with Choices** Center

Practical Ethics Lunchtime Workshop series starts

2017 2018 2019

Mammoths?" featuring Beth Shapiro

Kyoto University welcome

#### A HUMAN-CENTERED APPROACH TO ARTIFICIAL INTELLIGENCE

The UC San Diego Institute for Practical Ethics presented a new model for artificial intelligence technology Dec. 3, 2020, virtually hosting famed AI expert Stuart Russell as their third annual keynote speaker to an audience of more than 300 people. Russell, former vice-chair of the World Economic Forum's Global Agenda Council on AI and Robotics, advocated for artificial intelligence that takes a human-centered approach, one with the capacity to lift the living standards of everyone on Earth.



#### **DONOR 9623 AND THE STRANGE BUSINESS OF MAKING BABIES**

When scores of aspiring parents turned to the fertility industry to start families, they chose a remarkable young man to be the biological father of their children. He was a music prodigy and gifted athlete who had a genius IQ, movie-star looks and perfect health. Except it was all a lie.

Hosted Feb. 3, 2021 by the Institute for Practical Ethics, guest speaker Dov Fox, Professor of Law and director of the Center for Health Law Policy and Bioethics at University of San Diego, examined the complex forces and competing agendas behind the biggest reproductive hoax of our time.

Public Science Funding: After the Linear Model

A War on Science? Rethinking Vaccine Hesitancy and Refusal

Uses and Misuses of Scientific Models in Pandemic Policy Advice

COVID-19 Policy, Ethics and the Limits of Science Fossil Fuel Funding on Campus: What to Do?

Our Uncertain Eugenics

Toward a Theory of Scientific Misappropriation: White Nationalism, Racial Hereditarianism and Beyond

Conference: "Animal Minds," organized by Andy Lamey

represent every scholarly event of the institute. This timeline is a selection only, and does not

Imaging Surveillance Programs for Patients

Privacy and Ethics at a Large University

When Extinction is Warranted

Conference: Countertechnologies @ The Edgelands

Dengue, COVID-19 and Trust in Science

Medical Ethics and Medical Education

Keynote: "How Not to Destroy the World with AI" featuring Stuart

Ethical Considerations for Gene Drives

Global Ethics of Climate Change

2021

Science and Democracy working group series starts

Keynote: "Donor 9623 and the Strange Business of Making Babies" featuring Dov Fox

Scientists and Conservations' Perceptions of Risk of Gene Drive Varieties of Gene Drives: Implications for Ecosocial Relations

Practical Ethics Fellows presentations **Technology** 

Genealogies of Data junior workshop

Machine Learning Political Orders

Global Regulation of Human Heritable Genome Editing

2022

# **SUPPORT**

#### UC SAN DIEGO LAUNCHES INSTITUTE TO ADDRESS ETHICS OF TODAY'S INNOVATION

To help close the gap between the pace of innovation and society's ability to deal with these advances responsibly, the University of California San Diego—one of the world's greatest producers of technology, medical innovations and scientific knowledge—has launched the Institute for Practical Ethics. Loyal campus donors Joel and Ann Reed have committed to providing generous annual gifts to support the institute in the near term, and to create a \$1 million endowment for permanent support in the future. The gifts will be included in the Campaign for UC San Diego.



"As UC San Diego and other institutions move rapidly forward in medical, scientific and technological innovation, important ethical questions emerge," said Ann Reed. "It is critical that scientists and humanists move forward together. Ethical questions should be investigated, and practical applications created as humans advance, so that the advancement will be ethical."

#### MIRROR LIFE PROJECT

As part of a \$4 million National Science Foundation grant with Neal Devaraj of Chemistry and Biochemistry, Practical Ethics co-directors and a team of outside experts are looking at the ethical issues that may arise from pursuing the creation of synthetic mirror cells. The ambitious basic and applied science project not only will give scientists a better understanding of the impact of chirality on biology, it also will spur the development of new technologies in bioconjugation, directed evolution and synthetic biology.

# TATA INSTITUTE FOR GENETICS AND SOCIETY (TIGS)

The Institute for Practical Ethics developed a deep connection to TIGS in its early years to work on the ethics and social impact of possible public health interventions using gene drive technology. Activities centered on the creation of the gene drive working group, hiring postdoctoral scholars and Ph.D. fellows, the Bioethics Bootcamp, and outreach to TIGS-India.

#### **FUTURE OF WORK PROJECT**

As part of a \$2.6 million National Science Foundation grant with Leanne Chukoskie of the Qualcomm Institute, Practical Ethics co-director Craig Callender has hired a Ph.D. student in Philosophy to mentor and do research on the ethical issues surrounding interventions to aid employment of people with Autism spectrum disorders. The project's multidisciplinary research team includes experts in cognitive and behavioral sciences, computer vision, electrical engineering, economics, ethics, and education.

The Institute for Practical Ethics is grateful for financial support from the Office of the Dean of Arts and Humanities, and the Office of the Executive Vice Chancellor.





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