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Education

- 1995. Ph.D. Science and Technology Studies, Virginia Tech, Blacksburg, Virginia
- 1976. M.A. History, University of Chicago, Chicago, Illinois
- 1973. M.A. American Studies, Stetson University, DeLand, Florida
- 1969. M.A. Chemistry, the Johns Hopkins University, Baltimore, Maryland
- 1967. B.S. Chemistry, *cum laude*, Stetson University, DeLand, Florida

Work Experience

July 2021 – present, Principal and CEO, Climate and Environmental Security, LLC, Louisville, CO.
Providing research and consulting services in climate change and environmental security. Recent and ongoing projects include:

- Collaborative Track 2 dialog on “Strategic Competition and Cooperation: Geopolitics and the Pursuit of Environmental Security,” Co-hosted with the Songyun Forum, Shanghai Institutes for International Strategic Studies. Quarterly discussions by international scholars of environmental security. (January 2023 – ongoing).
- Consulting as Senior Advisor, USINDOPACOM Climate Change Impact Program, Center for Excellence in Disaster Management, Honolulu, Hawaii. (July 2021 – June 2023).
- Research grant, “Mongolian Sand and Dust Storms’ Impacts on Asia-Pacific Environmental Security” Chinese Academy of Sciences, Northwest Eco-Environmental Research Institute. (April – September, 2022).
- Invited presentations on topics in climate change and environmental security, at Daniel K. Inouye Asia Pacific Center for Security Studies, International Desert Ecological Technology Alliance, Korean National Defense University (remote), and Institute for Future Engineering (IFENG, Tokyo).

Aug 2015-June 2021. Professor, College of Security Studies, Daniel K. Inouye Asia-Pacific Center for Security Studies, Honolulu, HI.

DKI APCSS is a U.S. Department of Defense regional center that addresses regional and global security issues, inviting military and civilian representatives of the United States and Asia-Pacific nations to its comprehensive program of executive education and workshops, both in Hawaii and throughout the Asia-Pacific region.

- Course manager. Responsible for curriculum design, planning and implementation.
 - Transnational Security Cooperation course – a one-week course serving 25-30 flag officer and ambassadorial-level executives from around the Indo-Pacific region (2018-present).
 - Comprehensive Crisis Management Course -- a five-week course serving some 120 mid-career, security practitioners and scholars from 35 nations (2017-18).
- Seminar leader and lecturer in topics related to strategic thinking and environmental security, with special interests in issues of climate change, sustainable development and issues of the global commons.
- Conducting research on topics in climate change and environmental security with an emphasis on collaborative research with colleagues in the Chinese Academy of Sciences Cold and Arid Regions Environmental and Engineering Research Institute, Lanzhou, PRC.

- Organizer & academic lead, international workshop joint with Lanzhou Branch, Chinese Academy of Sciences: “*Improving Science and Security Collaboration: Climate change and environmental security in High Asia.*” Beijing, China, November 3-6, 2015.
- Invited speaker, New Zealand National Security Conference, April; 5-6, 2018, and other venues.

Apr 2010 – Aug 2015. Associate Professor, College of Security Studies, Daniel K. Inouye Asia-Pacific Center for Security Studies, Honolulu, HI.

- Course manager, Senior Executive Orientation Course, serving flag officer and ambassadorial-level fellows from U.S. government agencies and Asia-Pacific nations (2013-14).
- Invited speaker, CAS Graduate School at CAREERI, Kubuqi International Desert Forum, APEC Climate Center, Bangladesh Institute for Peace and Security Studies, and other venues.
- Teaching and research as above.

Apr 2006—Dec 2008. Research Professor, Science, Technology and Policy, Division of Hydrologic Sciences, Desert Research Institute (DRI), Reno, NV.

- Principal investigator and program director for a 5-year, \$13 million infrastructure development program, entitled, “A Laboratory for Advanced Environmental Modeling and Visualization,” funded through the U.S. Army Research, Development and Engineering Command’s Simulation Training and Technology Center. Recruited faculty and staff. A 4-sided CAVE was placed in operation in late 2005. A 6-sided CAVE, the first in the Western U.S., was procured for installation in DRI’s new 40,000 square foot Computational Research and Visualization Building, funded by the State of Nevada to house the new laboratory. Managed seven scientific visualization demonstrations. Worked with the Nevada National Guard to develop an immersive VR training prototype for first responders to a radiological disaster.
- Worked with colleagues in six nations to establish a Global Collaboratory for Drylands and the City and in February 2008. Elected Executive Director of that organization. Chaired the foundational meeting to establish a Global Network of Drylands Research Institutes. Organized workshops and faculty exchange with the Chinese Academy of Sciences’ Cold and Arid Regions Environmental and Engineering Research Institute. Participated and presented papers on global research collaboration in international conferences in China, Israel, Egypt and the U.S.
- Principal investigator for an NSF-funded research project entitled, “The Emergence of State-sponsored R&D: Research Policy and Knowledge Production in a Federal System.”

Jan 2004 – Apr 2006. Vice President, Government and Business Relations (VPGBR), Desert Research Institute (DRI), Las Vegas, NV.

- Provided oversight and guidance for DRI’s technology transfer office (through 2007).
- President of DRI Research Parks, Ltd., with oversight of DRI’s research park and incubator initiatives. Secured a grant from the U.S. Department of Commerce in support of research park and incubator development.
- Provided staff support to the DRI Research Foundation’s Science and Technology Committee.
- Shared responsibilities for DRI’s relations with the U.S. Congress and federal government agencies, under the leadership of DRI’s President and Vice President for Research. Represented DRI before a variety of state and local organizations concerned with science and technology-based economic development.
- Served as DRI’s senior executive at its Las Vegas Campus.
- Secured approval of the Nevada Board of Regents for a new Center for Advanced Visualization, Computing and Modeling at DRI. Provided oversight for the Center while serving as P.I. on the Laboratory for Advanced Environmental Modeling and Visualization

January, 1997 – December, 2003. Director, Research Competitiveness Program (RCP), then Director, Science & Engineering Policy and Practice Group, (1999-2003), American Association for the Advancement of Science (AAAS), Washington, DC.

- Oversaw operations of four major projects:
 - The AAAS Science and Engineering Fellows Program which brings, each year, some one hundred Ph.D.-level scientists and engineers to Washington to work in Congressional offices, the White House and executive branch agencies;
 - The AAAS Center for Science, Technology and Congress which conducts a suite of activities to provide objective, non-partisan information to Congress on current science and technology issues;
 - The R&D Budget and Policy Program which analyzes R&D trends in the federal budget, providing authoritative analyses to the American science and technology community; and
 - The Research Competitiveness Program, which mobilizes the expertise of the national science and technology community to address science and policy problems related to improving research effectiveness and impacts on society.
- Founding director of the AAAS Research Competitiveness Program. Under a major grant from the National Science Foundation's (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR), RCP was established to provide resources and expertise to help states, universities, and research institutions improve their ability to conduct scientific and technological research. Between 1997 and 2000, this program conducted some sixty-five peer review and workshop projects, on-site at American universities and in support of state government agencies. As the period of the NSF Grant came to a close, led the reconfiguration of this program into the AAAS Research Competitiveness Service (RCS), a permanent AAAS activity, available to institutions in all states. By December 2003, RCS had completed a total of more than one hundred fifty projects. In addition to providing administrative oversight and guidance to RCS, I led about ten project teams per year.
- Chaired, organized, or participated in national symposia, meetings and conferences on topics related to science and technology policy.

May 1991 – December 2003. Faculty member and administrator, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

- May 1991 through April 1993, Assistant Director of the Biobased Materials Technology Development Center. Managed sponsored research and technology transfer activities in areas related to natural biopolymers and recyclable materials. Helped establish a Biomass Conversion Technology Demonstration Center to develop and demonstrate technologies for the conversion of waste materials to biopolymers.
- April 1993 through January 1995, Coordinator, Accessibility Research and Planning, reporting to the Associate Vice President, Personnel and Administrative Services. Served on the University Committee on ADA, and on its Executive Subcommittee. Chaired the university's Accessibility Equipment Task Force. Served as Ombudsman for members of the university community with disabilities and established an Accessibility Advisory Panel comprised of students, faculty and staff with disabilities. Prepared Virginia Tech's ADA Self Evaluation, and wrote an accessibility guide for faculty and staff. Also appointed a Senior Research Associate in the Center for Gerontology, working to secure and manage grants for a research program on technology for aging.
- February, 1995 to June 1997, Associate Professor of Science and Technology Studies, and Coordinator, STS Graduate Program at Northern Virginia Graduate Center (non-tenure track). Established a branch program of Virginia Tech's internationally known graduate program in Science and Technology Studies in the metropolitan Washington area. Responsible for curriculum development, recruiting students and adjunct faculty, and for program administration.

From May through December 1996, also served as Assistant Director of Virginia Tech's Northern Virginia Center. Responsibilities centered on building and facilitating relationships in support of our academic and research programs with firms and institutions in Northern Virginia.

- June 1997 through December 2003, Adjunct Professor of Science and Technology Studies, teaching introductory and advanced graduate-level courses in science and technology policy and in the history and philosophy of science and technology. Chaired or co-chaired two Ph.D. dissertation committees and three M.S. thesis committees.

November, 1989 -- April 1997. Consulting, as President of Virginia Technology Associates, Ltd. and as an Adjunct Staff Member of the Institute for Defense Analyses, Blacksburg, Virginia.

- Clients included the U.S. Architectural and Transportation Barriers Compliance Board (ATBCB), the U.S. Congress Office of Technology Assessment (OTA), Apple Computer, Inc., and, through the Institute for Defense Analyses, the Office of the Secretary of Defense.
- Major projects included co-editing the 1990 *Army Technology Base Master Plan* and the 1991 *Defense Critical Technologies Plan*; contributions to the DoD Environmental Technology Development Strategy; and work for the Army Environmental Policy Institute in the area of pollution prevention policy development.

November 1979 – December 1989. President, Applied Concepts Corporation, Winchester, Virginia.

- Founded and led this innovative technology assessment and development firm from a business idea to more than \$1.3 million in annual revenues (1987-89), with eighteen professional employees.
- Provided engineering, analytical and policy analysis services in the fields of defense, industrial automation and robotics, alternative energy systems, and technology and disability.
- Responsible for corporate direction and management, including full profit and loss responsibility. The firm showed a profit in every year but 1984. The firm formed and led teams of researchers from industry and academia to solve problems of new technology applications and technology transfer in areas where there were no ready-made or off-the-shelf solutions.
- Served as principal investigator for research and development programs in the areas of defense, technology and disability, innovation economics, and alternative energy. Clients included the U.S. Army, Air Force and Joint Logistics Commanders, NASA's Jet Propulsion Laboratory, the National Science Foundation, the U.S. Departments of Energy, Education, Defense and Commerce; the U.S. Architectural and Transportation Barriers Compliance Board, U.S. Metric Board, and the National Institute for Disability and Rehabilitation Research. Accomplishments included design, fabrication, and test of nation's first point-focusing solar industrial steam plant (1982); research leading to first national TDD-relay system (1984) and to the specification of standards for fire alarms for the deaf (1988); a determination of the impact of national tax policies on innovation in high technology business (1986), and of the extent of foreign dependency on high technology components in U.S. weapons systems (1986); and development of the first effective artillery-delivered propaganda round (1989).

1977-1979. Staff Member, then Associate Manager, BDM Corporation, McLean, Virginia.

- Participated in and led a variety of technological studies and analyses, including 1977 studies of defense against cruise missile systems, and photovoltaic systems' applications; 1978 projects in the societal impacts of nuclear waste disposal options, artillery interdiction modeling, and photovoltaics' manufacture; and 1979 analyses of solar thermal energy systems, and military logistics modeling.

Teaching Experience

College of Security Studies, Asia-Pacific Center for Security Studies (CSS-APCSS), 2010 – 2021.

APCSS provides executive education to educate, enable and connect government professionals in security fields from across the Asia-Pacific Region. As course Manager, for the Comprehensive Crisis Management Course (2017-18) and the Senior Executive Asia-Pacific Orientation Course (2013-14), I was responsible for curriculum development and management of these annual courses for mid-career and flag and ambassadorial rank officials. As seminar leader in courses for Advanced Security Cooperation, Comprehensive Crisis Management, and the Asia Pacific Orientation, I facilitated interactive learning by small, diverse groups of fellows from different countries across Asia and the Pacific (except North Korea), from civilian and military agencies and NGOs. I lectured and taught electives on topics of science, technology and security, including environmental security, climate change and space and the global commons.

Virginia Polytechnic Institute and State University, 1995 - 2003. Associate Professor, Science and Technology Studies. Adjunct Professor after June 1998. During the period 1995-1998, served as general advisor to approximately twenty STS graduate students each year at the Northern Virginia Graduate Center.

Courses taught:

STS/HIST 5205/6	Main Themes in the History of Science and Technology
STS/PHIL 5305/6	Main Themes in the Philosophy of Science and Technology
STS 5514	STS Research Methods
STS/PAPA 5614	Introduction to Science and Technology Policy.
STS/HIST 6234	Advanced Topics in the History of Science, Technology, and Medicine
STS/PHIL 6334	Advanced Topics in the Philosophy of Science and Technology
STS/PAPA 6664	Advanced Topics in Science and Technology Policy

Theses and dissertations supervised

(All completed theses and dissertations are available in electronic format from the Virginia Tech website at <http://scholar.lib.vt.edu/theses/>)

Laura DeNardis. Ph.D. 2006. *Technologies of Scarcity*. Committee Co-chair. Continued as committee member after 2004).

William Shields. Ph.D. Candidate. *Safety Features of American Automobiles, 1900-1960*. Ph.D. Graduated 2007. Committee Co-chair. Continued as committee member after 2004).

Victoria P. Friedensen. 1999. *Protest Space: A Study of Technology Choice, Perception of Risk, and Space Exploration*. Virginia Tech M.S. thesis. Committee Chair.

Ellen R. Wertman. 1999. *Electronic Preprint Distribution: A Case Study of Physicists and Chemists at the University of Maryland*. Virginia Tech M.S. thesis. Committee Chair.

Richard H. Smith II. 1998. *A Policy Framework for a National Nanotechnology Program*. Virginia Tech M.S. thesis. Committee Chair.

Cochise College, Sierra Vista, Arizona, 1976. Instructor, Department of History. Taught Introduction to American History as an adjunct instructor.

Stetson University 1972-73. Visiting Instructor, Department of Chemistry. Taught freshman chemistry and team-taught and developed the Honors Program Science Seminar with colleagues from the Physics and Biology Departments.

Johns Hopkins University, 1967-69. Graduate Teaching Assistant and Instructor, Department of Chemistry. Taught conference and laboratory sections of freshman chemistry and organic chemistry lab.

Military Service

Called to military service in 1969, while a doctoral candidate at Johns Hopkins University. Received a direct commission as 2nd lieutenant in the U.S. Army Reserve. Spent three years on active duty, principally as a strategic intelligence officer at LANDSOUTHEAST, a NATO Army Group headquarters in Izmir, Turkey, working with allied forces from Greece, Turkey, Italy and the U.K. Active in Army reserves 1972-1980. Assignments with the Defense Intelligence Agency, the Army Assistant Chief of Staff for Intelligence, the U.S. Army Intelligence Center & School, the Defense Intelligence School, and the 354th Civil Affairs Brigade. Received honorable discharge at the rank of captain, in 1980.

Current Membership in Professional Associations

- American Association for the Advancement of Science
- American Geophysical Union
- American Historical Association
- International Studies Association
- Sigma Xi. The Scientific Research Society

Professional Service

- Vice President, University of Hawaii Manoa Chapter, Sigma Xi. 2011-2015.
- Peer reviewer, *Land Degradation and Development*, *Environmental Management*, ongoing.
- Peer reviewer for proposals for the National Science Foundation in both SBIR and social science program areas, for the National Institute for Disability and Rehabilitation Research, and for the AAAS Research Competitiveness Program.
- Advisory Board, Kentucky NSF EPSCoR Program, 2004 – 2007.
- Member of the Board of Directors of Research Ventures, Inc., formed to hold stock on behalf of DRI and the University of Nevada, Reno, 2004-2008.
- Advisory Board, University of Nevada Las Vegas, Howard R. Hughes College of Engineering, 2004 – 6.
- Chair, Technology Transfer Special Interest Group, RESNA, 1989-1991. 1991 RESNA SIG Recognition Award.

University / College Service

- Curriculum Committee, College of Security Studies, APCSS, 2014 – present. Chair 2016-2018.
- Research and Travel Committee, APCSS 2012-2014; 2016-present.
- Faculty Advisor to the Visiting Scholar and Intern Programs, APCSS, 2015 – present.
- Faculty Screening Committee, 2015- 2016. Reviews & recommends applications for faculty positions.
- Faculty Promotion Committee, APCSS, 2013.
- Faculty Promotion Committee, DRI, 2006-2008.
- Faculty search committees, DRI, 2004-2007.
- DRI's representative to the Nevada Board of Regents' Research and Economic Development Committee, 2005-2006.

Current Research Interests

- Governance issues related to climate change and its impacts.
- Indo-Pacific climate and environmental security
- Barriers to interdisciplinary and international research collaboration
- Desertification in northeast Asia and its global impacts.

Selected Publications, Reports, and Presentations

a. Refereed or reviewed articles and reports

Hauger, J. Scott. 2024. “Competition and Collaboration in the Environmental Security Domain, *Journal of Indo-Pacific Affairs* 7 (2), pp. 44-67. <https://media.defense.gov/2024/Mar/11/2003410991/-1/-1/0/JIPA%200702%20MAR-APR%202024.PDF?source=GovD>

Hauger, J. Scott. 2022. Mongolian Sand and Dust Storms’ Impacts on Asia-Pacific Environmental Security. *Security Nexus* 23-2022 (November). https://dkiapcss.edu/nexus_articles/mongolian-sand-and-dust-storms-impacts-on-asia-pacific-environmental-security/

Hauger, J. Scott. 2022. The U.S. Government & Climate Security: History and Prospects, *Security Nexus*, (14 January). <https://apcss.org/the-u-s-government-climate-security-history-and-prospects/>

Hauger, J. Scott. 2016. Climate Change and the U.S. Security Sector: The Securitization of Climate Change, in *International Security Studies Vol 2, No 2* (Winter), pp. 88-108.

气候变化与美国国家安全部门：气候变化问题的安全化。(Climate Change and the U.S. Security Sector: The Securitization of Climate Change), Ma Jinjing, trans. in *International Security Studies* 2016 No. 3, pp. 90-113.

Hauger, J. Scott, Daniels, Michael and Saalman, Lora. 2014. Environmental security and governance at the water-energy nexus: Greenpeace in China and India. *Journal of Asian Security and International Affairs* 1:3 (December), pp. 235-261.

Zhou LH, Hauger JS, Liu N et al., 2014. Perceptions of climate change in China: The research and policy connection. *Sciences in Cold and Arid Regions*, 6(2), 89-98. DOI: 10:3724/SP.J.1226.2014.00089.

Liu N, Zhou L, Hauger JS. 2013. How Sustainable Is Government-Sponsored Desertification Rehabilitation in China? Behavior of Households to Changes in Environmental Policies. *PLoS ONE* 8(10): e77510. doi:10.1371/journal.pone.0077510

Hauger, J. Scott. 2010. “Technology Assessment.” In Priest, S.H., ed. 2010. *Encyclopedia of Science and Technology Communication*. SAGE, pp. 876-879.

Hauger, J. Scott. 2008. “Toward a socio-cognitive theory of innovation: A model of technology as practice.” In *The International Journal of Technology, Knowledge and Society, Vol 4*, pp. 205-214.

Hauger J.S. 2004. “From best science toward economic development: The evolution of NSF’s Experimental Program to Stimulate Competitive Research (EPSCoR).” *Economic Development Quarterly* 18:2 (May 2004), pp 97-112.

Hauger, J. S., Rigby, J. C., Safewright, M., and McAuley, W.J. 1996. Detectable warnings at curb ramps. *Journal of Visual Impairment and Blindness*. V. 90 (Nov-Dec), pp. 512-525.

Glasser, W. G., Hauger, J. S. and Wright, R. S. 1992. High Value-added chemicals from renewable resources, in Cundiff, John S., Ed. *Liquid Fuels from Renewable Resources: Proceedings of an Alternative Energy Conference*. St. Joseph, MI. American Society of Agricultural Engineers.

Hauger, J. S. 1991. The creation and innovation of electronic travel aids and reading machines, in *Technology and Disability*, 1:1, (Summer 1991), pp. 69-86.

Cordes, J. J., Watson, H. S., and Hauger, J. S. 1987. Effects of tax reform on high technology firms, in *National Tax Journal*, Vol. XL, No. 3, pp. 373 - 391.

b. Books edited

Hauger, J.S. and McEnaney, C., eds. 2000. *Strategies for Competitiveness in Academic Research*. Washington: AAAS.

c. Book Chapters

Hauger, J. Scott. 2022. "Chapter 10. Climate Security and the Pacific Island States," in Canyon, Deon, ed. 2022. *Blue Pacific Security Vol. 3: Strategic Competition and Security Cooperation in Oceania*, Honolulu: Asia-Pacific Center for Security Studies, pp. 126-145. <https://apcss.org/wp-content/uploads/2022/09/Blue-Pacific-Security-07-Hauger-ClimateSecurity-1.pdf>

Hauger, J. Scott. 2015. "Addressing climate change and enhancing environmental security in the Asia Pacific region." In Werrell, Caitlin. and Femia, Francisco,, eds. 2015. *The U.S. Asia-Pacific Rebalance, National Security and Climate Change*, Washington: The Center for Climate and Security (November), pp. 46-53. Available at: https://climateandsecurity.files.wordpress.com/2015/11/ccs_us_asia_pacific-rebalance_national-security-and-climate-change.pdf

Hauger, J. Scott. 2015. "Chapter 11. Climate Change Challenges to Security in the Pacific Islands Region and Opportunities for Cooperation to Manage the Threat," in Azizian, Rouben and Cramer, Carleton, eds, *Regionalism, Security & Cooperation in Oceania*, Honolulu: Asia-Pacific Center for Security Studies, pp. 147-160.

Hauger, J. Scott. 2013. "Foreword." In Manton, M. and Stevenson, L., eds. *Climate in Asia and the Pacific: Security, Society & Sustainability*. Springer, pp. xi-xii.

Hauger, J. Scott. 2012. "Chapter Two: Climate Change and Environmental Security in the Asia-Pacific Region: A Role for APEC?" In Azizian, Rouben and Lukin, Artyom, eds. 2012. *From APEC-2011 to APEC-2012: American and Russian Perspectives on Security and Cooperation in the Asia-Pacific*. Vladivostok: Far Eastern Federal University Press, pp. 33 – 45.

Hauger, J.S. 2012. "Climate change and environmental security in the Asia-Pacific region" in Watson, Virginia ed. 2012. *The Interface of Science, Technology & Security: Areas of Most Concern, Now and Ahead*. Honolulu: APCSS, pp. 67-80.

Hauger, J.S. 2000. "Chapter 4. Strategic Planning for Research Competitiveness," in Hauger, J.S. and McEnaney, C., eds. 2000. *Strategies for Competitiveness in Academic Research*. Washington: AAAS, pp.77-113.

Hauger, J. S. 2000. "Chapter 9: STS Education for Knowledge Professionals," in Chubin, Daryl E. and Kumar, David D., eds. 2000. *Science, Technology and Society: A Sourcebook on Research and Practice*. New York: Kluwer Academic, pp. 231-255.

d. Other papers and analytic reports

Hauger, J. Scott. 2018. Changing Climate and the U.S. Security Sector: The Desecuritization of Climate Change. Unpublished paper. Available on Research Gate. DOI: [10.13140/RG.2.2.22720.81923](https://doi.org/10.13140/RG.2.2.22720.81923)

Hauger, J. Scott 2018. Security implications of climate change for New Zealand and the Indo-Pacific region. *Line of Defence 1:8* (Winter), pp. 36-38. Available at: <http://defsecmedia.co.nz/data/documents/Line-of-Defence-Winter-2018.pdf>

Hauger, J.S. 2002. "Beyond the center: The role of regional governments and research universities in the new economy (The American experience)," *Proceedings of the Conference, The New Economy in Russia: Problems and Prospects* (December 10). Moscow State University, Higher School of Economics. May be found at www.neweco.ru/docs/conference/hauger.doc

Rich, R.H., Hauger, J.S., and Derrick, E.G., 1999. The role of the National Science Foundation in Supporting Advanced Network Infrastructure: Views of the research community. Report to NSF. May be found at [www.aaas.org/spp/rcp/netpolicy/reporth.htm].

Hauger, J. S, Rigby, J. C. and Johnstone, C. 1996. A Guide to Implementing ADAAG's Communications Provisions: Meeting the Needs of People with Speech or Hearing Impairments. Blacksburg, Virginia: Virginia Technology Associates.

White, R. H., Bell, J. P., Hauger, J. S., Nash, M. S., Roberson, M., Tai, A., and Ziemke, C. F. 1996. *A Survey of Dual-Use Issues*. IDA Paper P-3176. Alexandria, Virginia: Institute for Defense Analyses.

Riddell, F.R., Evans, K.A., and Hauger, J.S. 1996. Reducing the Life Cycle Cost of Future Army Materiel Acquisition by Good Environmental Design. IDA Document D-1824. Alexandria, Virginia. Institute for Defense Analyses.

Riddell, F., Kreis, J., and Hauger, J. 1995. DoD Environmental Technology Development Strategy. IDA Document D-1696. Alexandria, VA. Institute for Defense Analyses.

White, R. Stowsky, J. and Hauger, S., eds. 1995. Assessing the Economic and National Security Benefits from Publicly Funded Technology Investments: An IDA Round Table, IDA P-3138. Alexandria, VA: Institute for Defense Analyses.

Hauger, J. S., Hubbard, W., and Travis, D., Jr. 1995. A Guidebook for Achieving Accessible Programs at Virginia Tech. Blacksburg, VA: Virginia Polytechnic Institute and State University.

McAuley, W. J., Hauger, J. S., Safewright, M., and Rigby, J. C. 1995. The Detectable Warnings Project: Final Report of Research to the U.S. Architectural and Transportation Barriers Compliance Board. Blacksburg, VA: Virginia Polytechnic Institute and State University.

Riddell, F.R., Rubin, R., Hauger, J. S., Rigby, J. and Evans K. 1995. Avoiding Environmentally Hazardous Materials in the Army Acquisition Process. IDA Paper P-3081. Alexandria, VA. Institute for Defense Analyses.

Hauger, J.S. 1993. Ensuring the Accessibility of New Technologies for the Electronic Delivery of Federal Services for Persons with Disabilities. Final Report to the U.S. Congress, Office of Technology Assessment. Blacksburg, VA: Virginia Technology Associates, Ltd.

Hauger, J. S. 1992. *Preliminary Regulatory Impact Analysis for ADA Accessibility Guidelines for Buildings and Facilities*. Final Report to the U.S. Architectural and Transportation Barriers Compliance Board. Blacksburg, VA.: Virginia Technology Associates, Ltd., 1992

Office of the Secretary of Defense. 1991. *Defense Critical Technologies Plan, 1991*. Washington: Department of Defense. (Co-editor with R. White and F. Riddell).

U.S. Department of the Army. 1990. *Army Technology Base Master Plan, 1990*. Washington: Department of the Army.. (Co-editor with P. Richenbach and F. Riddell).

Hauger, J. S. and Rigby, J. C. 1989. *Auditory Alarms Project: Technical Paper*. Final report to the U.S. Architectural and Transportation Barriers Compliance Board. Winchester, VA: Applied Concepts Corp.

Hauger, J. S., ed. 1989. *A Comparison of Domestic and Selected Foreign Standards and Codes for Accessible Facilities*. Final Report to the U.S. Architectural and Transportation Barriers Compliance Board. Winchester, VA: Applied Concepts Corp.

Hauger, J. S., Rigby, J. C., et al. 1989. *MGRAD / UFAS Evaluation*. Final Report to U.S. Architectural and Transportation Barriers Compliance Board. Winchester, VA: Applied Concepts Corp.

Hauger, J. S. and Rigby, J. C., 1988. *Visual Signals Project: Modifications to Minimum Guidelines and Requirements for Accessible Design*. Final report to the U.S. Architectural and Transportation Barriers Compliance Board. Winchester, VA: Applied Concepts Corp.

Hauger, J. S. 1988. An Assessment of the State of the Art of Stirling Engines for DoD Applications. Report to the Institute for Defense Analysis. Winchester, VA: Applied Concepts Corp.

Hauger, J. S. 1986. *Alarms Documentation Project: Final Report*. Report to the U.S. Architectural and Transportation Barriers Compliance Board. Edinburg, VA: Applied Concepts Corp.

Hauger, J. S., Starns, J., et al. 1986. *A Study of the Effects of Foreign Dependency*. Final Report for the Joint Logistics Commanders of the United States. Edinburg, VA: Applied Concepts Corp.

Hauger, J. S. Cordes, J. J, and Watson, H. S. 1986. *An Analysis of Domestic and Foreign Tax Treatment of Innovation and High Technology Firms*. Final report for the National Science Foundation. Edinburg, VA: Applied Concepts Corp.

Hauger, J. S. et al. 1984. *Telecommunications Access with and within the Federal Government: A Consideration of Issues and Applications for Telecommunication Devices for Deaf Persons (TDDs)*. Final report for the U.S. Architectural and Transportation Barriers Compliance Board. Edinburg, VA: Applied Concepts Corp.

Hauger, J. S., Adams, W. A., and Uphoff, R. L. 1984. *USAF Mobile Electric Power and Facilities Electric Power System Analysis*. Dayton, Ohio: USAF Systems Command.

Hauger, J. S. and Pond, S. 1982. *Capitol Concrete Solar Industrial Process Heat Experiment: Final Report of Research to U.S. Department of Energy, Albuquerque Operations Office.* Herndon, VA: Applied Concepts Corp.

Hauger, J. S. and Simpson, J. S. 1981. *USAF Solar Thermal Applications Study.* Final Report to NASA Jet Propulsion Laboratory. Herndon, VA: Applied Concepts Corp.

e. Book Reviews

Simon, Bart, 2002. *Undead Science: Science Studies and the Afterlife of Cold Fusion.* New Brunswick, NJ: Rutgers University Press, in *Isis* 95:1 (March 2004), pp. 161-162.

Chiles, James R. 2001. *Inviting Disaster: Lessons from the Edge of Technology.* New York: HarperCollins Publishers, 2001, in *Isis* 93:4 (December 2002), pp. 763-764

Wade, Nicholas J. 1998. *A Natural History of Vision.* Cambridge: MIT Press, in *Isis* 90:4, (December 1999), pp. 795-796.

Degenaar, Marjolein. 1996. *Molyneux's Problem: Three Centuries of Discussion on the Perception of Forms.* Translated by Michael J. Collins. Boston: Kluwer Academic Publishers, in *Isis* 88:4, (December 1997), pp. 701-702.

f. Conferences and Symposia

2019. Lecture. "Framing Science and Policy for Desertification: From Combat to Neutrality" American Geophysical Union Annual Meeting. San Francisco. 10 December 2019. Abstract available at: <https://ui.adsabs.harvard.edu/abs/2019AGUFMGC23C..01H/abstract>

2016. Lecture. "Climate Change: Regional Issues and Opportunities." Facilitator, Joint APCSS workshop with the Philippine Department of Foreign Affairs, "The Philippine Agenda for its ASEAN Chairmanship and Beyond." Manila, June 7-9, 2016.

2015. Organizer and co-chair. "Improving Science and Security Collaboration: Climate Change and Environmental Security in High Asia." Joint APCSS workshop with the Chinese Academy of Sciences Lanzhou Branch. Beijing, November 3-6, 2015.

2014. Lecture. "Climate Change Challenges for the Pacific Islands Region & Opportunities and Mechanisms for Collaboration." Workshop: Regional Security Governance & Architecture in the Pacific Islands Region, Port Vila, Vanuatu. August 5.

2014. Lecture. "Opportunities in Climate Change and Environmental Security." Pacific Operational Science and Technology Conference. Honolulu, HI August 26.

2014. Lecture. "The Intersection of National Security and Climate Change: What Do Decision Makers Need to Know to Be Prepared?" Symposium hosted by the Henry M. Jackson Foundation and the Pacific Northwest National Laboratory. Seattle. June 4.

2014. Lecture. "Security Challenges: Environment," 21st Century Pacific Island Security Workshop, Honolulu, HI, May 8.

2013. Paper: “Desertification, Climate Change and Environmental Security in the Asia-Pacific Region.” 4th International Kubuqi Desert Forum, Ordos, China, August 4.

2013. Lecture. “Climate Change & Environmental Security,” Pacific Operational Science & Technology Conference, Honolulu, HI. March 5.

2012. Organizer and chair. “Science and Security: Adapting to Climate Change – the Case of Bangladesh,” Paper: “Science, Climate Change, and the Evolution of Security Policy in the Asia-Pacific Region.” AAAS Annual Meeting, Vancouver, Canada. February 19.

2011. Organizer and chair, “Science and Policy for Environmental Security in the Asia-Pacific Region,” Paper: “Science and Policy for Environmental Security in the Asia-Pacific Region.” AAAS Annual Meeting, Washington, DC. February 18.

2010. Co-organizer and chair, “The Origin and Evolution of Deserts.” AAAS Annual Meeting, Chicago, IL Feb 15.

2009. Organizer and chair, “Drylands and the City: Global Issues and Perspectives.” Paper: “A Global Collaboratory for Drylands and the City.” AAAS Annual Meeting, Boston, MA. Feb 16.

Hauger, J. Scott. 2008. “International Collaborations for Drylands Research: An Analytic Review.” Presented at Drylands, Deserts & Desertification – 2008, Sede Boquer, Israel. December 17. [Available at <http://idisk.mac.com/jscotthauger-Public>].

Kauneckis, D. and Hauger, J.S. 2008. “The changing Role of American States in Science and Technology Policy: Exploring the Strategic Use of State-level Organizations.” American Political Science Association Annual Meeting, Boston, MA (Aug 29).

Hauger, J. Scott; Tsunekawa, Atsushi; and Sun, Qingwei. 2008. "Global Collaboration to Address Global Problems: Trans-Pacific Collaboration on Global Change and Sustainable Living on Arid Lands." Presented at the AAAS Pacific Division Annual Meeting, Waimea, HI (June 18). [Available at <http://idisk.mac.com/jscotthauger-Public>].

Hauger, J. Scott. 2008. “A New Approach to Understanding Technological Knowledge & Innovation.” Presented at the AAAS Pacific Division Annual Meeting, Waimea, HI (June 16). [Available at <http://idisk.mac.com/jscotthauger-Public>].

2008. Organizer and chair, “Drylands and the City: Global Issues and Global Perspectives,” Symposium, AAAS Annual Meeting, Boston, MA. February 17.

Hauger, J. Scott. 2008. Toward a Socio-cognitive Theory of Innovation: A Model of Technology as Practice,” Presented at the Fourth International Conference on Technology, Knowledge and Society, Boston, MA. January 19. [Available at <http://idisk.mac.com/jscotthauger-Public>].

2007. Organizer and chair, “Drylands in Crisis: Science, Technology and Sustainable Living on Arid Lands,” Symposium, AAAS Annual Meeting, San Francisco, CA. February 18.

2006. Organizer and chair, “Challenges and Opportunities for Research on Global Desertification and the Reclamation of Arid Lands,” Symposium, AAAS Annual Meeting, St. Louis, MO. February 17.

2004. Co-organizer, “Sino-U.S. Workshop on Desert Environments and Desertification,” Chinese Academy of Sciences Cold and Arid Regions Environmental and Engineering Research Institute, Lanzhou, China, Oct 17 – 24.

2002. Organizer and chair. “Coping with Complexity: Managing the Academic Research Enterprise.” Symposium, AAAS Annual Meeting, Boston, MA. February 16.

2001. Organizer and Chair. “Executive Workshop on Academic Strategic Planning” Invitational Workshop for Provosts and Vice Presidents for Research of Emerging Universities. San Francisco, CA. February 20.

2001. Organizer and Co-chair. “Global Perspectives on Emerging Research Universities: Strategies for Achieving Research Competitiveness.” Symposium, *AAAS Annual Meeting*. San Francisco, CA. February 19.

1999. Program Organizer. *Strategies for Competing in the Main Stream*. AAAS Science Policy Conference. Coeur d’Alene, ID. October 1 – 3. Also Organizer and Chair of the First Plenary Session: “Pursuing Large Scale Proposals.”

1999. Organizer and Chair. *The Role of University Research in Innovation and Economic Development*. AAAS EPSCoR Leadership Development Conference. Biloxi, MS. May 10 – 11

1999. Organizer and Chair. “Bringing the Knowledge Economy Home: The Role of State and Local Governments.” Symposium, *Twenty-fourth Annual AAAS Colloquium on Science and Technology Policy*. Washington, D.C. April 15.

1999. Organizer and Co-chair. “Investing in Research: Distributed Science or Elite Science?” Symposium, AAAS Annual Meeting. Anaheim, CA. January 24.

1998 Program Organizer. *14th Annual NSF EPSCoR Conference: Engaging Industry*. Myrtle Beach, S.C. Also Organizer and Chair of the Third Plenary Session, “Working together for Public Support. Myrtle Beach, SC. November 8 – 10.

1998. Organizer and Chair. “The Art of Strategic Science and Technology Planning at the State Level.” Symposium, *Twenty-third Annual AAAS Colloquium on Science and Technology Policy*. Washington, D.C. April 30.

1997 Organizer and Chair. *Building Links between Academic Research and the Private Sector*. AAAS EPSCoR Leadership Development Conference. Burlington, Vermont. September 21 – 23

g. Other Invited Presentations

Institute for Future Engineering (IFENG,Tokyo). "Competition and Collaboration in Climate Space and the Environmental Security Domain." August 8, 2023.

International Desert Ecological Technology Alliance (IDETA). “*International Collaboration for Desertification, Climate Change and Technological Innovation: Addressing the Security Dimension in a Complex Eco-environmental System*.” 9 January 2023.

Asia Pacific Center for Security Studies. “Cooperation for Climate Security.” Comprehensive Security Cooperation course, 8 June 2022.

Asia Pacific Center for Security Studies. “Climate Science & Climate Security.” Comprehensive Security Cooperation course, 8 June 2022.

Asia Pacific Center for Security Studies. “Climate Science & Climate Security.” Indo-Pacific Orientation Course, 14 April 2022.

Asia Pacific Center for Security Studies. “Security Cooperation to Managing Emerging Threats in Environmental and Health Security: The Cases of Climate Change and Infectious Diseases.” Joint with Dr. Sebastian Kevany. Indo-Pacific Orientation Course, 14 April 2022.

IPIKU. Future Strategies for a Sustainable Micronesia: Resilience and Opportunity. “Climate Change and Security: A focus on Micronesia.” Webinar presentation 5 April 2022.

Korea National Defense University. ROK-Colombia-U.S. Joint Seminar. “The U.S. Government and Climate Security: History and Prospects.” Webinar presentation. 29 September 2021.

Thailand Strategic Studies Center, National Defence Studies Institute. “Environmental Security in the Mekong Subregion” Webinar presentation. 9 July 2020.

Chinese Academy of Sciences Graduate School. Cold and Arid Regions Environmental and Engineering Research Institute, Lanzhou, China. “Desertification, Climate Change and Environmental Security in the Indo-Asia-Pacific Region. 11 July 2017.

Myanmar National Defence College. Naypyidaw, Myanmar. “Climate Related Global Change: Challenges and Opportunities for Security Cooperation.” 18 August 2016.

Kubuqi International Desert Forum. Ordos, PRC. “Science, Climate Change & the Evolution of Security Policy in the Asia-Pacific Region.” 4 August 2013.

Chinese Academy of Sciences Graduate School. Cold and Arid Regions Environmental and Engineering Research Institute, Lanzhou, China. “Desertification, Climate Change and Security in the Asia-Pacific Region.” September 27, 2011.

Chinese Academy of Sciences Graduate School. Cold and Arid Regions Environmental and Engineering Research Institute, Lanzhou, China. “International Collaborations for Drylands Research” September 28, 2011.

Punahou School Global Leadership Institute, Honolulu, Hawaii. “Water: Dimensions of the Challenge in the Asia-Pacific Region.” July 30, 2010.

Moscow State University, Higher School of Economics. Conference: The New Economy in Russia: Problems and Prospects. “Beyond the Center: The Role of Regional Governments and Research Universities in the New Economy (The American Perspective). December 10, 2002.

Visiting scholar, University of South Dakota, Vermillion, SD, March 21, 2002. Lectures and classroom presentations on science policy practices and careers.

University of Puerto Rico. Sixth Workshop on Academic Strategic Planning. “Strategic Planning for Academic Excellence.” Ponce, PR. August 2, 2000.

University of Puerto Rico Annual EPSCoR Meeting. “Strategies for Becoming a Research I University: Some Thoughts and Some Directions. Las Coabras, PR. May 27, 2000.

15th Annual NSF EPSCoR National Conference. “The AAAS Research Competitiveness Program: Past, Present and Future.” Orange Beach, AL. November 2, 1999.

Chatauqua Alliance. Innovations in Science, Computing, and Grid Technology. “Research Competitiveness and Science Policy.” Lexington, KY. August 23, 1999.

North Dakota –South Dakota Joint Annual EPSCoR Meeting. “Evaluating the Competitiveness of Researchers in EPSCoR States.” Fargo, ND. September 10, 1999.