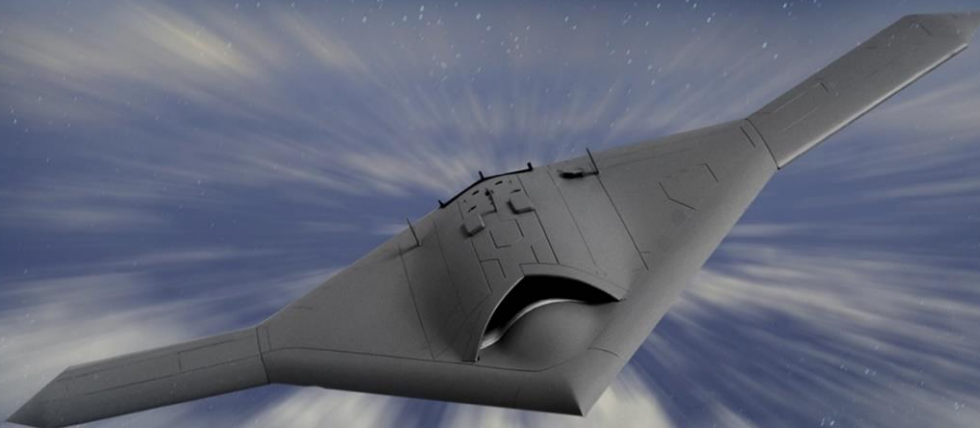


# Disruptive Technologies and International Law

7-9 December 2020

Zoom Conference ID: 938 7828 8070 - Password: 129153



U.S. NAVAL WAR COLLEGE

Stockton Center  
for International Law



Yale Law School

## Disruptive Technologies and International Law

7-9 December 2020 | Newport, Rhode Island

Attendees: Join the Zoom Webinar via the below link

<https://usnwc.zoom.us/j/93878288070?pwd=TXJMVzhPcVUydzY2TDdPbDFZa3dBUT09>

Webinar ID: 938 7828 8070 | Password: 129153

Speakers: Join the Zoom Webinar via the panelist link you received separately.

Sponsored by the Stockton Center for International Law, the annual Law of Armed Conflict conference is the flagship event of the U.S. Naval War College to explore international law and multi-domain warfare. This year the conference is co-sponsored by Directorate Legal Services (Royal Air Force), The West Point Lieber Institute for Law and Land Warfare, United States Army National Security Law Division, United States Air Force Academy, and the Yale Law School Paul Tsai China Center.

## PROGRAM OF EVENTS

### MONDAY, 7 DECEMBER 2020

#### **1100 Welcoming Remarks**

[James Kraska](#), Chair and Charles H. Stockton Professor, Stockton Center for International Law, U.S. Naval War College

[Rear Adm. Shoshana S. Chatfield](#), U.S. Navy, President, U.S. Naval War College

#### **1110 Opening Keynote: The Rise of Intelligent Machines**

[Paul Scharre](#), Senior Fellow and Director, Technology and National Security Program, Center for a New American Security

#### **1150 Break**

#### **1200 Presentation: Ship Identification and AI**

[Michael S. Treacy](#), Co-Founder, Anabasis Technologies

#### **1230 Lunch**

#### **1310 Panel 1: Autonomous Vessels**

**Moderator:** [Margaret Materna](#), Deputy Director, National Security Law Division (Code 10), Office of the Judge Advocate General of the Navy

- ♦ [LCDR Joel Coito](#), Deputy Counsel, Office of Maritime and International Law, U.S. Coast Guard Headquarters
- ♦ [Anna Petrig](#), Chair of International Law and Public Law, University of Basel
- ♦ [Raul “Pete” Pedrozo](#), Howard S. Levie Professor, Stockton Center for International Law, U.S. Naval War College

#### **1400 Break**

#### **1410 Panel 2: Artificial Intelligence and the Law of Armed Conflict**

**Moderator:** [Michael Meier](#), Special Assistant to the Army Judge Advocate General for Law of War Matters

- ♦ [Ashley J. Llorens](#), Chief, Intelligent Systems Center, Johns Hopkins Applied Physics Laboratory
- ♦ [Iben Yde](#), Assistant Professor in International and Operational Law, Royal Danish Defence College

#### **1500 Break**

#### **1510 Panel 3: Is There an “Accountability Gap” in Lethal Autonomous Weapons Systems?**

**Moderator:** [Robert Williams](#), Executive Director, The Paul Tsai China Center, Yale Law School

- ♦ [Laura A. Dickinson](#), Oswald Symister Colclough Research Professor of Law, The George Washington University Law School
- ♦ [Li Qiang](#), Associate Professor of Law and Director of the Military Law Institute, School of Law, China University of Political Science and Law

#### **1600 Break**

#### **1610 Panel 4: Futures Command and Technology on the Battlefield**

**Moderator:** [Sasha Radin](#), Director of Research and Publications, Lieber Institute, United States Military Academy, West Point

- ♦ [COL Stephanie Ahern](#), Director of Concepts, Futures & Concepts Center, Army Futures Command
- ♦ [Chris Jenks](#), Associate Professor of Law, Dedman School of Law, Southern Methodist University

#### **1700 Announcements and Closing Remarks**

---

### TUESDAY, 8 DECEMBER 2020

#### **1100 Keynote: International Law, Cyberspace, and Contestation**

[Roy S. Schöndorf](#), Deputy Attorney General for International Law, Israeli Ministry of Justice

#### **1140 Panel 5: Attribution of Cyber Operations**

**Moderator:** [Herbert S. Lin](#), Hank J. Holland Fellow in Cyber Policy and Security, Hoover Institution

- ♦ [Yuval Shany](#), Hersch Lauterpacht Chair in Public International Law, Hebrew University of Jerusalem
- ♦ [Tomohiro Mikanagi](#), Deputy Legal Advisor, Japanese Ministry of Foreign Affairs

**1230 Lunch**

**1330 Panel 6: Perfidy, Ruses, and Blockades in Cyberspace**

**Moderators:** [Air Vice-Marshal Tamara Jennings](#), and [Air Commodore Mark Phelps](#), Directorate of Legal Service, Royal Air Force

- ♦ [Kubo Mačák](#), Legal Adviser, International Committee of the Red Cross
- ♦ [Jeff Biller](#), Assistant Professor of Cyber Law and Policy, CyberWorx, United States Air Force Academy
- ♦ [Wolff Heintschel von Heinegg](#), Chair of Public Law, Europa-Universität Viadrina

**1420 Break**

**1430 Panel 7: Evolving State Practice and Cyber Operations**

**Moderator:** [Lt Col Timothy Goines](#), Senior Military Faculty and Assistant Professor of Law, United States Air Force Academy

- ♦ [Eric Talbot Jensen](#), Professor of Law, Brigham Young University
- ♦ [Ashley S. Deeks](#), E. James Kelly, Jr.-Class of 1965 Research Professor and Director of the National Security Law Center at the University of Virginia Law School
- ♦ [Przemysław Roguski](#), Lecturer in Law, Jagiellonian University, and Expert on Cybersecurity, Kościuszko Institut

**1520 Announcements and Closing Remarks**

---

**WEDNESDAY, 9 DECEMBER 2020**

**1100 Keynote: Submarine Cable Security and the Law**

[Douglas Burnett](#), Chief Counsel of the Maritime Administration, U.S. Department of Transportation

**1140 Break**

**1150 Panel 8: Outer Space, Security and International Law**

**Moderator:** [Duncan Blake](#), Senior Research Associate in Space Law & Strategy, University of New South Wales, Canberra

- ♦ [Laura Grego](#), Senior Scientist and Research Director, Global Security Program, Union of Concerned Scientists
- ♦ [David A. Koplow](#), Professor of Law, Georgetown Law
- ♦ [Major Jeremy Grunert](#), Assistant Professor of Law, Department of Law, United States Air Force Academy

**1240 Lunch**

**1330 Panel 9: Legal Accountability for Military Space Operations**

**Moderator:** [Lynne A. Tatso](#), Senior Attorney Advisor for Operations, International and Space Law & Policy, Combined Force Space Component Command

- ♦ [Frans von der Dunk](#), Harvey and Susan Perlman Alumni / Othmer Chair of Space Law, LL.M. Programme on Space, Cyber and Telecommunication Law, University of Nebraska-Lincoln
- ♦ [Colonel Rob Holman](#), Chief of Staff, Office of the Judge Advocate General, Canadian Armed Forces

**1420 Break**

**1430 Panel 10: The Law of Armed Conflict, Neutrality, and Counterspace Operations**

**Moderator:** [Michael R. Hoversten](#), Chief Counsel for Space, International, and Operations Law, Space Operations Command, Peterson Air Force Garrison, CO

- ♦ [Laurie R. Blank](#), Clinical Professor of Law and Director of the International Humanitarian Law Clinic, Emory University School of Law
- ♦ [Sqn Ldr Kieran R.J. Tinkler](#), Royal Air Force, Military Professor, Stockton Center for International Law, U.S. Naval War College
- ♦ [Christopher J. Borgen](#), Professor of Law and Co-Director of the Center for International and Comparative Law, St. John's University School of Law

**1520 Closing Remarks**

[James Kraska](#), Chairman and Charles H. Stockton Professor, Stockton Center for International Law, U.S. Naval War College

## ABOUT THE SPEAKERS

(in alphabetical order)

**STEPHANIE AHERN, COLONEL**, is the Director of Concepts for Futures and Concepts Center, Army Futures Command. She has served in overseas U.S. Army Corps of Engineer assignments in Germany, Bosnia-Herzegovina, Albania, Kosovo, Afghanistan, and Iraq. After becoming an Army Strategist, she taught International Relations at the U.S. Military Academy at West Point (2005-08), spending summers in Baghdad (2006) and the State Department (2007). She has a B.S. in Engineering Management from the U.S. Military Academy, a Master of Strategic Studies from the U.S. Army War College, and a Master and Ph.D. in Political Science from the University of Notre Dame.

**JEFF BILLER** is an Assistant Professor of Cyber Law and Policy with CyberWorx, a department of the United States Air Force Academy (USAFA). Through partnerships with government, academia, and industry, CyberWorx develops innovative solutions to the Department of the Air Force's most complex problems. He is also the co-director of USAFA's Law, Technology, and Warfare Research Cell. Jeff teaches in USAFA's Departments of Law and Political Science, focusing on military uses of cyber, space, and emerging technologies.

**DUNCAN BLAKE** transferred from the permanent Air Force to the Reserves in January 2017, after 22 years as a Legal Officer in the Royal Australian Air Force. Among other things, he served as the Deputy Director of Operations and International Law for the Australian Department of Defence. Duncan's thesis for his Master's degree in space law at McGill University was the genesis of both the '*Manual on International Law Applicable to Military uses of Outer Space*' (MILAMOS) Project and the *Woomera Manual on International Law Applicable to Military Space Activities*. Duncan continues to contribute in an editorial role for the *Woomera Manual*. He is also doing a PhD in military space law, he is an academic at the University of New South Wales in Canberra (coincident with the Australian Defence Force Academy), and he supports commercial entities with legal aspects of space activities as Special Counsel - Space Law for International Aerospace Law and Policy Group.

**LAURIE R. BLANK** is a Clinical Professor of Law, Director of the Center for International and Comparative Law and Director of the International Humanitarian Law Clinic at Emory University School of Law. Professor Blank is the co-author of *International Law and Armed Conflict: Fundamental Principles and Contemporary Challenges in the Law of War*, and co-director of the End of War Project, a multi-year project exploring a range of legal, policy, moral and strategic challenges in ending complex counterterrorism and counterinsurgency conflicts. She is also a core expert on the *Woomera Manual on International Law of Military Space Operations*, a Senior Fellow at the Lieber Institute for Law and Land Warfare, Chair of the American Society of International Law Lieber Prize Committee, and a term member of the ABA's Advisory Committee to the Standing Committee on Law and National Security.

**CHRISTOPHER J. BORGEN** is Professor of Law and Co-Director of the Center for International and Comparative Law at St John's University School of Law in New York City. He is a 'core expert' for the *Woomera Manual on the International Law of Military Space Operations* and has served as Co-Rapporteur for the International Law Association's Committee on Recognition and Non-Recognition in International Law. He had also co-founded the blog *Opinio Juris*.

**DOUGLAS BURNETT** of Colorado is the Chief Counsel of the Maritime Administration in the U.S. Department of Transportation. Mr. Burnett has practiced maritime law his entire career, most recently nine years in New York City with the transportation, shipping and logistics practice group of the law firm of Squire Patton Boggs (US) LLP. His over three decades of private practice include some sixty-four reported cases, focused on maritime litigation and arbitration involving charter parties, bills of lading, maritime casualties, and general maritime and international law of the sea. His experience includes projects for marine terminals, pipelines, deep water ports, off-shore wind, and submarine power and telecom cables. He also acted as the international legal advisor for the International Cable Protection Committee for twenty years.

He is co-editor and co-author of *Submarine Cables, the Handbook of Law and Policy* (2014), *Submarine Cables and Deep Seabed Mining, Advancing Common Interests and Addressing UNCLOS "Due Regard" Obligations* (International Seabed Authority Technical Publication No. 14) (2015), and *Submarine Cables and Biodiversity beyond National Jurisdiction-The Cloud Is beneath the Sea* (2017). Additionally, he has also written thirty-eight articles on maritime law and international law of the sea. His most recent article "Losing the Great Pacific War for Lack of Ships and Mariners" appeared in *U.S. Naval Institute Proceedings* (Jan. 2019)



Mr. Burnett is the Chair of the Subcommittee on International Law of the Sea of the Maritime Law Association of the United States and the former Chair of the Admiralty and Maritime Law Committee of the New York County Lawyers Association.

In 2007, he provided expert testimony before the Senate Foreign Relations Committee on accession to the United Nations Convention on the Law of the Sea (UNCLOS) and the ratification of the 1984 Agreement regarding Part XI of the Convention. He has been a frequent lecturer at the Rhodes Academy on International law of the sea.

Mr. Burnett is a graduate of the U.S. Naval Academy (1972-B.S.) and the University of Denver College of Law (1980-J.D.). He spent a 30-year career on active and reserve duty with the U.S. Navy in billets afloat and ashore, including duty as an exchange officer with the Brazilian Navy and with the Military Sealift Command. He holds the rank of Captain USN (ret.)

**SHOSHANA S. CHATFIELD, RADM, USN**, is the fifty-seventh President of the U.S. Naval War College and a career naval helicopter pilot. A native of Garden Grove, California, she graduated from Boston University in 1987 with a Bachelor of Arts in International Relations and French Language and Literature. She received her commission through the Naval Reserve Officers Training Corps in 1988 and earned her wings of gold in 1989. Chatfield was awarded the Navy's Political/Military Scholarship and attended the Kennedy School of Government, receiving a Master of Public Administration from Harvard University in 1997. In 2009, the University of San Diego conferred upon her a doctorate of education in leadership studies. Operationally, she flew the SH-3, CH-46D and MH-60S and deployed in helicopter detachments to the Western Pacific and Arabian Gulf supporting carrier strike group and amphibious ready group operations. Ashore, she participated in the Joint Staff/OSD Internship Program, augmenting the Joint Staff, Plans and Policy (J-5) Directorate, Central & Eastern European Branch and served as assistant professor of political science at the United States Air Force Academy from 2001–2004. Chatfield commanded at the squadron and type wing level and additionally commanded a joint provincial reconstruction team in Farah Province, Afghanistan. Most recently, Chatfield commanded Joint Region Marianas from January 2017 to August 2019.

**JOEL COITO, LCDR**, currently serves as a judge advocate in the Office of Maritime and International Law at U.S. Coast Guard Headquarters in Washington, DC. Prior to this assignment, he has served as the Coast Guard Liaison Officer, Office of Ocean and Polar Affairs, U.S. Department of State. LCDR Coito's operational assignments have included service aboard Coast Guard Cutter KUKUI in Honolulu, Hawaii, as well as deployment to Umm Qasr, Iraq, in support of Operation Iraqi Freedom. LCDR Coito graduated with High Honors from the U.S. Coast Guard Academy in 2005. He received a Juris Doctor from the University of California, Berkeley, School of Law in 2013, where he was a publishing editor of the *California Law Review*. LCDR Coito earned a Master of Laws degree from Yale Law School in 2020, with a focus on international and national security law.

**ASHLEY S. DEEKS** is the E. James Kelly, Jr.-Class of 1965 Research Professor and the Director of the National Security Law Center at the University of Virginia Law School. Her primary research and teaching interests are international law, national security, intelligence, the laws of war, executive power, and new technologies. She serves on the State Department's Advisory Committee on International Law and the Boards of Editors for the *American Journal of International Law*, the *Journal of National Security Law & Policy*, and the *Texas National Security Journal*. She is a senior fellow at UVA's Miller Center and at the Lieber Institute for Law and Land Warfare at West Point, as well as a senior contributor to *Lawfare*. Before joining UVA, Deeks served for ten years in the U.S. State Department's Office of the Legal Adviser, including as the assistant legal adviser for political-military affairs and the legal adviser to U.S. Embassy Baghdad.

**LAURA A. DICKINSON** is the Oswald Symister Colclough Research Professor and Professor of Law at George Washington University. She has published widely on legal issues related to national security, human rights, and foreign affairs privatization. Her prize-winning book, *Outsourcing War and Peace* outlines a framework of accountability and oversight to protect core public values threatened in the current era of growing military and security privatization. Professor Dickinson has served as Special Counsel to the General Counsel of the U.S. Department of Defense and as a senior policy adviser in the Bureau of Democracy, Human Rights, and Labor at the U.S. Department of State. She is currently the 2020 Lieber Scholar at the Lieber Institute for Law and Land Warfare at the US Military Academy at West Point.

**FRANS VON DER DUNK, PROFESSOR DR**, holds the Harvey and Susan Perlman Alumni / Othmer Chair of Space Law at the unique LL.M. Programme on Space, Cyber and Telecommunication Law with the University of Nebraska-Lincoln. He also is Director of Black Holes BV, Consultancy in space law and policy, based in Leiden, The Netherlands. He has published the first *Handbook of Space Law, the Advanced Introduction to Space Law* and over 200 articles on issues of space law and policy, and is editor of the renowned series *Studies in Space Law*.

**TIMOTHY GOINES, LT COL**, serves as a Senior Military Faculty and Assistant Professor of Law, United States Air Force Academy, Colorado Springs, Colorado, where he teaches Cyberlaw, Law for Air Force Officers, and the Legal Studies Capstone Course. He also serves as the Director of USAFA's Law, Technology, and Warfare Research Cell.

Lt Col Goines was born and raised in Omaha, Nebraska. In May of 2004, he graduated Summa Cum Laude from Creighton University with a Bachelor of Science degree in Mathematics. He was commissioned as a Second Lieutenant in May of 2004 through Air Force R.O.T.C. Detachment 470, University of Nebraska at Omaha. In May 2009, Lt Col Goines graduated Cum Laude from Baylor University, School of Law. Just prior to his assignment at the Air Force Academy, Lt Col Goines received a Master of Laws Degree in Cyber, Space, and Telecommunications Law at the University of Nebraska Law School in May 2016.

**LAURA GREGO** is a senior scientist and research director in the Global Security Program at the Union of Concerned Scientists. A physicist by training, she works at the intersection of science and policy on the topics of nuclear weapons, missile defense, and space security.

**JEREMY GRUNERT, MAJ**, is an Air Force JAG officer currently serving as an Assistant Professor of Law in the US Air Force Academy's Department of Law. Maj Grunert teaches USAFA's "Law for Air Force Officers" and "Space Law" courses. Prior to serving at USAFA, Maj Grunert served as a prosecutor at the Incirlik Air Base, Turkey, and RAF Lakenheath, United Kingdom, legal offices; deployed to al Udeid Air Base, Qatar, and Bagram Airfield, Afghanistan, in support of US Central Command; and earned a Master of Law (LL.M.) degree in Air & Space Law from the University of Mississippi School of Law.

**WOLFF HEINTSCHEL VON HEINEGG, PROFESSOR DR.**, holds the Chair of Public Law, in particular Public International law, European Law and Foreign Constitutional Law at the Europa-Universität Viadrina in Frankfurt (Oder), Germany. In the academic years 2003/2004 and 2012/2013 he was the Charles H. Stockton Professor of International Law at the U.S. Naval War College. Since May 2018 he has been the President of the International Society for Military Law and the Law of War. He contributed to the *San Remo Manual on International Law Applicable to Armed Conflicts at Sea* (1995), the *Manual on Air and Missile Warfare* (2010) and the *Tallinn Manuals on the International Law Applicable to Cyber Warfare* (2013) and to *Cyber Operations* (2016).

**ROB HOLMAN, COL**, is Chief of Staff of the Office of the Judge Advocate General. He joined the Canadian Forces in 1986. Following service as a pilot, he was selected for sponsored legal education and, upon his to the bar of Ontario, joined the Office of the JAG. He served as a military prosecutor from 2002 until 2007, when he deployed to Afghanistan as part of the American-led Combined Security Transition Command-Afghanistan. Upon his return to Canada, he was employed in a range of positions of increasing responsibility, providing strategic operational and international law advice. After serving as Special Assistant to the Judge Advocate General, he was promoted to his present rank in 2013. He served as Deputy Judge Advocate General for Military Justice until July 2017 and then as Deputy Judge Advocate General for Operational and International Law until August 2020, when he assumed his present responsibilities. Colonel Holman is a graduate of the Royal Military College of Canada (B.Eng.), Queen's University (LL.B.) and McGill University (LL.M.). In his personal capacity, he is part of the international group of legal and technical experts that is drafting the *Woomera Manual on the International Law of Military Space Operations*.

**MICHAEL R. HOVERSTEN**, Chief Counsel for Space, International, and Operations Law, Space Operations Command, Peterson Air Force Garrison, CO, is responsible for providing legal advice to military commanders and senior government officials on all space, international, and operations law issues affecting Space Operations Command. A retired U.S. Air Force Judge Advocate, Mr. Hoversten has more than 27 years' legal experience in myriad disciplines to include 20 years' experience advising top-level government officials in the U.S. Space Force, U.S. Air Force, U.S. Space Command, and Office of the Secretary of Defense on military space operations, international space law, and the law of armed conflict. In addition to Space Operations command, Mr. Hoversten has held positons in the Office of the Secretary of Defense, Headquarters U.S. Air Force, Air Force Space Command, and multiple other U.S. Air Force organizations.

**CHRIS JENKS** is an Associate Professor of Law at the SMU Dedman School of Law. His research focuses on the impact of emerging technologies on accountability norms across the spectrum of armed conflict. He received a Fulbright scholars grant to research autonomous weapons and has presented on that topic at the United Nations Group of Governmental Experts meetings and testified at the Commission on Security and Cooperation in Europe. Prior to joining the SMU law faculty, Professor Jenks served as an Army officer, initially in the Infantry and then as a Judge Advocate. In his last assignment he served as the Chief of the Army's International Law Branch in the Pentagon.

**TAMARA JENNINGS** - With a family history of service in the Royal Air Force, Air Vice-Marshal Jennings led a rather nomadic existence in her early years. After completing a law degree and legal practice course, she spent a year volunteering with the homeless and providing advice for the Citizens Advice Bureau before completing her legal training, qualifying as a Solicitor in 1998.

Following practice in Newcastle upon Tyne, Air Vice-Marshal Jennings commissioned into the Legal Branch in 2000 and has enjoyed tours at HQ PTC, HQ STC, RAF Brize Norton and latterly at HQ Air in advisory, service complaints and operational legal roles. She has also served with the Army on 2 occasions at HQ 1 UK Armoured Division, which involved deployments to Kosovo, Oman, Bahrain and Canada. Her operational tour advising the UK red card holder in the CAOC in Al Udeid saw her awarded an AOC's commendation. Her completion of ACSC was followed by an out of Branch tour running the RAF Service Complaints Team, for which she was awarded an OBE. She was promoted to Air Commodore in 2017 and to Air Vice-Marshal, Director of Legal Services in September 2018.

Air Vice-Marshal Jennings is married to a former Officer in the Royal Signals, who qualified as a teacher after leaving the Army, and is now a Reserve Officer in the AGC (ETS). With a daughter and a son, Air Vice-Marshal Jennings enjoys the theatre and walking, but spends most of her time juggling family and service life.

**ERIC TALBOT JENSEN** teaches and writes in the areas of Public International Law, Criminal Law, The Law of Armed Conflict, International Criminal Law, Cyber Law and National Security Law. His recent scholarship has appeared, among others, in the *Texas, Temple, Houston, and Israel Law Reviews*; the *Virginia, Stanford, Chicago, Michigan, and Minnesota Journals of International Law*; the *Stanford Law and Policy Review*; and *International Law Studies*. Professor Jensen is a co-author on a law school casebook on the Law of Armed Conflict and a student treatise on National Security Law for Aspen Publishing and a co-author on an Oxford University text analyzing application of the laws of war to the war on terror. He was a member of the group of experts that produced both the *Tallinn Manual on the International Law Applicable to Cyber Warfare* and the recently released *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations*.

Professor Jensen recently returned to BYU Law School after serving for one year as the Special Counsel to the Department of Defense General Counsel. Prior to joining the BYU law faculty in 2011, Professor Jensen spent 2 years teaching at Fordham Law School in New York City and 20 years in the United States Army as both a Cavalry Officer and as a Judge Advocate. During his time as a Judge Advocate, Professor Jensen served in various positions including as the Chief of the Army's International Law Branch; Deputy Legal Advisor for Task Force Baghdad; Professor of International and Operational Law at The Judge Advocate General's Legal Center and School; legal advisor to the US contingent of UN Forces deployed to Skopje, Macedonia as part of UNPREDEP; and legal advisor in Bosnia in support of Operation Joint Endeavor/Guard.

**DAVID A. KOPLow** is a professor at the Georgetown University Law Center, where he teaches and writes in the areas of international law, national security, and arms control and non-proliferation. He has served in government in the U.S. Department of Defense, the U.S. Arms Control and Disarmament Agency, and NASA.

**JAMES KRASKA** is Chair and Charles H. Stockton Professor of International Maritime Law in the Stockton Center for International Law at the U.S. Naval War College. He is also a Visiting Professor of Law and John Harvey Gregory Lecturer on World Organization at Harvard Law School, where he teaches International Law of the Sea. He is Distinguished Fellow at the Law of the Sea Institute, University of California Berkeley School of Law, a Permanent Member of the Council on Foreign Relations and U.S. representative to the International Group of Experts for the *San Remo Manual on the Law Applicable to Armed Conflicts at Sea*.

**HERBERT S. LIN, DR.**, is senior research scholar for cyber policy and security at the Center for International Security and Cooperation and Hank J. Holland Fellow in Cyber Policy and Security at the Hoover Institution, both at Stanford University. He is also Chief Scientist, Emeritus for the Computer Science and Telecommunications Board, National Research Council (NRC) of the National Academies, where he served from 1990 through 2014 as study director of major projects on public policy and information technology, and Adjunct Senior Research Scholar and Senior Fellow in Cybersecurity (not in residence) at the Saltzman Institute for War and Peace Studies in the School for International and Public Affairs at Columbia University; and a member of the Science and Security Board of the Bulletin of Atomic Scientists. In 2016, he served on President Obama's Commission on Enhancing National Cybersecurity.

**ASHLEY J. LLORENS** is the founding chief of the Intelligent Systems Center at the Johns Hopkins Applied Physics Laboratory (APL), where he directs research and development activities in machine learning, robotic and autonomous systems and applied neuroscience. Since joining APL in 2003, Llorens has served as a principal investigator for a diverse portfolio of applied research programs focused on advancing artificial intelligence for national security applications. Mr. Llorens has served on strategic studies for the Department of Defense, Department of Energy and the National Academy of Sciences and was recently elected to serve on the steering committee for the Global Partnership on Artificial Intelligence.

**KUBO MAČÁK** is a Legal Adviser in the ICRC's Legal Division, assigned jointly to the Arms and Conduct of Hostilities Unit and the Commentaries Unit. Prior to joining the ICRC in October 2019, he worked as an Associate Professor at the University of Exeter in the UK. In that position, Kubo taught and researched in the areas of public international law, international humanitarian law, and international cyber law. He is the author of the book *Internationalized Armed Conflicts in International Law* (OUP 2018) and of multiple articles in peer-reviewed journals including the *International Review of the Red Cross*, the *Journal of Conflict and Security Law*, and the *Cambridge International Law Journal*. Kubo is also the General Editor of the *Cyber Law Toolkit*, an interactive online resource on the international law of cyber operations. He holds a doctorate in international law from the University of Oxford (Somerville College), an undergraduate degree in law from Charles University in Prague, and the Diploma of the Hague Academy of International Law.

**MARGARET MATERNA** is currently the Deputy Director of the National Security Law Division within the Office of the Judge Advocate General (OJAG), U.S. Navy. In this capacity, she provides long-term, strategic focus and continuity for the Division, and oversees the Division's efforts to support the Fleets and advise the Judge Advocate General of the Navy on the Law of the Sea, Law of Armed Conflict, and International Agreements. She previously served in President Obama's administration as Special Advisor to the Assistant Secretary of the Army for Installations, Energy & Environment, and as a fellow with the White House National Security Leaders program. Prior to her work at DoD, Margaret spent several years in the U.S. Senate as Legislative Counsel to two Senators. She also worked as Foreign Policy and Defense Legislative Analyst for Bloomberg Government, and as a legislative staffer for a Member of the U.S. House of Representatives.

**MICHAEL MEIER** serves as the senior civilian adviser to the Army Judge Advocate General on matters related to the Law of Armed Conflict. He advises on legal and policy issues involving the law of armed conflict, reviews proposed new weapons and weapons systems, serves as a member of the DoD Law of War Working Group. Mr. Meier previously served as an Attorney-Adviser with the Office of the Legal Adviser for Political-Military Affairs, U.S. Department of State, from June 2009 until June 2016. Mr. Meier also served almost 23 years as an Army Judge Advocate from 1986 until his retirement as a Colonel in August 2009 in a variety of positions.

**TOMOHIRO MIKANAGI** is Deputy Legal Advisor of the Japanese Ministry of Foreign Affairs, overseeing the interpretation and application of international law, including international law relating to cyberspace, and managing the submission of treaties to the Diet (Parliament). He studied international law in Cambridge, UK, from 1992 to 1994, and, after serving in Tokyo, NY and Beijing, he served in London as the Head of Political Section of the Japanese Embassy. While he was based in London, in 2018 and 2019 he co-organized workshops relating to international law and cyber security at the Lauterpacht Centre for International Law (LCIL) as a visiting fellow. His publications include *Establishing a Military Presence in a Disputed Territory: Interpretation of Article 2(3) and (4) of the UN Charter* (2018 ICLQ) and *Attribution of cyber operations: an international law perspective on the Park Jin Hyok case* (2020 CILJ).

**RAUL "PETE" PEDROZO** (Captain, USN, Ret.) is the Howard S. Levie Chair on the Law of Armed Conflict and Professor of International Law, U.S. Naval War College, Stockton Center for International Law. He also serves as one of two U.S. representatives to the International Group of Experts participating in the revision of the 1994 *San Remo Manual on International Law Applicable to Armed Conflicts at Sea*. Prior to assuming the Levie Chair, Captain Pedrozo was the



Principal Deputy Staff Judge Advocate, U.S. Indo-Pacific Command. Prior to his retirement from active duty after 34 years of service, he served in numerous positions advising senior military and civilian Defense officials, including as Special Assistant to the Under Secretary of Defense for Policy and senior legal advisor to Commander, U.S. Pacific Command. He has lectured extensively at military and civilian academic institutions and participated in numerous multilateral and bilateral negotiations, including the International Maritime Organization (Chairman of the IMO Working Group responsible for drafting the *Guidelines for the Suppression of Illegal Transport of Migrants by Sea* adopted by the IMO), Transnational Organized Crime Convention (lead U.S. negotiator for the maritime chapter to the Migrant Smuggling Protocol to the Convention), International Civil Aviation Organization, and US-PRC Military Maritime Consultative Agreement. CAPT Pedrozo has written extensively on maritime security and South China Sea issues, and is the co-author to *International Maritime Security Law* (Brill/Martinus Nijhoff Publishers, 2013), *The Free Sea: The American Fight for Freedom of Navigation* (United States Naval Institute, 2018), and the forthcoming, *Emerging Technology and the Law of the Sea* (Oxford University Press). He has an LLM (International & Comparative Law), Georgetown University Law Center and JD (Law), The Ohio State University College of Law.

**ANNA PETRIG** holds the Chair of International Law and Public Law at the University of Basel in Switzerland. She has a PhD in the field of the law of the sea and human rights law and an LL.M. from Harvard Law School. Anna is a member of the Bar of the Canton of Berne (Switzerland) and the New York State Bar (USA). Her broad legal experience includes work in private practice, the courts, and the Legal Division of the ICRC. Anna is the author of various monographs, notably pertaining to the law of the sea. She has provided expert advice and legal counsel on maritime-related matters to the Swiss Government, NGOs, and international organizations. She is currently involved in the International Maritime Organization's Working Group on Maritime Autonomous Surface Ship. Since 2019, Anna has served as Judge ad hoc for Switzerland on the International Tribunal for the Law of the Sea (ITLOS) in Cases 27 and 29.

**MARK PHELPS, AIR CDRE**, was called in 1994 and practiced at the independent Bar until commissioning into the RAF in 2001. Since joining the RAF, he has served in numerous roles both in the UK and overseas. Operationally he served as the legal advisor to the Special Ops Command Element in Afghanistan and was the chief legal advisor to the Operational HQ for Operation Unified Protector (Libya – Odyssey Dawn). Academically he has both a degree and a Masters in American Studies, a Masters in Defence Leadership and is now undertaking research for a PhD focusing on the legal, ethical and moral implications of autonomous warfare. He is married and they have three daughters.

**LI QIANG** is an Associate Professor of Law and the Director of the Military Law Institute at the School of Law, China University of Political Science and Law (CUPL). He is also the Deputy Secretary-General of the Beijing Military Law Society and serves as a member of an expert panel on lawfare for the Chinese PLA Air Force (2015-2020). He obtained a Ph.D. in law with a focus on international humanitarian law (IHL) from Renmin University of China in 2009. His research is mainly focused on basic principles of IHL, new means and methods of warfare, and the implementation of IHL in China.

**SASHA RADIN** is Director of Research and Publications at the Lieber Institute at West Point and Managing Editor of *Articles of War*. Previously, she worked for the International Committee for the Red Cross as the Managing Editor of the *Humanitarian Law and Policy* blog and digital content strategist for their Law and Policy Department. At the U.S. Naval War College Stockton Center, she was Editor-in-Chief of International Law Studies and Associate Director of Research. In addition to her international law experience, she has worked onsite in Belarus, Russia and Ukraine with trade unionists and political opposition leaders. Dr. Radin holds a PhD from Melbourne University Law School, an LL.M. in International Law from Amsterdam University, and a B.A. in Slavic Studies from Harvard University.

**PRZEMYSLAW ROGUSKI** is a Lecturer in Law at the Jagiellonian University in Kraków (Poland) and an expert on cybersecurity and international law at the Kościuszko Institute. Dr. Roguski's research focuses on the law of peacetime cyber operations and different aspects of international law relating to cybersecurity, ICT and internet governance. Previously, Przemysław has worked in private practice and as lecturer for the German Academic Exchange Service (DAAD). He holds law degrees from the University of Mainz (Germany), Trinity College Dublin (Ireland) and a PhD in international law from Jagiellonian University. His thesis on "Cyber Operations and International Law" received the Polish Ministry of Defense's "Marian Rejewski Prize."

**PAUL SCHARRE** is a Senior Fellow and Director of the Technology and National Security Program at the Center for a New American Security. He is the author of *Army of None: Autonomous Weapons and the Future of War*, which won the 2019 Colby Award and was one of Bill Gates' top 5 books of 2018. Dr. Scharre worked in the Office of the Secretary of Defense

in the Bush and Obama Administrations. He holds a PhD in War Studies from King's College London and is a former Army Ranger with multiple tours to Iraq and Afghanistan.

**ROY S. SCHÖNDORF** serves as Israel's Deputy Attorney General (International Law) since October 2013. In that capacity, Dr. Schöndorf provides legal counsel to Israel's government on all aspects of public international law, including its interpretation and application within Israel's legal system, as well as with respect to international litigation, various aspects of treaty negotiations and representation of the State in international forums.

Prior to his appointment as Deputy Attorney General, Dr. Schöndorf was the Director of the Department of Special International Affairs within the States Attorney's Office.

Before joining the Ministry of Justice, Dr. Schöndorf worked with the International Dispute Resolution Group at Debevoise & Plimpton LLP. He has also served as a legal advisor to Israeli delegations for peace negotiations with Syria, Lebanon, Jordan and the Palestinians and was a member of Israel's delegation in the negotiations for the establishment of the International Criminal Court. He earned a Doctorate of Juridical Sciences from New York University School of Law and holds degrees in law and economics from Tel Aviv University.

**YUVAL SHANY** is the Hersch Lauterpacht Chair in Public International Law at the Hebrew University of Jerusalem. He has also been serving as a Member (2013-2020) Chair (2018-2019) and Vice-Chair (2019-2020) of the Human Rights Committee in Geneva and as Vice-President for Research at the Israel Democracy Institute. He also heads the CyberLaw Program in the Federmann Cyber Security Research Centre at the Hebrew University of Jerusalem. Shany has degrees from Hebrew University (LL.B., 1995), NYU (LL.M., 1997) and the SOAS, the University of London (PhD, 2001). He specializes in general international law, the law and practice of international courts and tribunals, international human rights law, international humanitarian law and international law as applied in cyberspace.

**LYNNE A. TATRO** is the Senior Space Operations Law and Policy Advisor for Combined Force Space Component Command (CFSCC) and Space Operations Command – West (SpOC-W), Vandenberg Air Force Base, California. Ms. Tatro previously served as an active duty Air Force judge advocate for twenty years at wing, MAJCOM, HAF and CCMD positions. She served as a current operations judge advocate at the Combined Air Operations Center in Al Udeid and at the Air Operations Center in Ramstein, Germany. She also served as the Staff Judge Advocate while deployed at Bagram Air Base, Afghanistan and Manas Air Base, Kyrgyzstan. She is admitted to practice law before the Supreme Court of Florida and the Supreme Court of the United States.

**KIERAN R. J. TINKLER, SQUADRON LEADER**, is a Legal Officer within Directorate of Legal Services (Royal Air Force). He is currently a Military Professor at the Stockton Center for International Law, U.S. Naval War College. Immediately prior to this, he advised HQ Air Command on operational law issues. In 2016, he spent six months addressing dynamic targeting as part of Operation Inherent Resolve (ISIS campaign). Sqn Ldr Tinkler is a 'core expert' to the Woomera Manual on the International Law of Military Space Operations. His Ph.D. research, under the supervision of Professor Michael Schmitt, is focused on the application and interpretation of targeting law rules in the event that hostilities begin in, or extend to, outer space.

**MICHAEL S. TREACY** is a co-founder of Anabasis Technologies, seeking to make maritime activity transparent with artificial intelligence and satellite imagery. Michael is a physics graduate from Columbia, where he published papers in medical imaging. At Anabasis, Michael leads image processing development.

**ROBERT WILLIAMS** is the executive director of the Paul Tsai China Center and a senior research scholar and lecturer at Yale Law School. He is also a nonresident senior fellow at the Brookings Institution and a contributing editor at *Lawfare*. He focuses on U.S.-China relations and Chinese law and policy, with particular interests in technology policy and national security. His recent research and track II dialogues cover issues of cybersecurity, trade and investment policy, technology governance, and international law. Williams holds a B.A. from Vanderbilt University and a J.D. from Harvard Law School.

**IBEN YDE** is assistant professor in international and operational law at the Royal Danish Defence College (RDDC), Institute for Military Technology and Head of the newly established Center for Operational Law, RDDC. Her research focuses on the legal aspects of emerging technologies, with particular focus on AI and autonomous weapons systems.

Iben has served as legal advisor to the Admiral Danish Fleet and Royal Danish Defence Command and has years of experience with operational planning and several operational deployments behind her. She serves as advisor to the Danish MoD and various national and international projects on emerging technologies and teaches and publishes widely on topics related to the law of armed conflict and military technology.