

# IGCC in Review

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2018-2022



# Contents

- 1** Note From the Director
- 3** Our Work
- 20** Our Impact
- 22** Five Goals for the Next Five Years
- 24** Our People
- 27** Our Partners
- 28** Our History

# Note from the Director

IGCC is a network of researchers from across the University of California and the Los Alamos and Lawrence Livermore national labs who conduct research to help build a more peaceful and prosperous world.



We conduct rigorous social science research on international security, the environment, geo-economics, and the future of democracy; help to educate and train the next generation; and work hard to ensure that what we're learning makes a difference in the world outside the academy. Not everything we study is immediately relevant to policy, but we aim for much of it to be, and we also aim to translate what we are learning for broader audiences, knowing that educated citizens must increasingly play a crucial role in shaping their countries' futures.

**The international system is under strain as never before.** Over the course of the last several years, the global community has endured severe and overlapping challenges: from the COVID-19 pandemic to spiraling geostrategic competition, the continuing spread of strident domestic nationalism, and brutal military conquest by a revanchist Russia.

IGCC was founded to foresee and address such challenges, and to offer fresh thinking and academic rigor, which can provide the intellectual foundations for effective policymaking.

**IGCC's research agenda has evolved over the years.** The Institute was born out of concern among UC faculty about UC management of the weapons-building national labs. We thus focused initially on nonproliferation and arms control. Over the years, our portfolio expanded to include the security

implications of climate change—well before that topic was as central to global policy thinking as it is today; counterterrorism; great power competition; emerging technologies such as artificial intelligence that promise to reshape the global landscape; and the rise of China. More recently, we have initiated research programs on threats to democratic norms of governance, both in the United States and beyond, and the spread of disinformation and its corrosive effect on global health and democracy.

Our focus continues to evolve as the challenges do.

**This report looks back over the last five years at IGCC and highlights what we are learning, and where we think we have made a difference.**

It also sketches a path for where we want to go. At this critical moment, the role of engaged scholars matters more than ever. Over the next five years, IGCC will continue in our commitment to policy-relevant research and engagement on issues ranging from great power competition, global catastrophic risks, geo-economics, and nuclear policy, to migration, global health, and the environment. The opportunity now is to strengthen the conditions that allow for shared peace, stability, and prosperity—in 2022 and beyond.

**Tai Ming Cheung**  
Director, IGCC



# 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. 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.

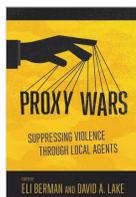




# International Security

The international security landscape is rapidly changing. Old definitions of what international security means, and what role states play, are evolving, while challenges proliferate beyond traditional domains. IGCC's program on international security is a leading source of rigorous analysis on the threats and opportunities shaping U.S. security interests at home and abroad. 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.

## FEATURED PUBLICATIONS



**Proxy Wars:**  
**Suppressing Violence**  
**through Local Agents**  
Edited by Eli Berman  
and David A. Lake



**Why the U.S. Should**  
**Prioritize Security in Its**  
**5G Roll Out**  
IGCC Policy Brief  
James Lee

## PROGRAM HIGHLIGHTS

### Defense Innovation

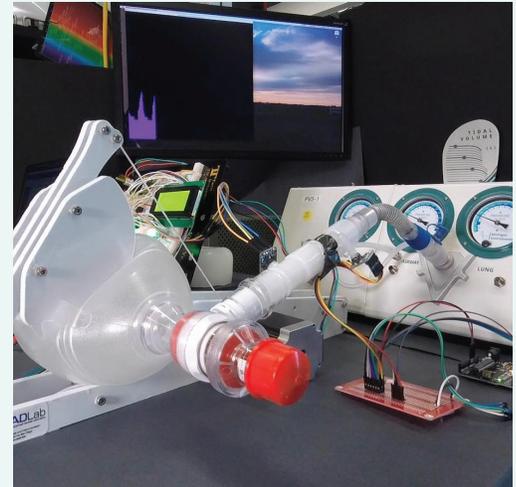
Gaining a decisive technological edge is a never-ending pursuit for defense establishments and the states they protect. In 2021, the *Journal of Strategic Studies* in collaboration with IGCC, published a new series on defense innovation. IGCC researchers examine defense innovation in small countries 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.).

### New Postdoctoral Fellowship

In 2021, IGCC, together with the Lawrence Livermore and Los Alamos National Laboratories, launched the Postdoctoral Fellowship in Technology and International Security. Led by Research Director Neil Narang, the program supports fellows whose research generates new theoretical and empirical insights into the relationship between technology, national security, and the global security environment. Current fellows are studying influence operations and Russian strategic thought; the trade-offs involved in using nuclear energy to combat climate change and the risk of terrorism; and why some military innovations are harder to integrate than others.

### Defense Transparency Index

Cultivating mutual trust in the international security arena is increasingly critical as new and long-standing hotspots—including the Taiwan strait, Korean peninsula, and South China Sea—become more volatile. The need for confidence-building measures is clear. IGCC's work on defense transparency includes research and policy engagement to improve policy and practice, and annual publication of the Defense Transparency Index (DTI), which ranks six countries on their efforts to promote transparency in defense and national security, including the People's Republic of China, Japan, the Democratic People's Republic of Korea, the Republic of Korea, Russia and the United States.



The UC San Diego MADVent Mark V, developed with support from IGCC's Catalyst initiative, is a ventilator built around a bag used by EMTs, which is pressed by a machined paddle. Photo: Jacobs School of Engineering, UC San Diego

## PROGRAM IMPACT

The United States leads the world in innovation, research, and technology, but risks losing its edge to rising competitors. Catalyst aims to drive more and better investment in, and adoption of, security innovations by strengthening connections between innovators, researchers, investors, and policymakers. Led by Scott Tait, this IGCC initiative brokers partnerships, and provides practical, effective policy recommendations to improve U.S. competitiveness and enhance global stability and prosperity.

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. In 2020, 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.



# Indo-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.

## PROGRAM HIGHLIGHT

### China's Science, Technology, Innovation, and Industrial Policy

How does China translate its strategic ambitions in science, technology, and innovation into practical state support for Chinese firms and labs? A new IGCC program synthesizes new and existing information on China's science, technology, innovation, and industrial policy and provides an integrated and coherent view of China's innovation and industrial policy ecosystem. Led by IGCC Director Tai Ming Cheung and UC San Diego Professor Barry Naughton, the project 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.

## FEATURED PUBLICATIONS



### Innovate to Dominate: The Rise of the Chinese Techno-Security State

Tai Ming Cheung  
Forthcoming Cornell  
University Press



### North Korea's Nuclear and Missile Programs

IGCC Policy Brief  
Stephan Haggard  
and Tai Ming Cheung



### The One-China Policy: Adapting to Tensions in the Taiwan Strait

IGCC Policy Brief  
James Lee

## PROGRAM HIGHLIGHT

### Northeast Asia Cooperation Dialogue (NEACD)

The Northeast Asia Cooperation Dialogue (NEACD) provides the only regular venue for frank discussion among China, Japan, Russia, North and South Korea, and the United States on the region's security challenges. Founded in 1993 with the aim of reducing the risk of military conflict in the region, NEACD is the only ongoing channel of informal communication among the six countries and the precedent for the Six Party Talks on the 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. Today, NEACD ensures there is meaningful dialogue between U.S. and Chinese officials and experts as relations between the two countries turn increasingly confrontational.

“

*I am proud of the fact that [NEACD] was the template for the six party talks. ... It became a kind of back channel that wasn't as scripted with talking points, and you could develop a better understanding that could move the official process forward.*

*... I think it 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 ON NEACD



# 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. Understanding the tradeoffs between the social benefits and costs of environmental protection is essential to designing good policy, which serves as a guiding force behind all of IGCC's work on the environment. 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 potentials solutions.

## IGCC FELLOWS

### Navigating Changing Oceans, Human Health and Poaching in the Caribbean

IGCC dissertation fellow Kyrstin Mallon Andrews (2019-20), who received her Ph.D. from UC Irvine and is a Visiting Assistant Profess at Miami University, conducts research analyzing the experiences and decision-making processes of coastal communities—fishermen, divers—in the Dominican Republic as they grapple with the effects of climate change. Her research suggests ways to re-conceive the notion of equitable environment policies.

### Designing Conservation Markets for International Cooperation

IGCC dissertation fellow Juan Carlos Villaseñor Derbez (2021-22), a PhD candidate at UC Santa Barbara, conducts research on the economics of marine conservation. His research explores whether and how environmental markets can be designed to induce global cooperation on the conservation of the marine environment.

## FEATURED PUBLICATIONS



**Promoting Energy Innovation:  
A Policy Proposal**  
Joshua Graff Zivin



**Air Pollution's Hidden Impacts**  
Joshua Graff Zivin  
January 2018, *Science*



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

## PROGRAM HIGHLIGHT

### Renewable Energy Pathways to Support Carbon Neutrality in China

A joint California-China research team, led by IGCC affiliate and UC San Diego assistant professor Michael Davidson, in collaboration with Prof. Da Zhang (Tsinghua University) and Prof. Xi Lu (Tsinghua University), will develop and apply a combined renewable energy siting and power system optimization model under different policy pathways to carbon neutrality. The work expands on efforts by the team to optimize the deployment of renewable energy and storage by 2060 by exploring the geospatial sequencing of installations and retirements from present over the next several decades.



# 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, China appears to be engaging in a major expansion of its nuclear capabilities, and the nuclear and conventional war-fighting divide becomes more blurred. 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.

## PROGRAM HIGHLIGHT

### Nuclear Weapons, Public Opinion, and Strategic Stability

A new project led by IGCC Research Director and UC Santa Barbara associate professor Neil Narang will evaluate public opinion on the use of nuclear weapons, in the United States and allied countries. When the Cold War ended, the problem of nuclear weapons went away for many Americans. As nuclear weapons re-appear in the headlines and more countries acquire the technology to develop and use them, understanding public attitudes about the role they play in U.S. defense and deterrence strategies is crucial for developing a U.S. nuclear weapons policy and creating education strategies that encourage diplomacy and nonproliferation, instead of conflict and war.

## FEATURED ANALYSIS



#### Beyond New Start: The Future of Arms Control

IGCC Policy Brief  
Andrew W. Reddie



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

IGCC Podcast  
Brad Roberts



#### Ukraine and the Risk of Nuclear Confrontation

IGCC Podcast  
Michael Nacht



#### Recommendations for the Biden Administration

Bethany Goldblum  
on Nuclear Weapons Policy

## PROGRAM HIGHLIGHT

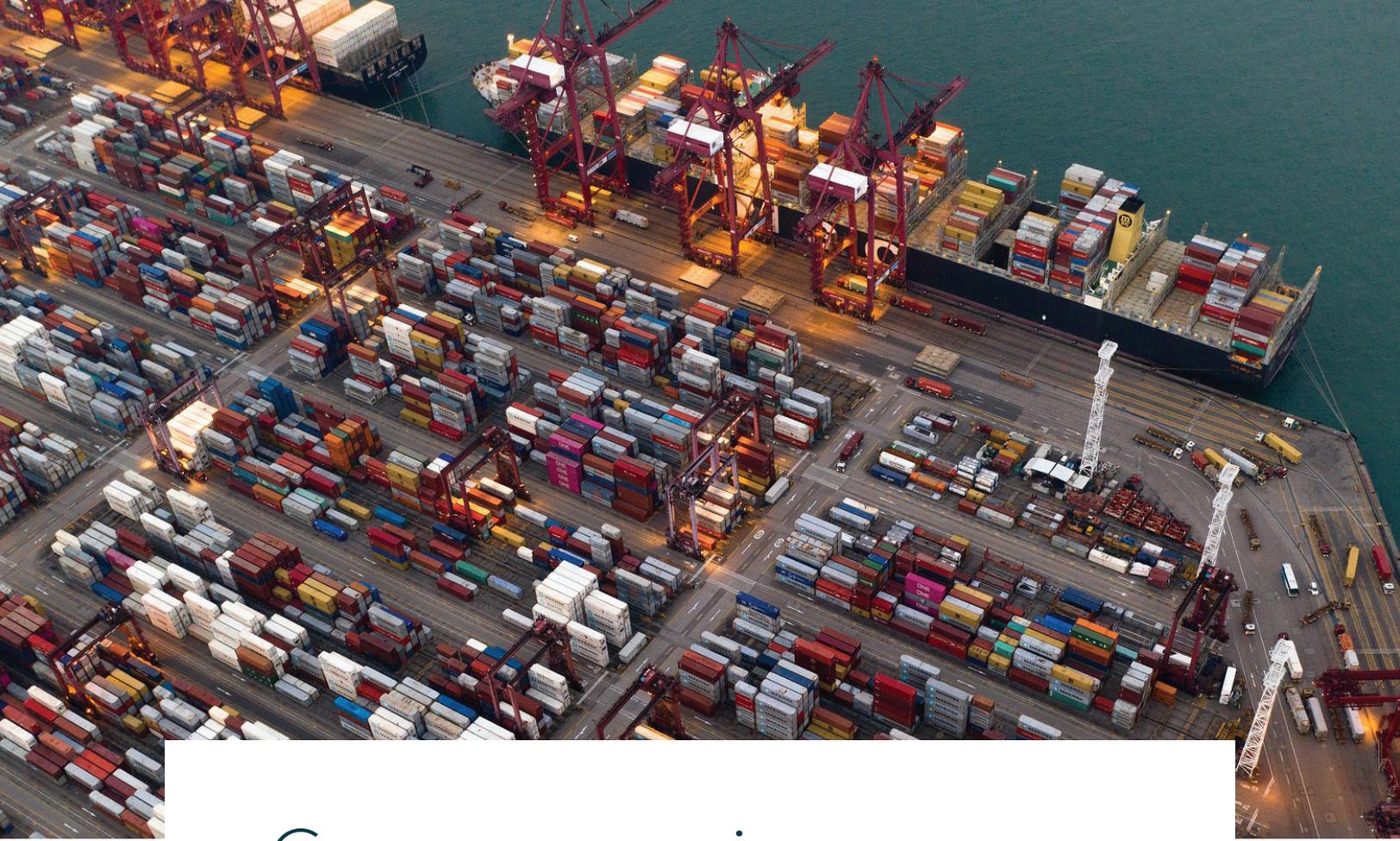
### Public Policy and Nuclear Threats Boot Camp

IGCC's longstanding Public Policy and Nuclear Threats Boot Camp is emblematic of the best of IGCC training. The training, normally in-residence in La Jolla prior to the COVID-19 pandemic, brings together social scientists, engineers, policy officials, and operational specialists from leading universities, the National Laboratories, international organizations, and government agencies to analyze nuclear threats, international safeguards, and nonproliferation strategies, and debate the future of U.S. nuclear policy. Directed by Bethany Goldblum (UC Berkeley) and Amb. Linton Brooks, this signature training creates professional connections that last decades, spurs interdisciplinary collaboration, and exposes students to new ideas and ways of thinking.

“

*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  
(PPNT ALUM)



# Geoeconomics, Innovation and National Security

A profound paradox of the twenty-first 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, national security implications of foreign direct investment, the role of industrial and innovation policies in economic development, and U.S.-China geoeconomic competition.

## PROGRAM HIGHLIGHT

### The New Great Power Competition

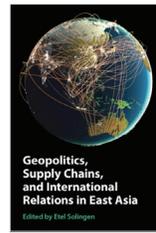
Great power competition has returned to the global center stage. The contours, dynamics, and characteristics of this new rivalry, primarily between the United States, China, and Russia, but also with other emerging power centers, will be different from what took place in the twentieth century. While scholarship on this latest iteration of great power competition is emerging, much of the work centers on military, diplomatic, and hard power aspects. This program brings together researchers from across the University of California and Lawrence Livermore National Laboratory to understand the technological, economic, and domestic dynamics of great power competition.

## NEW IN 2021-22

### Professional Military Education

IGCC is leading a civilian-military consortium to produce a wide-ranging curriculum in Goeconomics, 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.

## FEATURED PUBLICATIONS



### Geopolitics, Supply Chains, and International Relations in East Asia

Edited Volume  
Etel Solingen, ed.



### A Crucial Link: Using Intellectual Property to Inform Global Supply Chain Policy

IGCC Policy Brief  
Great Power Series  
Philip Rogers



### Maximizing the Benefits of Trade for Africa

IGCC Policy Brief  
Great Power Series  
Prince Heto



### Global Value Chains, Risk Perception, and Economic Statecraft

IGCC Policy Brief  
Great Power Series  
Phoebe Moon



## IMPACT

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

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.

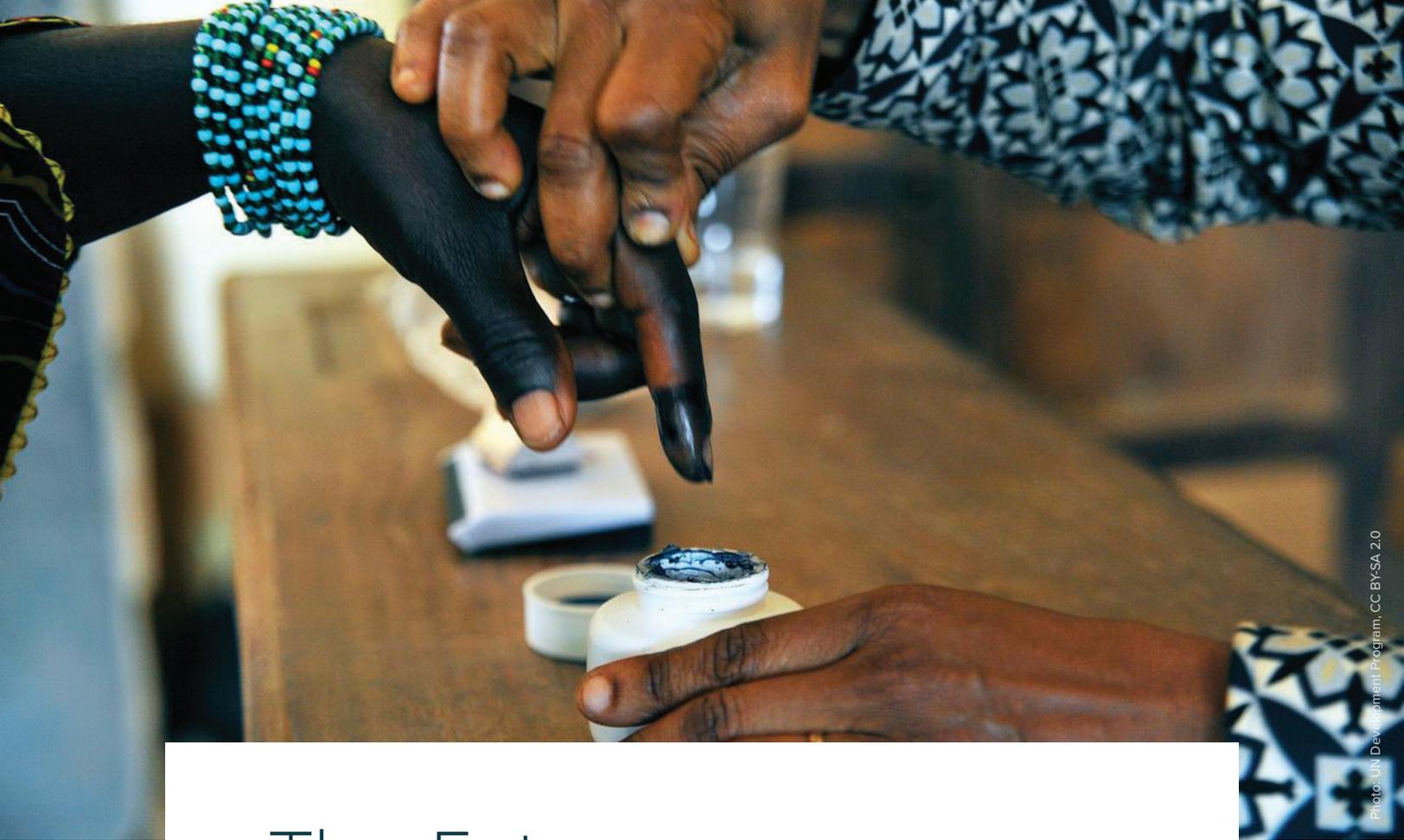


Photo: UN Development Program, CC BY-SA 2.0

# 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. Countries such as Russia and China, whose institutions developed outside the post-war democratic consensus, are becoming increasingly powerful. Authoritarian states are proliferating. And new technologies are fueling the spread of disinformation and empowering autocrats and extremists. The Future of Democracy program, which is led by Research Director Emilie Hafner-Burton and IGCC expert Christina Schneider, expands understanding of how to strengthen democracy and the democratic world order. The initiative brings together specialists from across the University of California to better understand urgent threats to democracy and democratic representation at all levels of governance, and to suggest practical solutions and support new generations of thought leaders.

## PROGRAM HIGHLIGHT

### Program on authoritarian international organizations

The rise of authoritarian regional organizations—institutions with largely authoritarian members—pose potential challenges to U.S. foreign policy: in Asia, where China and Russia play significant roles; in the Middle East; and in Africa. Playing roles as aid donors, election monitors, and even as partners with the west in counterterrorism and peacekeeping, the influence of authoritarian regional organizations is understudied. Yet these institutions can augment the capabilities of authoritarian powers, blunt prospects for democratic rule, and influence economic policy in ways that challenge an open world economy. This IGCC program catalogues these organizations, tracks their rising influence, and studies their activities and impact.

## FEATURED ANALYSIS



### Is the U.S. Headed Toward Civil War?

IGCC Podcast  
Barbara Walters



### Turning the Tools of the Liberal International Order Upside Down

IGCC Podcast  
Christina Cottiero



### Elections Are Under Threat—How Can We Protect Them?

IGCC Podcast  
Lauren Prather



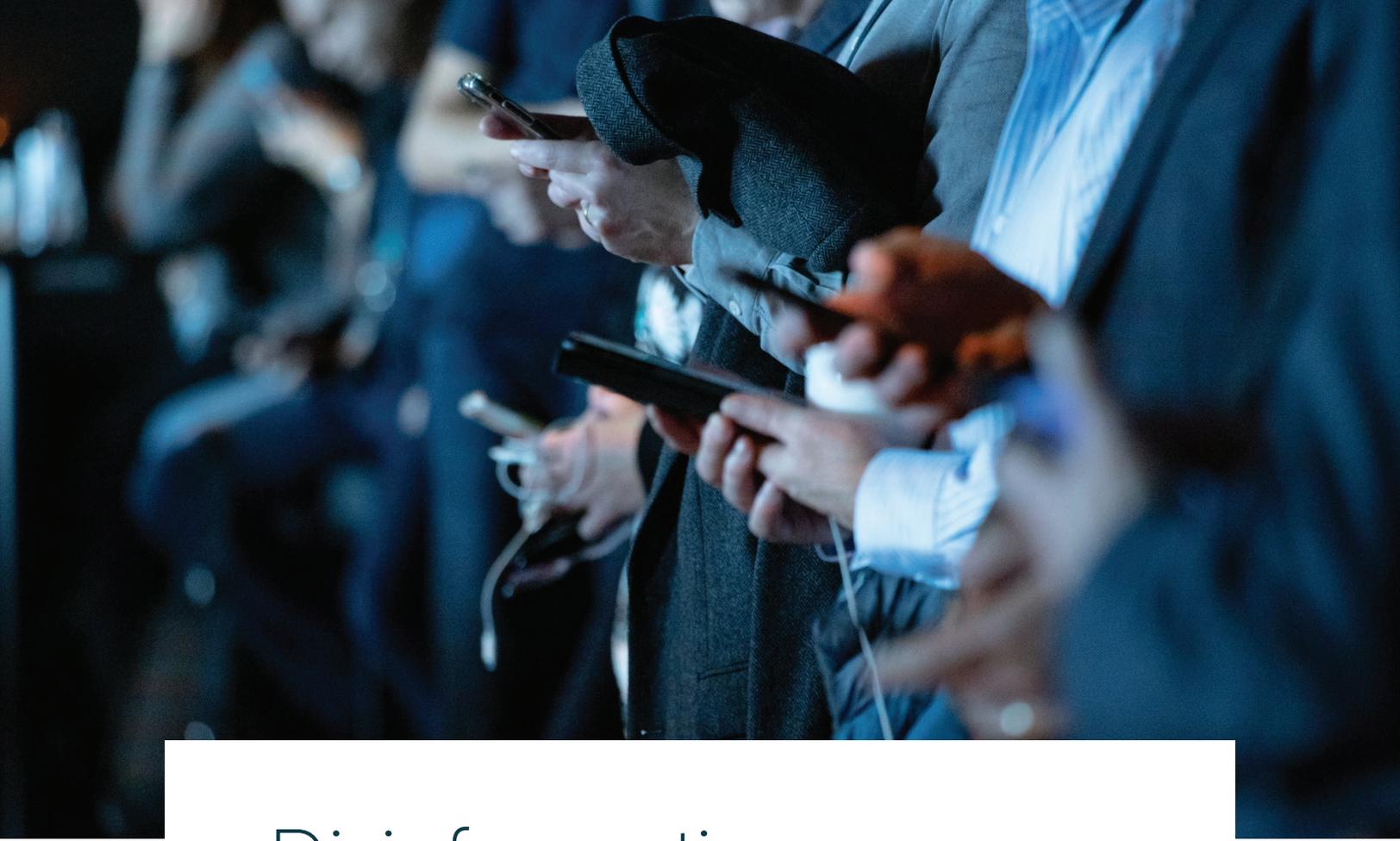
## IMPACT

IGCC's widely-read blog, Political Violence At A Glance, and our podcast Talking Policy, 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.



*When I started in this profession two decades ago, the future for democracy looked really bright. Countries like Myanmar and Tunisia appeared to be transitioning, and that was supposed to lead to a more peaceful, secure, and just future. Today, the world looks very different. We're confronted with many existential threats to national and global security. And a central, if not the most central, threat is the attack on democracy."*

—EMILIE HAFNER-BURTON, IGCC RESEARCH DIRECTOR FOR DEMOCRACY STUDIES AND UC SAN DIEGO PROFESSOR OF POLITICAL SCIENCE



# Disinformation

Manipulation and deception have always been a part of politics. But misinformation and disinformation are flourishing in the digital age, with social media, and new technologies like artificial intelligence, making fake content easier to create and disseminate. Despite growing concern about the threat misinformation and disinformation pose to democracy and public health, research on digital mis/disinformation is still in its infancy. As concerns about digital disinformation and rising U.S. political polarization grow, 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.

## FEATURED ANALYSIS



**The Disinformation Threat—  
and What to Do About It**  
IGCC Podcast  
Jacob N. Shapiro



**American Endorsement  
of Conspiracy Theories Is  
Smaller Than You Think**  
IGCC Podcast  
Seth Hill and Molly Roberts



**Acquiescence Bias  
Inflates Estimates of  
Conspiratorial Beliefs and  
Political Misperceptions**  
Paper  
Seth Hill and Molly Roberts



## IMPACT

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.

### Presentation highlights

Damon McCoy of New York University described the market for fake social media accounts, which manipulate platform algorithms to direct traffic to fake political news ads, which are sometimes allowed by platform policies.

Danny Rogers of the Global Disinformation Index (GDI) reported on how the emotionally charged narratives favored by attention-maximizing algorithms enable actors to profit from disinformation.

Jonathan Ong of the University of Massachusetts Amherst described online misinformation in Philippine elections.



# 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.

### BY THE NUMBERS



\$8,000,000+

COMPETITIVELY AWARDED GRANTS



600

FELLOWSHIPS



35

DISCIPLINES AND INTERDISCIPLINARY PROGRAMS

Our doctoral fellowships enable students to conduct fieldwork; focus on writing and polishing their dissertations; and work on “translating” their research for general audiences through interviews, podcasts, and blog posts. IGCC funding currently supports research on migration, marine conservation, post-conflict violence, global health, foreign aid, global supply chains, military history, and refugees.

Postdoctoral fellowships offer researchers the opportunity to work on emerging topics and regularly participate in policy seminars and research colloquia. IGCC’s Postdoctoral Fellowship in Technology and International Security, supported jointly by IGCC and Lawrence Livermore and Los Alamos National Laboratories, supports fellows whose research generates new theoretical and empirical insights into the relationship between technology, national security, and the global security environment.

### ALUMNI PRAISE



“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)

# Education and Training

## ALUMNI PRAISE

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 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)



“

*Our nation needs people who can think critically and objectively, who can think through three, four, or five positions at a time. IGCC is important because it brings together diverse minds and diverse experiences, and helps smart people get beyond their individually limited experiences.”*

—HUBAN GOWADIA, PRINCIPAL ASSOCIATE DIRECTOR FOR GLOBAL SECURITY AT LAWRENCE LIVERMORE NATIONAL LABORATORY (PPNT ALUMNA, 2007)

# Our Impact



**LASTING IMPACT**

**Eli Berman**

Eli Berman’s research group on strategy and deterrence frequently engages with policymakers and informs policymaking. For example, a study examining an Israel Defence Forces tactic of house demolitions in the Palestinian Territories found that “preventative” demolitions were not effective. Influenced partly by this research, which was led by IGCC affiliate Esteban Klor, the Israeli Supreme Court decided to limit that practice.

“  
*Our research model is built around regular engagement—we consult with practitioners, be they ambassadors, government officials, NGO leaders and industry representatives. We bring them in to conferences, have coffee, try to understand what their problems are, what their questions are. We ground our research this way. Stakeholders outside the academy inform the research process. Often these discussions reveal potential policy reforms already under consideration internally, within institutions. Our role as academics is then to move those discussions in a direction more grounded in rigorous research.”*



66  
AFFILIATES



20  
UNIVERSITIES



2  
NATIONAL LABS



## LASTING IMPACT

### Josh Graff Zivin

Josh Graff Zivin's work on pollution and climate change, and its impact on labor markets, cognition and human capital, has been incredibly influential for U.S. policymaking. Josh'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. Zivin continues to advise the EPA on forecasting the labor market impacts on climate change.



“

*Part of what we think makes research relevant to policymakers is that we try to understand the institutional incentives that drive policy change. Policymakers may be motivated by wanting to improve peoples' lives, but they may also need evidence that a policy can support economic growth. For example, I led research on the economic impacts of providing treatment for HIV/AIDS in Africa. My argument was, look: it is totally justifiable to provide HIV/AIDS treatment based on humanitarian reasons alone. But it also makes economic sense, and my research demonstrates that.”*



400+

PUBLICATIONS  
SINCE 2018



\$767,000

RESEARCH GRANTS  
AWARDED ANNUALLY

# Our Goals

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## 5 Goals for the Next 5 Years

The world over the next five years promises to be far more volatile and prone to disruption, large-scale risk, and major conflict than at almost at anytime since the end of World War II. Rigorous scholarship and practical policy engagement matter now more than ever. Here are five overarching goals for IGCC over the next five years:

# 01

### **Expand Our Research Portfolio**

We remain committed to addressing large-scale problems that require global cooperation to solve. We will expand our work on the intersection between the economic, technological, geostrategic, defense, and political spheres of great power competition. We will explore the potentials and pitfalls of new technologies and innovations—both as a means for strengthening global and national security, and for spreading disinformation and threatening global stability. With democracy being challenged as never before, we will invest significantly in growing our program on threats to democracy and democratic representation, while suggesting practical solutions and supporting new generations of thought leaders. We will revive and refresh our research on climate change and environmental policy, and deepen work on China and nonproliferation.

# 02

### **Foster New Collaborations**

We plan to promote stronger partnerships among scholars within the UC system, the national labs, and universities globally, to create a robust network capable of tackling these complex issues from multiple perspectives over the long term. Central to this goal is our desire to support new generations of engaged scholars who can contribute fresh thinking and ask hard questions; and to engage with industry, government, and civil society, to ensure our research is grounded in practice and usable by those who need it most.

# 03

## **Improve Diversity, Equity, and Inclusion**

We strongly believe that diversity, equity, and inclusion are of central importance to the health of IGCC as an institution and that diverse perspectives make our research, engagement, and training better. Over the next five years, we will work hard to do more to ensure that new and diverse voices inform our research, engagement, and strategy and are represented among our leadership team, affiliates, and grant recipients.

# 04

## **Invest in Communicating What We Are Learning**

Because we believe that policy is informed by politics, we will invest in strengthening our relationships with decisionmakers, including by expanding our Washington, DC footprint, and by making sure our research is relevant, accessible and available in multiple formats across multiple communications channels. We will clarify and strengthen IGCC's story and identity, and invest in outreach—across California, in Washington, DC, and among our alumni.

# 05

## **Deepen our focus on policy impact**

Ultimately, we want the work we do to make a difference in the world outside the academy. Learning for the sake of learning is not the end-goal at IGCC. We want our research, training, and engagement to improve policies and practices in ways that help reduce conflict and make the world a safer, more equitable place. Over the next five years we will continue to push to ensure our work is having an impact. We will do this by choosing the topics we work on carefully, focusing on areas where making a difference is possible. We will identify areas where there are knowledge gaps among decisionmakers, and use our expertise to bring data to bear on decision-making. And we will do more to track our influence and improve our understanding of how scholarly research can influence people outside the academy—from policymakers to ordinary citizens.

# Our People

## 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



**Susan L. Shirk**

Director Emeritus

# Our People

## STEERING COMMITTEE

**TJ Pempel** (Chair, 2008-2022)  
UC Berkeley

**Mike Albertson**  
Lawrence Livermore National Lab

**Courtenay Conrad**  
UC Merced

**Kelsey Jack**  
UC Santa Barbara

**Bronwyn Leebaw**  
UC Riverside

**Aila Matanock**  
UC Berkeley

**Jeannette Money**  
UC Davis

**Daniel Posner**  
UC Los Angeles

**Jonathan Robinson**  
UC Santa Cruz

**George Rutherford**  
UC San Francisco

**Christina Schneider**  
UC San Diego

**John Scott**  
Los Alamos National Lab

**Stergios Skaperdas**  
UC Irvine

## RESEARCHERS

**Vinod Aggarwal**  
UC Berkeley

**Stephen Biddle**  
Columbia University

**Linton Brooks**  
Center for Strategic and  
International Studies

**Michael Callen**  
UC San Diego

**Courtenay Conrad**  
UC Merced

**Christina Cottiero**  
UC San Diego

**Peter Cowhey**  
UC San Diego

**James Cross**  
Franklin Templeton

**Cesi Cruz**  
UC Los Angeles

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**Stephan Haggard**  
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**Susan Hyde**  
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**Esteban Klor**  
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**James Lee**  
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# Our Partners

21st Century China Center

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

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

Silicon Valley Defense Group

Smith Richardson Foundation

The Stanton Foundation

University of California Office of the President competitive grant programs

University of Virginia

U.S. Department of State

USAF Office of Commercial and Economic Analysis

# Our History

## 1981



When the UC contract to manage Los Alamos and Lawrence Livermore Laboratories was up for review in 1981, controversy erupted among the UC faculty about the University's links with the nuclear weapons laboratories.

California Governor Edmund G. Brown, Jr. and UC President David Saxon agreed that the University should consider the establishment of an organized unit to study questions of peace and security in an academic setting in addition to the work being done in the laboratories.

## 1983



In 1983, the Institute on Global Conflict & Cooperation (IGCC) was formed. In defining IGCC's research focus, the University's Special Committee on Global Security and Cooperation stated that:

“*The focus of the Institute's research program should be the study of global situations sufficiently severe so as to threaten their escalation into large-scale war, especially, but not exclusively, nuclear war.*”

Dr. Herbert York was appointed IGCC's first Director in July 1983 and served until 1989. A renowned physicist, Manhattan Project participant, first Director of Lawrence Livermore National Laboratory (1952–1958), and first UC San Diego Chancellor (1961–1964), York was instrumental in both the development of the nuclear bomb and an influential voice for disarmament and nonproliferation. Throughout the 1960s, he acted as

an adviser to the Arms Control and Disarmament Agency). Under the Carter administration, he was the United States ambassador to the Comprehensive Test Ban Treaty talks in Geneva, where he led an attempt to establish a comprehensive nuclear test ban with the USSR.

As Director of IGCC, York helped to establish a model for influencing policy through rigorous research, seminars, informal diplomatic dialogues, training programs, and a strong presence in Washington, D.C., bringing together experts from government, academia, and the private sector to generate fresh thinking on the most pressing challenges of the day. IGCC's success can be traced back to York's multidisciplinary approach and passion for real-world relevance.

“*Herb's genius in bridging these different worlds is what makes IGCC an engine of original research and insights.*”

—TAI MING CHEUNG, IGCC DIRECTOR

## 1989

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John Ruggie was appointed Director of IGCC in 1989. A deeply engaged scholar-practitioner, Ruggie served in many roles spanning the research-policy space. After earning his Ph.D. in political science from UC Berkeley, he taught at UC Berkeley, UC San Diego, and Columbia University. He was the Dean of the School of International and Public Affairs at Columbia University from 1991 to 1996 before joining Harvard's Kennedy School of Government as the Berthold Beitz Research Professor in Human Rights and International Affairs. From 1997 to 2001, Ruggie served as United Nations Assistant Secretary-General for Strategic Planning, a post created specifically for him by then Secretary-General Kofi Annan.

While Director of IGCC, Ruggie put global climate change and environmental policy on IGCC's long-term agenda and led path-breaking research on multilateralism as an organizing principle for security and economics.

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*While maintaining the focus on issues of nuclear weapons policy, [Ruggie] also put global climate change and environmental policy on IGCC's long-term agenda long before it was de rigueur among policy think tanks.”*

—PETER COWHEY, IGCC DIRECTOR 1999-2006, FORMER DEAN AND QUALCOMM CHAIR EMERITUS AT UC SAN DIEGO'S SCHOOL OF GLOBAL POLICY AND STRATEGY

## 1991

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In 1991, Susan Shirk became the Director of IGCC, serving until 1997 and again from 2007 to 2012. The Chair of the 21st Century China Center and a Research Professor at the School Global Policy & Strategy at UC San Diego, Shirk served as Deputy Assistant Secretary of State in the Bureau of East Asia and Pacific Affairs, with responsibility for China, Taiwan, Hong Kong, and Mongolia.

## 1993

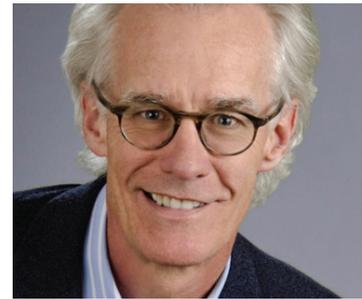


Shirk made an indelible mark on IGCC during her years at the helm.

In 1993, Shirk founded the Northeast Asia Cooperation Dialogue (NEACD), a Track 1.5 forum of academics, policy experts, and military and foreign ministry officials from China, Japan, North Korea, Russia, South Korea, and the United States, which has been meeting annually for the past 30 years since the winding down of the Cold War.

NEACD lay the groundwork for an official multilateral process in Northeast Asia and has proven its value as the only ongoing regular channel of informal communication among the six governments.

## 1997



Shirk was also instrumental in the founding and thriving of IGCC's signature policy training program, Public Policy and Nuclear Threats (PPNT) boot camp. The workshop-in-residence features debates, policy simulations, and lectures by distinguished researchers, academics, policy officials, and operational specialists from leading universities, the National Laboratories, international organizations, and government agencies, on topics ranging from current nuclear threats, international safeguards, and nonproliferation strategies.

Over the years, Shirk marshalled some of the leading scholars and policy experts to participate, offering attendees the chance to think about how theory applies to practice.

When Shirk was appointed to serve as Deputy Assistant Secretary of State in the Bureau of East Asia and Pacific Affairs in 1997, UC San Diego Professor Stephan Haggard was appointed Interim Director of IGCC. The Lawrence and Sallye Krause Professor of Korea-Pacific Studies, director of the Korea-Pacific Program, and distinguished professor of political science at the School of Global Policy and Strategy, Haggard leads work on the political economy of developing countries, with a particular interest in Asia and the Korean peninsula; has participated in NEACD for more than a decade; and currently leads IGCC's project on authoritarian international organizations.

## 1999

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Peter Cowhey became Director of IGCC in 1999, serving until 2006. The Dean and Qualcomm Chair Emeritus at UC San Diego's School of Global Policy and Strategy, Cowhey served in both the Clinton and Obama administrations in positions involving international economic and technology policies.

During his tenure as Director, IGCC continued NEACD and initiated a similar dialogue for the Middle East; added a multi-year project on biological threats and public policy to broaden its work on security and address global public health; and funded projects on trade and technology competition.

During this period IGCC prioritized support of the individual campus programs affiliated with IGCC.

## 2006

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In 2006, Eli Berman was appointed IGCC Research Director for international security studies. Eli leads a broad program of theoretical, empirical, and field research studying terrorism, insurgency, governance, and development to understand how economic and political development might help stabilize conflict or post-conflict zones.

## 2008

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Two years later, Joshua Graff Zivin was appointed Research Director for environmental studies.

Josh's projects focus on quantifying the effects of environmental changes on human capital development.

His work brings to light some of the tensions between environmental and economic priorities, with an emphasis on global-level policy considerations.

## 2012

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In 2012, Tai Ming Cheung assumed directorship of IGCC. A Professor at the School of Global Policy and Strategy at UC San Diego and expert in Asian security and Chinese security and technology, Cheung was based in Asia from the mid-1980s to 2002 covering political, economic, and strategic developments in greater China. He was also a journalist and political and business risk consultant in northeast Asia.

As Director of IGCC, Cheung has put great power competition, Chinese science, technology, and innovation, and defense innovation at the forefront of IGCC's research agenda, while presiding over a significant expansion in IGCC's research and training programs.

During the 2000s, IGCC was the recipient of several large Minerva grants. One, *The Evolving Relationship between Technology and National Security in China: Innovation, Defense Transformation, and China's Place in the Global Technology Order in 2009*, led by Director Cheung, examined China's drive to become a world class defense and dual-use technological and industrial power and the security and economic implications of this transformation for U.S. national security.

Another, led by Eli Berman brought together scholars at universities in the U.S., Europe and the Middle East. The project studied the use of incentives in proxy relationships to address international terrorism, human trafficking, narcotics and other threats. The initiative included projects on the Palestinian Authority, Naxalite rebels in India, and subnational conflicts in Iraq, Pakistan, Yemen, Korea, Denmark, Lebanon, Colombia and El Salvador.

Cheung has presided over a period of unprecedented growth and reinvigoration of IGCC.

Guided by our founding goal to address challenges that could lead to large-scale conflict, and which could benefit from cooperation to address, under Cheung's leadership, IGCC has launched new initiatives on climate change; the ride of authoritarianism and threats to democracy; disinformation; and nuclear security.

Since the start of 2020, IGCC has more than doubled the number of research initiatives it manages; and kicked off two educational initiatives—one focused on professional military education and the other on challenges in the maritime space. Additionally, together with Governor Jerry Brown, IGCC is helping to convene experts and lead a policy dialogue on existential threats.

## 2012

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IGCC is an increasingly sought-after destination for graduate students looking for training, research mentorship, and a bridge to the Washington DC policy space. The number of applications IGCC receives for its dissertation fellowship positions, for example, nearly tripled over the last five years.

The Institute is also deepening its relationships with the UC-managed National Laboratories. Together with the Center for Global Security Research at the Livermore National Laboratory and the National Security and International Studies Office at the Los Alamos National Laboratory, in 2021, IGCC launched a postdoctoral fellowship program in technology and international security, which supports Washington DC-based fellows whose research generates new theoretical and empirical insights into the relationship between technology, national security, and the global security environment.

## 2020

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In 2020, UC Santa Barbara Associate Professor Neil Narang was appointed IGCC Research Director for U.S. and global security initiatives, managing projects on grand strategy and great power competition, the future of alliances, emerging technologies and strategic stability, and nuclear security and extended deterrence.

## 2022

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In 2022, IGCC appointed UC San Diego Professor of political science, Emilie Hafner-Burton, Research Director for democracy studies and launches the Future of Democracy Initiative. The cross-campus initiative aims to better understand urgent threats to democracy and democratic representation at all levels of governance, while suggesting practical solutions and supporting new generations of thought leaders.



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