

At A Glance



Institute on Global Conflict and Cooperation (IGCC)

We conduct and apply rigorous research, training, and engagement to develop ideas, policies and practices to reduce conflict and build lasting peace.

About IGCC

IGCC is a network of researchers from across the University of California and the Los Alamos and Lawrence Livermore national labs who produce and use research to help build a more stable, peaceful, and prosperous world. We conduct rigorous social science research on international security, the environment, geoeconomics, nuclear security, and the future of democracy; help to educate and train the next generation of security experts, professionals, and peacemakers; and strive to ensure that what we are discovering contributes to a safer world.



66

AFFILIATED SCHOLARS AND FELLOWS



20

UNIVERSITIES



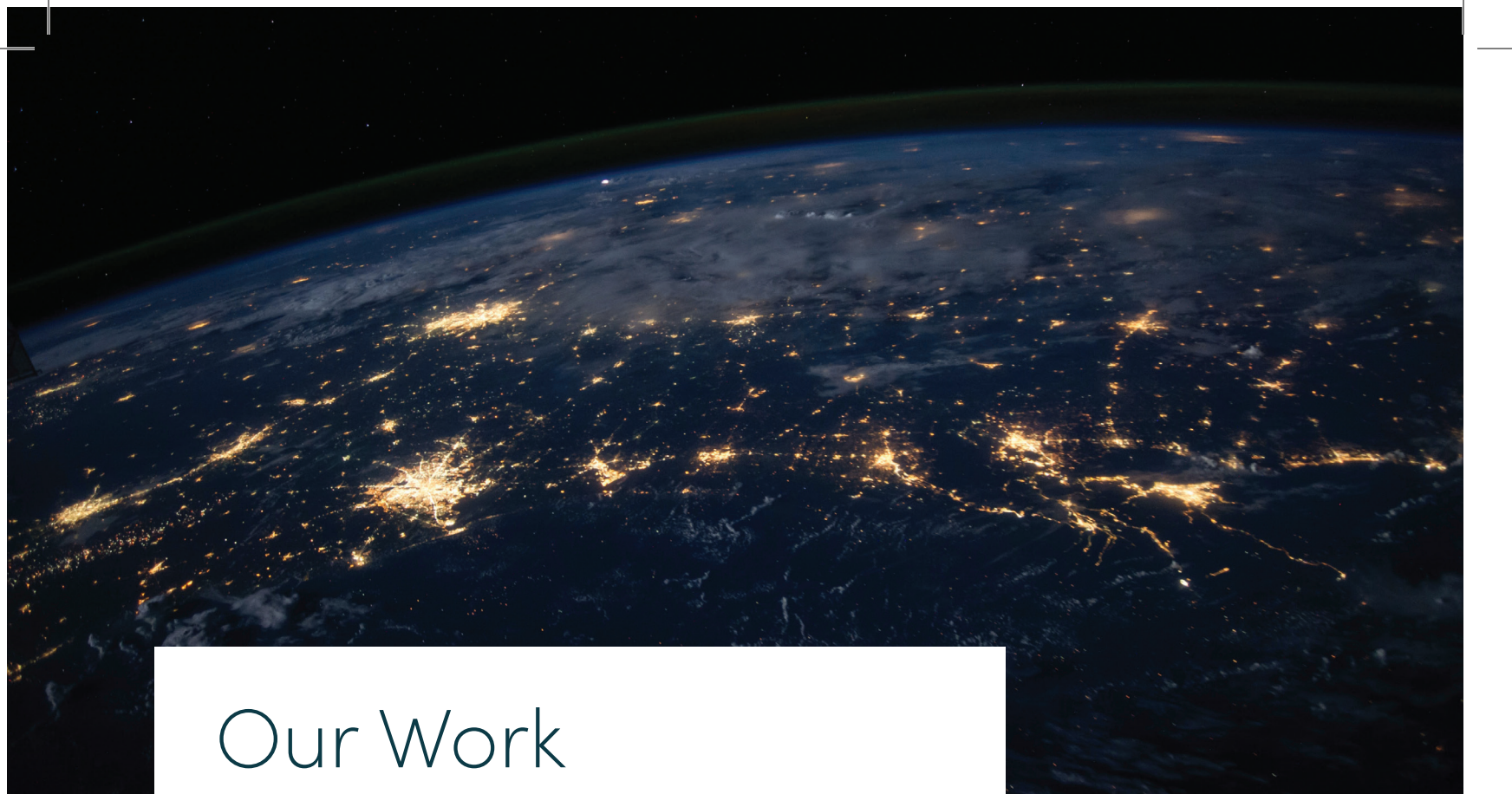
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NATIONAL LABS



\$767,000

AWARDED ANNUALLY IN COMPETITIVE
RESEARCH GRANTS



Our Work

IGCC researchers study a wide range of topics involving the security, geoeconomic, geopolitical, and environmental policies that shape our ability to prevent conflict and promote cooperation across the globe. Under the leadership of Director Tai Ming Cheung, IGCC works between and across disciplines and institutions.

Projects exploring democratic representation, evolving international institutions, innovation and advanced technologies, and the security implications of climate change complement those with a more traditional security focus such as nonproliferation, great power competition, and political violence.

International Security

IGCC's program on international security is a leading source of rigorous analysis on the domestic and external threats and opportunities shaping U.S. and global security dynamics and interests. Our portfolio includes defense transparency, defense innovation, strategy and deterrence, security cooperation, professional military education, challenges and opportunities in the maritime environment, and the role of emerging technologies like artificial intelligence.

New in 2021-22

Defense Innovation Series

Gaining a decisive technological edge is a never-ending pursuit for defense establishments and the states they protect. In 2021, the *Journal of Strategic Studies* in collaboration with IGCC, published a new series on defense innovation. IGCC researchers examine defense innovation in small countries with advanced defense innovation capabilities (Israel, Singapore), closed authoritarian powers (North Korea, Russia), large catch-up states (China and India) and advanced large powers (U.S.).

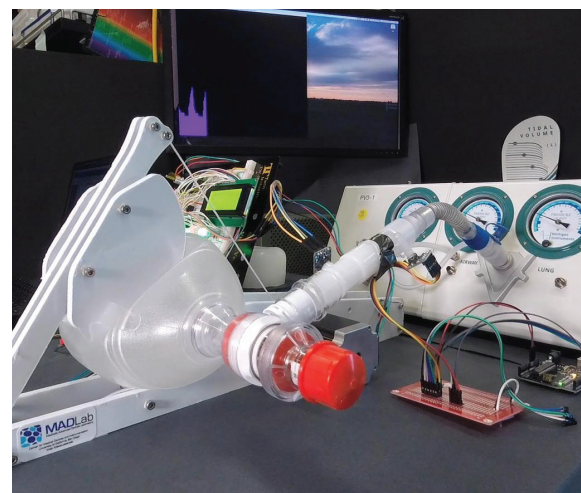
Postdoctoral Fellowship in Technology and International Security

IGCC, together with the UC-managed National Laboratories—the Lawrence Livermore and Los Alamos National Laboratories—launched the Postdoctoral Fellowship in Technology and International Security. The Washington DC-based program supports fellows whose research generates new theoretical and empirical insights into the relationship between technology, national security, and the global security environment.

Impact

Catalyst Supports COVID-19 Response

Concern that COVID-19 would overwhelm the supply of ventilators led IGCC's Catalyst initiative to do what it does best: connect the commercial, academic, and national security communities to drive more and better security innovation to improve U.S. and global security. Catalyst joined with UC San Diego's Medically Advanced Devices Lab and marshalled more than \$250,000 to support creation of a new low-cost, mechanical ventilation system that is now in use and can be rapidly produced at local levels.



The UCSD MADVent Mark V is a ventilator built around a bag used by EMTs, which is pressed by a machined paddle. Photo: UCSD, Jacobs School of Engineering

Asia-Pacific and the Rise of China

China's rise as an advanced technological, innovation, and industrial powerhouse is one of the most profound developments of the 21st century and promises to reshape the global economic and technological order. IGCC research explores the implications of China's rise and shifting geopolitical dynamics in Asia for the economic competitiveness and national security of the United States and the rest of the world. Our analysis and engagement spans geoeconomics, geopolitics, national security, the environment, defense modernization, technology, and innovation.

New in 2022

China Science, Technology, Innovation, and Industrial Ecosystems Project

IGCC's China Science, Technology, Innovation, and Industrial Ecosystems (STIP) project will comprehensively map China's STIP initiatives, policies, players, and programs, and provide an integrated and coherent view of China's innovation and industrial policy efforts as a whole. Led by IGCC director Tai Ming Cheung, the program will build the capacity of researchers in low- and middle-income countries, and disseminate research findings among civil society, the private sector, and government actors.

Impact

Northeast Asia Cooperation Dialogue

The Northeast Asia Cooperation Dialogue (NEACD) continues to provide one of the few regular venues for frank discussion among China, Japan, Russia, North and South Korea, and the United States on the region's security challenges. Founded in 1993, NEACD is the precedent for the Six Party Talks on North Korea's nuclear program that met between 2003 and 2009. NEACD has prioritized discussions to address North Korea's development of nuclear weapons and efforts to promote defense transparency.

“

I am proud of the fact that [NEACD] was the template for the Six Party Talks. [I]t remains a foundation for a concert-like arrangement among the four major powers in the region, and I believe that eventually we could have a security arrangement for northeast Asia.”

SUSAN SHIRK

NEACD FOUNDER AND IGCC DIRECTOR EMERITUS



Photo: Unsplash

Environment

The effects of environmental change on health and livelihoods are challenging governments in new and unprecedented ways with potentially far-reaching implications for prosperity and stability around the world. IGCC's program on the environment includes projects on air quality, climate change, renewable energy, global health, and human capital. They illuminate the human and economic costs of environmental degradation—and potential solutions.

New in 2022

Renewable Energy Pathways

IGCC launched its Renewable Energy Pathways to Support Carbon Neutrality in China project. Led by IGCC affiliate Michael Davidson, in collaboration with Da Zhang (Tsinghua University) and Xi Lu (Tsinghua University), the project will develop and apply a combined renewable energy siting and power system optimization model under different policy pathways to carbon neutrality.

Impact

Labor Market Impacts of Climate Change

Josh Graff Zivin's research on the labor market impacts of climate change (*Temperature and the Allocation of Time: Implications for Climate Change*) was cited by the Environmental Protection Agency (EPA) in their "Multi-Model Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment," which informed the Fourth National Climate Assessment, a congressionally mandated report that summarizes climate change's current and future impact on the U.S. Graff Zivin continues to advise the EPA on forecasting the labor market impacts on climate change.



Wind farm in China. Photo: Hahaheditor12667, CC BY-SA 4.0, via Wikimedia Commons

Nuclear Security

The existential threat from nuclear weapons is growing once again as countries such as Iran and North Korea intensify their efforts to establish full-fledged nuclear arsenals and a nuclear-armed Russia unleashes its military might for territorial conquest. IGCC's nuclear security program works to improve international regime governance; engages with states such as North Korea; trains new generations of experts through its Public Policy and Nuclear Threats (PPNT) program; and supports research on nuclear security policy through dissertation fellowships and faculty grants.

Impact

Neil Narang

IGCC research director Neil Narang was the co-recipient of two grants from the Carnegie Corporation of New York to study emerging technology and strategic stability and public attitudes towards nuclear weapons in the United States. He was also appointed an advisor to the Los Alamos National Laboratory Director's Office as part of the Director's Strategic Resilience Initiative. As part of the partnership, he provides advice to the Director's Office on matters related to the future of extended deterrence.

PPNT Boot Camp

IGCC's PPNT boot camp annually trains dozens of students and early-career professionals, giving participants the knowledge and analytic tools they need to contribute to the debate on future U.S. nuclear policy. Many PPNT alumni go on to hold positions in government.

“

The PPNT fellowship was really transformational. I arrived at Berkeley interested in nuclear weapons issues in 2001. Many of my advisors were saying: nuclear weapons were a Cold War problem; today it's all about globalization and the Internet. If you want to be relevant, you can't do nuclear weapons. Through PPNT, I realized that nuclear weapons still mattered, and that this was a viable career path. Without that, there's a good chance I wouldn't be working on nuclear issues today.”

MATTHEW KROENIG

GEORGETOWN UNIVERSITY
DISSERTATION FELLOW AND PPNT ALUMNUS 2003

Geoeconomics, Innovation, and National Security

A profound paradox of the 21st century is that while the world is tightly bound economically, it is being fractured by intense geopolitical and geostrategic rivalries, especially among the great powers. Understanding the complex factors at play in the global intersection between economics, innovation, and national security is the central focus of IGCC's new program on Geoeconomics, Innovation, and National Security. Issues under examination include economic securitization, global supply chains, economic statecraft, the national security implications of foreign direct investment, the role of industrial and innovation policies in economic development, and U.S.-China geoeconomic competition.

New in 2021-22

Professional Military Education

IGCC is leading a civilian-military consortium to produce a wide-ranging curriculum in Geoeconomics, Innovation, and National Security for adoption by the U.S. Professional Military Education establishment. This initiative will help bring the military education system into the 21st century and prepare future leaders to succeed amidst heightened global competition in peacetime.

Impact

New Publication

Geopolitics, Supply Chains, and International Relations in East Asia, a volume edited by IGCC affiliate Etel Solingen, was published by Cambridge University Press.

Great Power Competition in the 21st Century Series

IGCC published a policy brief series on great power competition in the 21st century, which includes analysis on intellectual property, global supply chains, trade in Africa, and great power domestic politics.



Photo: Ian Taylor, Unsplash

The Future of Democracy

Around the world, democracy is being challenged as never before. Many Western democracies, including the United States, face significant democratic backlash at home, authoritarian states are proliferating, and countries such as Russia and China, whose institutions developed outside the post-war democratic consensus, are becoming increasingly powerful. The Future of Democracy program expands understanding of how to strengthen democracy and includes work on inclusive representation, elections, technology and democracy, and authoritarian international organizations.

Impact

Making Content Accessible

IGCC's Political Violence At A Glance blog and Talking Policy podcast are helping to translate research to make it accessible to smart non-academic audiences, and to inform citizens about the ways in which their world is changing.

Disinformation

Manipulation and deception have always been a part of politics. But disinformation is flourishing in the digital age, with social media, and new technologies like artificial intelligence, making fake content easier to create and disseminate. IGCC's initiative on mis/disinformation convenes experts from academia, government, and industry, and conducts research to better understand the global landscape and develop lessons for U.S. policymakers.

Impact

Symposium on the Political Economy of Mis/Disinformation

On April 7, 2021, IGCC, together with partners at the Empirical Studies of Conflict Project, hosted a symposium to better understand the political economy of mis/disinformation, and to formulate a research agenda. The symposium brought together academics from universities and think tanks and experts from leading digital and social media platforms, including Google, Facebook, and Twitter.



Photo: Camilo Jimenez, Unsplash

Grants for Research

IGCC is committed to supporting new generations of international peacemakers and problem-solvers. Our fellowships and grants stimulate independent research and multidisciplinary collaboration and encourage research in emerging areas.



\$8 MILLION+

COMPETITIVELY AWARDED GRANTS



600

FELLOWSHIPS



35

DISCIPLINES AND
INTERDISCIPLINARY PROGRAMS



3+

DECADES OF SUPPORT FOR RESEARCH

Education and Training

As part of our mission to educate and prepare new generations of international peacemakers and problem-solvers, IGCC provides practical training for scholars and practitioners in a number of areas. Recent trainings have included great power competition, nuclear weapons policy, and innovation and technology in China.

“

IGCC funded me to finish my dissertation, which gave me the time to develop a research agenda. When I moved to the University of Northern Iowa, I was far enough along that I was able to generate the articles and a book to get tenure early. That was really important.”

STEVEN LOBELL

UNIVERSITY OF UTAH

DISSERTATION FELLOW 1996–97

“

IGCC played a tremendous role in my professional development. I don't think I appreciated the full value until much later. If you do a PhD program on the west coast, you don't always have opportunities to engage with other policy interested academics. PPNT provided an opportunity to do more than just read articles about the latest “ism” or theory, and think more about how theory would apply in practice. It whet our appetite for policy engagement, and got people from totally different disciplines to talk together.”

LARRY RUBIN

GEORGIA INSTITUTE OF TECHNOLOGY

DISSERTATION FELLOW AND PPNT

ALUMNUS 2003



Latest Analysis



Talking Policy Podcast

Talking Policy is a podcast of IGCC with expert analysis on the latest global policy issues. Subscribe on Spotify, Anchor, Breaker, Pocket Casts, and RadioPublic.



Is the U.S. Headed Toward Civil War?
Barbara Walter



The Disinformation Threat
Jacob Shapiro



Will the U.S. Go to War Over Taiwan?
James Lee



What's the Future of U.S. Nuclear Weapons Policy?
Brad Roberts

Policy Publications

Maximizing the Benefits of Trade for Africa

IGCC Policy Brief | Prince Paa-Kwesi Heto

The Rise of Authoritarian Regional International Organizations

IGCC Working Paper | Stephan Haggard and Christina Cottiero

Geopolitics, Supply Chains, and International Relations in East Asia

Edited Volume | Etel Solingen, ed.

Why the U.S. Should Prioritize Security in its 5G Roll Out

IGCC Policy Brief | James Lee

Beyond New Start: The Future of Arms Control

IGCC Policy Brief | Andrew W. Reddie

U.S. Security Ties with Korea and Japan: Getting Beyond Deterrence

IGCC Policy Brief | Stephan Haggard



Alumni Confidential



Kathleen Hancock on the Politics of Renewable Energy

Colorado School of Mines
Dissertation fellow 1996–97



David Palkki on Professional Military Education

U.S. Air Force's Air War College
PPNT alumnus 2003



Brenda Seaver on Serving in the U.S. Government

CIA
Dissertation fellow 1997–99

Leadership



Tai Ming Cheung

Director
UC San Diego



Emilie M. Hafner-Burton

Research Director
for Democracy Studies
UC San Diego



Eli Berman

Research Director
for International
Security Studies
UC San Diego



Neil Narang

Research Director
for U.S. and Global
Security Initiatives
UC Santa Barbara



Joshua Graff Zivin

Research Director
for International
Environmental and
Health Studies
UC San Diego

Our Partners and Funders

21st Century China Center

Bureau of Intelligence and Research, Department of State

California-China Climate Institute

Carnegie Corporation of New York

Center for Global Security Research,
Lawrence Livermore National Laboratory

Center for Security and Emerging Technology

Charles Koch Foundation

Mercator Institute for China Studies (MERICS)

Minerva Initiative, Department of Defense

National Nuclear Security Administration,
Department of Energy

Office of National Security and International Studies,
Los Alamos National Laboratory

Office of Naval Research

Rhodium Group

Schmidt Futures

Semiconductor Industry Association

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The Stanton Foundation

University of California Office of the President
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Department of Defense



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