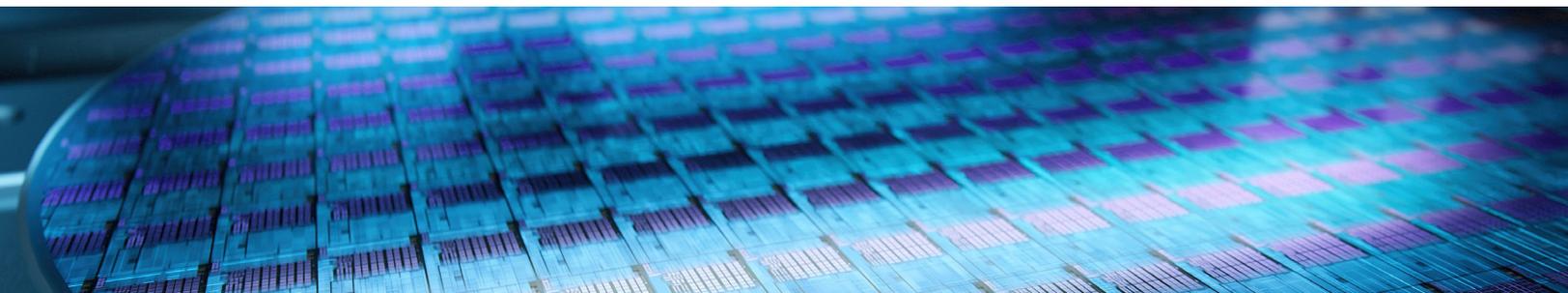
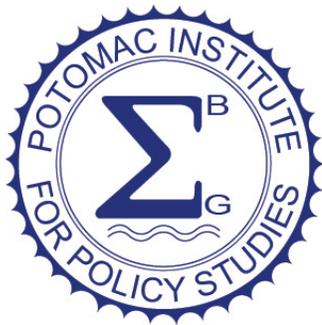


# CHIPS

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## The Real Deal and What it Means for US





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# Course Overview

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The recently passed, CHIPS for America Act is one of the largest U.S. government investments in domestic semiconductor capabilities in a generation. This bill highlights the importance of the microelectronics supply chain security and resilience. This is a serious global challenge due to limited access to essential materials and facilities that can manufacture these essential technologies. The key motivations for implementation of this act were COVID-induced shortages from lowered supplies due to work force and supply chain availability. This, coupled with U.S. concerns on economic competition with China, helped galvanize U.S. focus on the need for U.S. based production of critical technologies like semiconductors.

The CHIPS for America Act is a complex piece of legislation with many parts. For manufacturing semiconductors, the bill amounts to \$52 billion of USG investments for domestic semiconductor capabilities. There are multiple areas addressed by the legislation, including incentives for production and establishment of new research and development enterprises. Additionally, the legislation contains multiple types of execution vehicles, including grants and tax incentives. What do these large investments really mean? How will they be executed to benefit the U.S.? And what do the details of CHIPS really mean for those that want to invest?

Find the answers to all this and more at

the Potomac Institute for Policy Studies' new executive education course – CHIPS: The Real Deal and What it Means for US

This 2-day course, hosted at the Institute, will explore the recent groundbreaking CHIPS legislation. It will review motivations for this investment as well as the various sections in the bill. The class will also cover the execution options available and how this legislation can best impact the interests of the U.S. economy and national security.

The course will be led by an esteemed set of instructors with considerable experience in this field. Our instructors will help participants understand the big picture of the CHIPS Act and its intended impact to U.S. economics and national security. They will present a briefing followed by a dialogue between the participants and instructors to elicit critical understanding of the concepts and issues. The course will culminate in an interactive exercise where participants will create their own recommendations for proposed CHIPS execution, led by experienced coaches.

The Potomac Institute for Policy Studies invites early to mid-career professionals with an interest in understanding the complexities and nuances of the recently passed CHIPS Act and its impact on the U.S. economy and national security. This course is perfect for industry, government, and academic professionals alike with a shared goal of identifying and addressing the challenges the U.S. faces in the microelectronics realm.

[CLICK HERE TO APPLY ONLINE.](#)

Questions? Contact Lakishia Biggs at: [education@potomacinstitute.org](mailto:education@potomacinstitute.org)



# Sample Course Agenda

## CHIPS

An executive course presented by the Potomac Institute for Policy Studies

DATE: OCTOBER 26-27, 2022

LOCATION: Potomac Institute for Policy Studies | 901 N Stuart Street, Arlington, VA 22203

### Wednesday, October 26, 2022

Time	Courses	Instructors
9:00-9:30	Welcome / Introduction	General Gray & Dr. Michael Fritze
9:30-10:45	CHIPS Act: Reviewing the Bill	Dr. Michael Fritze
10:45-11:00	Break	
11:00-12:00	How to Ensure CHIPS Will Deliver the Final Punch	Mr. Ardavan Mobasheri
12:00-1:00	Lunch	
1:00-2:15	Manufacturing Considerations Session I	Mr. Brian Shirley
2:15-3:15	Motivation for USG Investment: Why Should the Government Invest?	Hon. Alan Shaffer
3:15-3:30	Break	
3:30-4:30	R&D Efforts	Dr. Paolo Gargini
4:30-5:30	Networking Reception	

### Thursday, October 27, 2022

Time	Courses	Instructors
9:00-10:15	Manufacturing Considerations II	Mr. John Behnke
10:15-11:30	Implementation Challenges: Acquisitions and How to Push Money Out for Government	Mr. Ted Glum
11:30-12:30	Lunch	
12:30-2:00	Interactive Event: How Would you Prioritize the Money?	Ms. Jenn Santos & Hon. John Young
2:00-2:15	Break	
2:15-3:30	Business Aspect and Workforce	Sara Newton-Klitz and Michael Guttman

For a full list of instructors, visit:

<https://www.potomac institute.org/events/education>

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# Seminars

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## **Motivation for USG Investment: Why Should the Government Invest?**

The government has been given \$52 billion for stimulating domestic semiconductor capabilities with the passing of the CHIPS Act. This session will focus on why the U.S. Government should make a large investment in this area right now. We will also consider the pressing economic and national security reasons motivating such a significant investment.

**Speaker: Hon. Alan Shaffer**

## **CHIPS Act: Reviewing the Bill**

Understanding the details of the bill is crucial to prioritizing the available funding. Where should this money go? In this session, participants will take a closer look at the CHIPS Act semiconductor related language with the goal of understanding the intent of this bill.

**Speaker: Dr. Michael Fritze**

## **Manufacturing Considerations**

Fabrication is at the heart of the microelectronics industry and this area will receive the largest amount of CHIPS funding. We will take a deep dive into the complex semiconductor fabrication process and develop a strong understanding of its importance and influence. The goal is a better understanding of how CHIPS funding can impact the semiconductor fabrication capabilities of the US.

**Speakers: John Behnke and Brian Shirley**

## **R&D Efforts**

R&D will receive the second largest amount of CHIPS funding, at \$24 billion. This will take the form of creating a National Semiconductor Technology Center (NSTC), Advanced Packaging Manufacturing Program (APMP), and a Manufacturing USA Institute focused on semiconductors. This course will focus on the structure of successful public-private consortia as we consider what we can learn from past experiences and current public-private consortia to inform the formation of the NSTC, APMP, and the Manufacturing USA Institute.

**Speaker: Dr. Paolo Gargini**

## **How to Ensure CHIPS Will Deliver the Final Punch**

We have the funding, now what? This session will address the economic and financial issues of the CHIPS Act. How can we turn the available \$50 billion into enough money to really address the issue of strong domestic semiconductor capabilities? What is the path to achieve a total \$200 billion investment, which is what is really needed to address this issue?

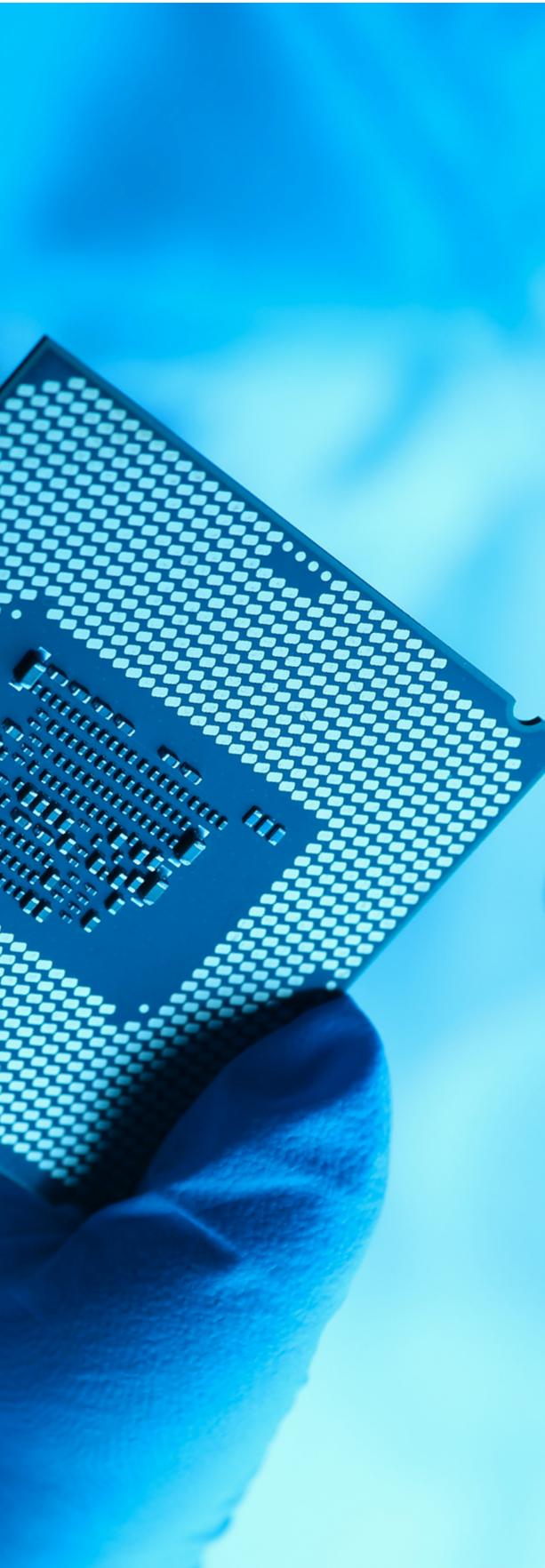
**Speaker: Ardavan Mobasheri**

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# Seminars



## **Implementation Challenges: Acquisitions and How to Effectively Push the Money Out**

The CHIPS Act provides a unique opportunity to change the course of the U.S. decline in microelectronic production and thereby provide more reliable and secure microelectronics parts. Now that the funds have been appropriated, how they are implemented by the USG could either enhance or squander this rare opportunity. This course will look at the various methods the USG can use to move funds. Topics will include grants versus specific contract mechanisms, the advantages and pitfalls of each, and the potential use of the Defense Production Act authorities. Participants will also explore potential guardrails to help discourage poor spending by awardees.

**Speaker: Ted Glum**

## **Interactive Event: How Would YOU Prioritize the Money?**

Culminating the knowledge learned, participants will engage in an interactive, multi-faceted discussion with each other on how they would prioritize CHIPS execution and spending. They will consider what specific types of investment priorities would have the most impact on US microelectronics capabilities. Several small groups will be formed to engage in discussions. These groups will be assigned an expert coach to give a unique perspective from real-life experiences and act as a sounding board for the groups before their presentations.

**Speakers: Jennifer Santos and Hon. John Young**

## **Business Aspects and Workforce**

The CHIPS investments will fail if there is insufficient workforce to execute the desired goals. This course will explore how we can incentivize the skills required for CHIPS in the U.S. workforce. In this session, we will consider the challenges posed by the limited trained workers, and the need for more in this field. We will also discuss ways to gain more interest while exploring options to increase the workforce.

**Speaker: Sara Newton-Klitz and Michael Guttman**

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# Faculty

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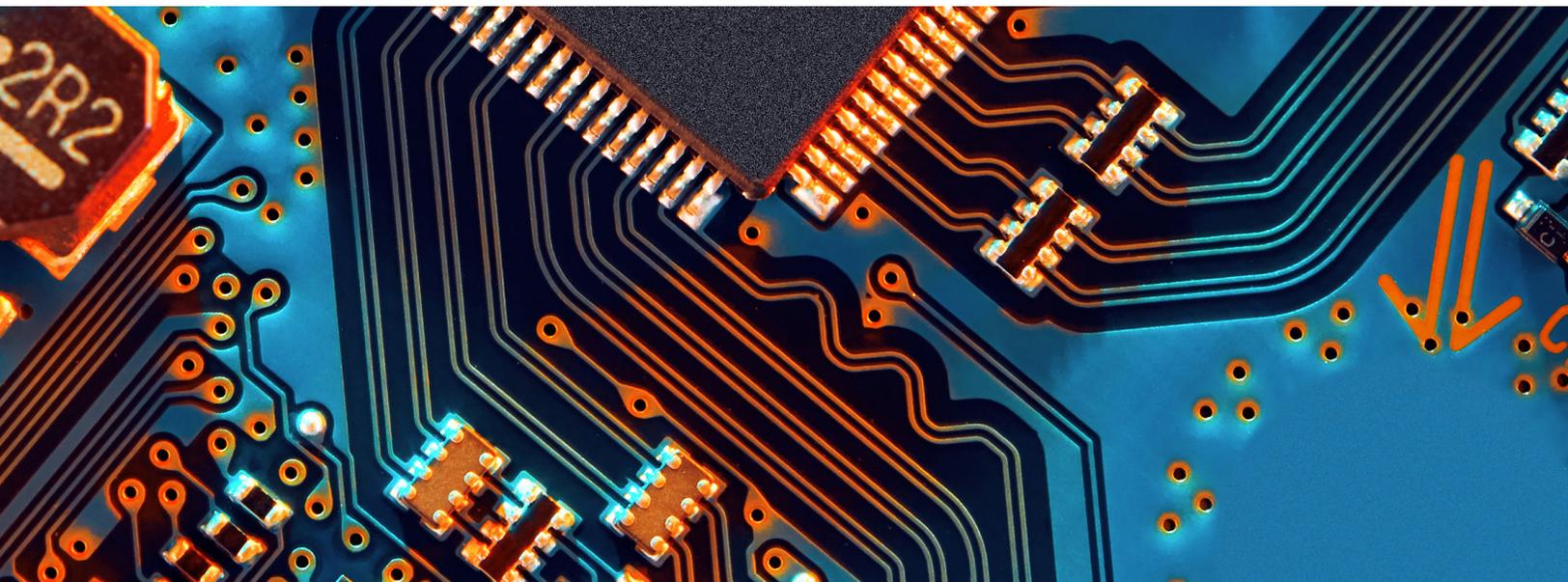
**John Behnke** has 35 years of semiconductor industry experience including: logic and memory manufacturing, technology/product development and fab operational excellence. As the GM of Final Phase Systems an INFICON Product Line, Behnke leads a team that develops and deploys SMART software solutions that enable fabs to improve their manufacturing efficiency.

**Dr. Michael Fritze** is a Senior Fellow and former Vice President at the Potomac Institute for Policy Studies responsible for the Microelectronics Policy portfolio. His activities include USG trusted access strategies, support of needed legacy technologies. DOD innovation policy and outreach to Industry and strengthening the U.S. Microelectronics Industrial Base. He is also the Director of the VITAL Center (Vital Infrastructure Technology and Logistics) at Potomac.

**Dr. Paolo Gargini** was a member of the Sematech Board until 2012. He also heads the International EUV Initiative (IEUVI) and the International Consortia Cooperation Initiative (ICCI). Gargini became the first Chairman of the Governing Council of the Nanoelectronics Research Initiative (NRI) funded in June 2005 by SIA. Gargini was inducted in the VLSI Research Hall of Fame in 2009. He was elevated to International Fellow of the Japan Society of Applied Physics in 2014.

**Ted J. Glum** is the former Director of the US Defense Microelectronics Activity (DMEA), serving in that capacity from its inception in 1996 to his retirement in 2018. As the Director, Glum reported to the Assistant Secretary of Defense for Research and Engineering, (ASD (R&E)), and was responsible for over \$2 Billion of microelectronics technology programs in addition to numerous classified programs for the Department of Defense (DoD) and Intelligence Community.

**Ardavan Mobasheri** is a Senior Research Fellow at the Potomac Institute for Policy Studies. He has over 30 years of experience in the private sector and academia. Ardavan is an economist specializing in macroeconomics, financial economics, corporate and international finance, industrial organization, economic history, and corporate strategy.





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# Faculty

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**Jennifer Santos** is the Principal Director for Strategic Initiatives in the National Security and Space (NS&S) business and Draper. In this role, she leads teams to address critical national challenges in defense and aerospace. Prior to Draper, Santos was appointed in June 2019 as the Deputy Assistant Secretary of Defense for Industrial Policy (IndPol).

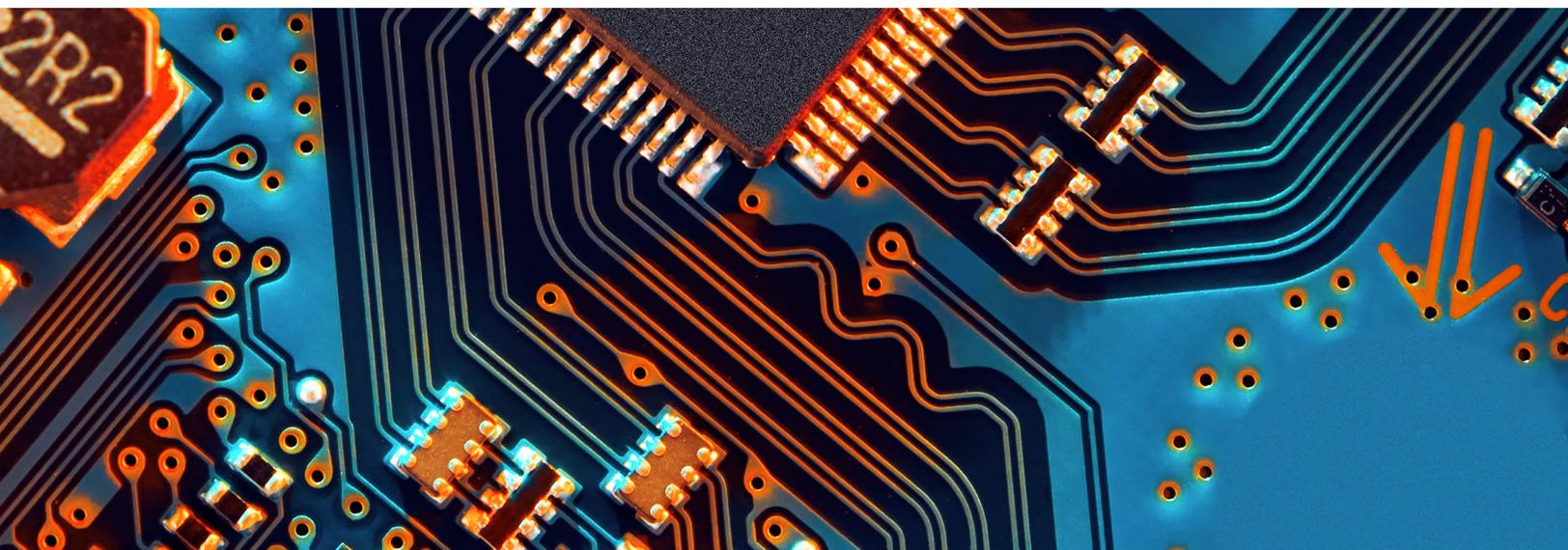
**The Honorable Alan R. Shaffer** is a member of the Board of Regents at the Potomac Institute for Policy Studies. He served as the Deputy Under Secretary of Defense for Acquisition and Sustainment (A&S) from January 2019 to January 20, 2021. From 2015 to 2018, Mr. Shaffer served as the Director, NATO Collaboration Support Office in Neuilly-sur-Seine, France.

**Brian Shirley** is a senior executive and advisor with over 34 years of broad-based experience in the semiconductor industry, including fourteen years as an executive officer of Micron Technology, a US-based Fortune 500 leader in semiconductor memory, as well as several years of senior consulting to the US Government on topics related to the Semiconductor Industry and US National Security.

**The Honorable John Young**, former Under Secretary of Defense for Acquisition, Technology and Logistics, is a Senior Fellow and Member of the Board of Regents of the Potomac Institute for Policy Studies. Mr. Young's distinguished career includes past positions as Director, Defense Research and Engineering (DDR&E); and Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN(RDA)).

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# About Us

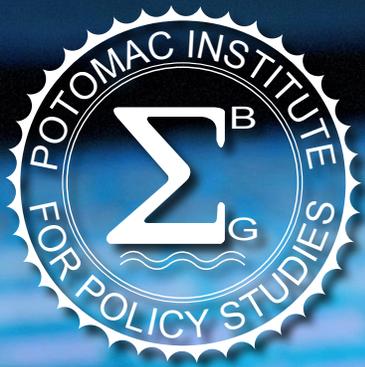
The **Potomac Institute for Policy Studies** is an independent, nonpartisan, not-for-profit, science and technology (S&T) policy research institute. The Institute identifies and leads discussions on key S&T and national security issues facing our society, providing an academic forum for the study of related policy issues. Based on data and evidence, the Institute develops meaningful policy recommendations and ensure their implementation at the intersection of business and government. The Potomac Institute seeks to (1) identify key emerging technologies or scientific fields with disruptive potential, (2) anticipate and understand the likely societal-level impacts of these technologies, and (3) recommend meaningful policy options to the government. The Institute is keenly aware that implementation is the most difficult component of policy work. As a result, we do not merely conduct a world class study and provide a report. We roll up our sleeves as a think and “do” tank!



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