## Contributors

## Heritage Experts

**Dakota L. Wood** is Senior Research Fellow for Defense Programs in the Center for National Defense, of the Kathryn and Shelby Cullom Davis Institute for National Security and Foreign Policy, at The Heritage Foundation. He served for two decades as an officer in the U.S. Marine Corps, including service as a strategic analyst for the Commandant of the Marine Corps and the Secretary of Defense's Director of Net Assessment.

**James Jay Carafano, PhD,** is Vice President for the Davis Institute and E. W. Richardson Fellow at The Heritage Foundation. He served for 25 years as a U.S. Army officer and has taught at a number of universities, including the National Defense University.

**Thomas W. Spoehr,** Lieutenant General, U.S. Army (Ret.), is Director of the Center for National Defense. Before joining The Heritage Foundation, he served America for more than 36 years in the U.S. Army.

**Frederico Bartels** is Policy Analyst for Defense Budgeting in the Center for National Defense. Before joining The Heritage Foundation, he served for three years as a Policy Analyst with Concerned Veterans for America.

**Thomas Callender** is Senior Research Fellow for Defense Programs in the Center for National Defense. Following a 20-year career in the U.S. Navy's submarine fleet, he served for five years as Director for Capabilities in the Capabilities and Concepts Directorate of the Office of the Deputy Under Secretary of the Navy for Policy.

**Dean Cheng** is a Senior Research Fellow in the Asian Studies Center of the Davis Institute. He specializes in China's military and foreign policy.

**Luke Coffey** is Director of the Douglas and Sarah Allison Center for Foreign Policy of the Davis Institute. He joined Heritage after service as Senior Special Advisor to the Secretary of State for Defence of the United Kingdom.

**James DiPane** is a Research Assistant in the Center for National Defense. He focuses on foreign security cooperation, maritime security, and the U.S. Coast Guard.

**Michaela Dodge** is Senior Policy Analyst for Defense and Strategic Policy in the Center for National Defense. She specializes in missile defense, nuclear weapons modernization, and arms control.

**Nile Gardiner, PhD,** is Director of the Margaret Thatcher Center for Freedom of the Davis Institute. He served as foreign policy researcher in the Private Office of former Prime Minister Margaret Thatcher of the United Kingdom.

**Bruce Klingner** is Senior Research Fellow for Northeast Asia in the Asian Studies Center. He served for two decades at the Central Intelligence Agency and the Defense Intelligence Agency.

**Daniel Kochis** is a Policy Analyst in European Affairs in the Margaret Thatcher Center for Freedom, where he specializes in trans-Atlantic security issues including NATO, U.S.-Russia relations, and the Arctic.

**Walter Lohman** is Director of the Asian Studies Center. He has served on the staff of the Senate Committee on Foreign Relations, in the Office of Senator John McCain, and as Executive Director of the U.S.-ASEAN Business Council.

**James Phillips** is Senior Research Fellow for Middle Eastern Affairs in the Allison Center. He has also served at the Congressional Research Service and at the East–West Center.

**John Venable** is Senior Research Fellow for Defense Policy in the Center for National Defense. A 25-year veteran of the U.S. Air Force and F-16 pilot, he served in three combat operations, was commander of the Thunderbirds, and earned the rank of colonel before retiring.

**Rachel Zissimos** is a Policy Analyst in the Center for National Defense. She focuses on Department of Defense Energy and Industrial Base policy in addition to supporting production of the *Index of U.S. Military Strength.* 

## **External Reviewers and Expert Contributors**

John Conger is President of Conger Strategies & Solutions, LLC.

**Patrick M. Cronin, PhD,** is Senior Director of the Asia–Pacific Security Program at the Center for a New American Security (CNAS).

**Lindsey Ford** is Director for Political-Security Affairs and Richard Holbrooke Fellow at the Asia Society Policy Institute.

Daniel Gouré, PhD, is Senior Vice President at the Lexington Institute.

Jim Greer, Colonel, U.S. Army (Ret.).

David Isby is a Washington-based defense analyst and consultant.

Roy D. Kamphausen is Senior Vice President for Research at the National Bureau of Asian Research.

**Eoin Micheál McNamara** is a Junior Research Fellow at the University of Tartu, Estonia.

**Blaise Misztal** is Director of the National Security Program at the Bipartisan Policy Center.

Thomas C. Moore is an independent consultant.

Jack Rametta is Project Associate for the Bipartisan Policy Center's Economic Policy Project.

**Douglas E. Streusand, PhD,** is a Professor of International Relations at the U.S. Marine Corps Command and Staff College.

John Wissler, Lieutenant General, USMC (Ret.).

Larry M. Wortzel, PhD, is Senior Fellow for Asian Security at the American Foreign Policy Council.

Any views presented in or reflecting the results of any prepublication review of this document by an officer or employee of the United States are rendered in his or her individual capacity and do not necessarily represent the views of the United States or any agency thereof.

## Acknowledgments

No publication of this type is possible without the contributions of a great many people, but there usually are a few special contributors whose talents, work ethic, and willingness to go the extra mile make it something quite special.

Policy Analyst for National Security and Defense Studies Rachel Zissimos was the linchpin of production success, working with the authors, editors, and graphics and production professionals who made this Index a reality, both in print and on the Web. Not only did she substantially smooth and enhance the efficient production of the Index, creating additional time and better focus for everyone involved, but she also directly handled the updating of its many framing and explanatory sections. She was supported by Heritage Young Leaders Program interns Matt Bartilotti, Josh Hunter, Hayden Morse, and Matt Ahlquist, who contributed significant research that helped to inform the findings of the 2019 Index.

As with all past editions, Senior Editor William T. Poole was instrumental not only in maintaining a consistent tone throughout this multi-author document—a challenging feat all its own—but also in checking every reference to ensure accuracy of reporting and coherence throughout the *Index* while also updating text that, though still current, can become stale when carried from one year to the next. He was aided this year by Research Editor Kathleen McCann Scaturro, who edited Blaise Misztal and Jack Rametta's manpower essay with the same attention to detail. Data Graphics Services Manager John Fleming, ably assisted by Data Graphics Specialist and Editorial Associate Luke Karnick, once again gave visual life to text and statistics to convey a message with maximum impact. Senior Designer of Research Projects Jay Simon and Digital Strategy Director Maria Sousa ensured that the presentation of *Index* materials was tuned to account for changes in content delivery as our world becomes increasingly digital, portable, and driven by social media. Finally, Director of Research Editors Therese Pennefather was critical in guiding each of these efforts into place to create a cohesive, finished product.

We believe that this *Index* helps to provide a better informed understanding and wider appreciation of America's ability to "provide for the common defence"-an ability that undergirds The Heritage Foundation's vision of "an America where freedom, opportunity, prosperity, and civil society flourish." Judging by reception of the *Index* during this past year-the work cited and referenced by Congress, the executive branch, officials within the Department of Defense, supporting government agencies, the media, academia, policy institutes, and among the public—we are encouraged that so many Americans are similarly concerned about the state of affairs in and the multitude of factors affecting our country.

The Heritage Foundation seeks a better life for Americans, which requires a stronger economy, a stronger society, and a stronger defense. To help measure the state of the economy, our Institute for Economic Freedom and Opportunity publishes the annual *Index of Economic Freedom*, and to help Americans everywhere more fully understand the state of our defenses, our Kathryn and Shelby Cullom Davis Institute for National Security and Foreign Policy is publishing this fifth annual edition of the *Index* of U.S. Military Strength.

In addition to acknowledging all of those who helped to prepare this edition, very special recognition is due to the Heritage members and donors whose continued support has made this 2019 Index of U.S. Military Strength possible.

Finally, as always, The Heritage Foundation also expresses its profound appreciation to the members of the U.S. armed forces who continue to protect the liberty of the American people in an increasingly dangerous world.