

Multidisciplinary Strengths

I am an active participant in technology, policy and educational organizations at the community, university, state and international levels. My work reflects expertise in project management, teaching, training, laboratory science, technological development, academic research, writing and editing. In support of these multidisciplinary skills, I am an excellent communicator in both written and verbal form, and have experience in public presentation and briefing. I demonstrate the ability to manage multiple projects simultaneously. My experiences have taught me the process of gathering information and building consensus between disciplines and across cultures, to deliver quality work product that meets stakeholder needs.

Education

Georgia Institute of Technology

Ph.D. Student, Sam Nunn School of International Affairs

2010-present

Research Assistant to Advisor: Adam Stulberg

Major: International Affairs, Science and Technology

SAIC Fellow 2010.

Research Facets: nuclear fuel cycle, crossover between civil and military uses of nuclear energy, nuclear safety and security, tacit knowledge acquisition for aspiring proliferants, nuclear governance, international organizations, strategic stability

Sample Coursework: Intl Security (INTA 6103), Energy and Security (INTA 8803AS), Special Problems: Nuclear Engr (NRE 8903), Science Tech and Intl Affairs (INTA 8000), Comparative Politics (INTA 6202), US Foreign Security Strategy (INTA 6111), Pol of the Southern Cone (INTA 8803KB), Special Topics: Nuclear Safeguards (NRE 4803), Env Politics (INTA 8803BL), Intl Relations Theory (INTA 6102), Empirical Research Methods (INTA 6003), Special Problems: Nuclear Detection (NRE 8903)

Georgia Institute of Technology

M.S. Analytical Chemistry

June, 2002

Research and Teaching Assistant to Advisor: Jiri Janata

Thesis: "A Label-free DNA Hybridization Sensor": This work focused on the fabrication and testing of a sensor designed to detect biological species via the electrochemical detection of ssDNA hybridization, using electrically-conducting polymers as the electrode substrate. It passed blind testing on DNA segments of malaria by the CDC.

Research Activities: electroanalytical chemistry, electrically conducting polymers, sensors and detectors

Sample Coursework: Biochem I (CHEM 6501), Mass Spec (CHEM 6281), Analytical Chem II (CHEM 6272), Fund of Policy (PUBP 6012), Env Analytical Chem (CHEM 6284), Analytical Chem I (CHEM 6271), Electroanalytical Chem (CHEM 6283), Political Economy of Development (INTA 3303)

Georgia Institute of Technology

B.S. Chemistry

December, 1999

Advisor: Jiri Janata

Research Activities: electroanalytical chemistry, electrically conducting polymers, proton conducting membranes, fuel cells, gas separation schemes, sensors and detectors

Sample Coursework: Special Problems: Electroanalytical Chem (CHEM 4901), Pacific Security Issues (INTA 3131), Special Problems: Advanced Instrumental Analysis (CHEM 4231), Synthetic Inorganic Chem (CHEM 4182), Arms Control and Tech (INTA 4220), Instrumental Analysis II (CHEM 4212), Advanced Inorganic Chem II (CHEM 3122), Instrumental Analysis I (CHEM 4211), Advanced Inorganic Chem I (CHEM 3121), Quantitative Analysis (CHEM 2211), Analytical Chem (CHEM 3211), Inorganic Chem (CHEM 3111)

Professional Experience

Training Consultant, Emergency Preparedness and Response

December, 2015

International Atomic Energy Agency

Served on a board of consultant advisors to the Chief of the Emergency Preparedness and Response Section of the IAEA, and other sections, with the goal of collaboratively developing metrics to measure the success of training within the Agency.

Managing Editor: Advanced Radiation Protection

July, 2015- present

School of Nuclear and Radiological Engineering, Georgia Institute of Technology

At the direction of the lead technical editor, I coordinate the contributions and output of nuclear physicists and engineers from across US national labs and universities, with duties including the technical editing and content coordination of this Nuclear Regulatory Commission- sponsored textbook. Estimated project completion: July 2016.

Research Assistant

August, 2010- present

Sam Nunn School of International Affairs, Georgia Institute of Technology

At the direction of my advisor, I research and refine concepts in international organization, energy, strategic stability, and nonproliferation, with duties that include writing, editing and teaching.

Operations Officer for the Operations Support Center- IFE14

November- December, 2014

Comprehensive Nuclear Test Ban Treaty Organization, Vienna, Austria

I serve as a rostered inspector on the OSI team, as the Operations Officer for the Operation Support Center (OSC). OSC is the link between Vienna and the OSI Inspection Team as it operates in an Inspection Area (in this case, Dead Sea, Jordan), and is responsible for logistical aid, advice, data, reporting, and media throughput. As OpsO, I coordinated OSC activities during the Integrated Field Exercise 2014- the largest exercise ever conducted by the CTBTO.

Science and Technology Consultant for OSI Training

February, 2013- August, 2014

Comprehensive Nuclear Test Ban Treaty Organization, Vienna, Austria

I developed technical training for the OSI team, and managed all aspects of training delivery. I coordinated internal and external subject matter experts, administrative staff and inspectors throughout the six-month training development cycle, and through delivery. I evaluated training, and produced Technical Papers to appraise CTBTO oversight bodies of training activities, outcomes and lessons learned. I gained experience in assessing terms of reference for contributions in kind from States Parties. I liaised closely with the surrogate inspectors, particularly the radionuclide (RN) subteam, and gained extensive experience operating in multicultural environments. Specific examples of training development and coordination include:

- **Integrated Field Exercise 2014 (IFE14) Preparatory Training**

June, 2014

Comprehensive Test Ban Treaty Organization (CTBTO). Guntramsdorf and Baden, Vienna

Designed, coordinated, delivered and managed OSI training for over 100 inspectors and exercise participants on equipment and processes to be used in the Integrated Field Exercise 2014 - the largest exercise ever conducted by the CTBTO.

- **Radionuclide/Noble Gas Techniques Equipment Training**

May, 2014

CTBTO. Guntramsdorf, Vienna

Designed, coordinated and managed OSI training for 20 inspectors from the radionuclide/noble gas (RN/NG) subteam on equipment to be used in the upcoming IFE14.

- **Airborne Technique Skills Training**

September, 2013

CTBTO. Catania, Italy

Designed, coordinated and managed OSI training for 10 inspectors focused on the planning and execution of airborne surveys, using techniques (gamma spec, electromagnetic survey, and visual observation) approved for use within treaty guidelines.

Center for Nonproliferation Studies, Monterey Institute for International Studies

This US State Department-funded grant engaged high school students in the US and Russia, educating them in nuclear safety. I served as the evaluator for student project output, and a consultant for program development.

Editor: Principles of Chemical Sensors**2006-2009**

Dr. Jiri Janata, Atlanta, GA and Springer Scientific Publishing, New York, NY

I served as sole editor of this 2nd edition text, with duties including derivation of equations, restructuring of existing text, and development of new text and content.

Department Head of Science Publications**2005-2008**

American Book Company, Atlanta, GA

I developed and coordinated the science curriculum for a growing test preparation company. Duties included the investigation of state educational standards; text writing and test development aligned to those standards for grades 3-12; management of writing, graphic, and copy editing staff within my department; and development of production timetables aligned with state testing schedules. Twenty-six sole or lead authorship publications, as well as online content and peripherals, over 2.5 years.

Assistant Editor: Radioanalytical Chemistry**2001-2007**

Dr. Bernd Kahn (Georgia Tech Research Institute) and Springer Scientific Publishing New York, NY

Under the managing editor's supervision, I coordinated the contributions and output of a board of radiochemists from across US national labs and universities, with duties including the partial authorship, technical editing and content coordination of the National Nuclear Security Agency-sponsored textbooks Radioanalytical Chemistry (2007) and Radioanalytical Chemistry Laboratory Manual (2007). Also assisted in the preparation of NCRP 64-22, Environmental Monitoring and Surveillance, the National Council on Radiation Protection and Measurements' guide to environmentally sound practice for industries that maintain nuclear stock.

Teaching Experience

Instructor- Sam Nunn School of International Affairs, Georgia Tech

INTA 4903 – Independent Research, Modeling a Treaty

Summer and Fall Semester 2015

Managed undergraduate researchers investigating the information flows between a Treaty Organization and the States Party to the Treaty. Emphasized web scraping and text extraction and analysis techniques.

INTA 3102 – The Problem of Proliferation

Fall Semester 2014

This class reviews the technology and history of WMD in the 20th and 21st centuries, including chemical, biological, radiological and nuclear weapons, their research, acquisition and use by states and groups; the issues attendant to their proliferation; and the mechanisms by which states, regions, and the international community have sought to halt their spread.

INTA8903/NRE 8903- CTBT Policy and Technology

Fall Semester, 2012 & 2013

This class examined the impact of technology on treaty verification, particularly as it relates to the Comprehensive Nuclear-Test Ban Treaty. We examined the ways in which science and technology affected the negotiation of the treaty over its history, and how it is affecting the treaty's ratification today.

INTA 2040- Science, Technology and International Affairs-

Fall 2012 and Spring 2015

This class covered the emergence and ongoing prominence of science and technology as drivers of domestic policy and international affairs. Using the science and technology aspects of infectious disease, terrorism and climate change, as well as the broader areas of nuclear technology, economic development and science and technology education, this class examined how science and technology affect state relations, and *vice versa*.

Teaching Assistantships

Sam Nunn School of International Affairs, Georgia Tech

INTA 2030 International Ethics

Summer and Fall Semester, 2011

School of Chemistry and Biochemistry, Georgia Tech

CHEM 4211 Instrumental Analysis

Fall and Spring Semester, 2001

Invited Academic Lectures, Panels and Posters

"CTBTO as a Teaching Tool"

June, 2015

At: 2015 Science and Technology Conference

Sponsored by the Comprehensive Nuclear Test Ban Treaty Organization, Hofburg Palace, Vienna, Austria

"Nuclear Science in International Relations"

Fall, 2012, 2014 and 2015

In: Scientific Perspectives on Global Problems, Professor Margo Alexander

Georgia State University

"The Evolution of Global Nuclear Governance."

Fall 2012 and 2014

In: Nuclear Safeguards, NRE 4803, Professor Nolan Hertel

Georgia Institute of Technology

"CTBTO as a Teaching Tool"

November, 2013

At: International Workshop on Disarmament and Nonproliferation Education and Capacity Development

Sponsored by the Organisation for the Prohibition of Chemical Weapons (OPCW) and the Vienna Center for Non-Proliferation and Disarmament (VCDNP), Vienna, Austria

"CTBTO as a Teaching Tool"

September, 2013

At: OPCW Education and Outreach Conference

Sponsored by the OPCW, The Hague, The Netherlands

"History of Nuclear Weapons and Nonproliferation."

Fall, 2012

In: Environmental Analytical Chemistry, CHEM 6284, Professor Jiri Janata

Georgia Institute of Technology

Training and Professional Meetings

Workshop-22 <i>CTBTO, Tel Aviv, Israel and Vienna, Austria</i> Lessons Learned from IFE14 and Development of the Path Forward for CTBTO.	March and June, 2015
On-Site (OSI) Inspector Training, Operations Officer Post <i>CTBTO, Vienna, Austria</i>	September, 2014
Union of Concerned Scientists (UCS) Professional Meeting on Science and World Affairs <i>Rome, Italy</i> Conference aimed at encouraging exchange amongst scientists with an interest in arms control, non-proliferation and disarmament.	July, 2013
OSI Training for Build-Up Exercise III, OSC Post <i>CTBTO, Vienna, Austria</i>	March, 2013
OSI Leadership Table Top Exercises <i>CTBTO, Vienna, Austria</i>	November, 2012
Public Policy and Nuclear Threats Training Program (PPNT) <i>University of CA San Diego. Institute on Global Conflict and Cooperation (IGCC)</i> Annual three-week program covering important issues in nuclear strategy and policy, focused on providing a firm understanding of the science and technology that supports the policy.	August, 2012
UCS Summer Symposium on Science and World Affairs <i>Princeton University</i> International conference aimed at identifying scientists with an interest in arms control, non-proliferation and disarmament and encouraging their research. Presentation: "Transferring nuclear tacit knowledge through state-directed organizational structures."	July, 2012
OSI Logistics and Administration Table Top Exercises <i>CTBTO, Vienna, Austria</i>	June, 2012
OSI Radiation Health and Safety Training <i>CTBTO, Vienna, Austria</i>	May, 2012
OSI Logistics and Administration Experts Meeting <i>CTBTO, Vienna, Austria</i>	March, 2012
CTBT Advanced Science Course <i>CTBTO, Vienna, Austria</i> Two –week certificate course on the Science and Political Significance of the CTBT, entitled "Strengthening Verification, Enhancing Security, Advanced Course."	November, 2011
CTBT Policy Introductory Course <i>CTBTO, online streaming through the Capacity Development Initiative</i> One –week certificate course on the Science and Political Significance of the CTBT, entitled Strengthening Verification, Enhancing Security.	September, 2011
International Safeguards Policy and Information Analysis <i>Center for Nonproliferation Studies at the Monterey Institute for International Studies (MIIIS). Monterey, CA</i> One –week certificate course, covering the concepts, effectiveness and limitations of the IAEA safeguards system, as well as issues specific to safeguards agreements, such as state-level safeguards, material accounting and surveillance.	May, 2011
Nuclear Safeguards Program Oak Ridge National Laboratory (ORNL). Oak Ridge, TN. One –week certificate course covering nondestructive assay techniques for international safeguards. Training in gamma ray detection of 235U, as well as gamma and neutron detection of other isotopes. Situations simulated included holdup analysis, search-and-identify and standard NDA techniques.	March, 2011

Publications

- Thompson, L.** (2008) *Passing the North Carolina EOCT in Chemistry*. American Book Company.*
- Thompson, L.** and Gunter, M. (2008) *Mastering the GA 5th Grade CRCT in Science*. American Book Company.*
- Thompson, L.** and Gunter, M. (2007) *Mastering the GA 8th Grade CRCT in Science*. American Book Company.* Kahn, B., Rosson, R. and **Thompson, L.** (2007) Applied Radioanalytical Chemistry. Chapter 6 in: *Radioanalytical Chemistry*, Ed. Bernd Kahn. Springer: New York.
- Thompson, L.**, Greenlaw, P., Selvig, L. and Inn, K. (2007) Quality Assurance. Chapter 11 in: *Radioanalytical Chemistry*, Ed. Bernd Kahn. Springer: New York.
- Wickman, A., Schlumper, P., Murphy, G. and **Thompson, L.** (2007) Laboratory Safety. Chapter 14 in: *Radioanalytical Chemistry*, Ed. Bernd Kahn. Springer: New York.
- Thompson, L.**, Kowalik, J., Josowicz, M. and Janata, J. (2003). Label-Free DNA Hybridization Probe Based on a Conducting Polymer *J. Am. Chem. Soc.* 125 (2). DOI: 10.1021/ja027929z
- Li, G., Polk, B., **Meazell, L.A.** and Hatchett, D.(2000) ISE Analysis of Hydrogen Sulfide in Cigarette Smoke. *J. Chem. Educ.*, 2000, 77 (8). DOI: 10.1021/ed077p104

* For brevity, only select American Book Company (ABC) references are included. Total of 26 ABC publications of primary authorship.

NOTE: All listed publications (**in bold**) were published under a maiden (**Thompson**) or prior (**Meazell**) surname.

Conference Papers

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| International Studies Association (ISA) Annual Conference. San Diego , CA. | April, 2013 |
| (Presented Paper (sole author): <i>Mechanisms of the Transfer of Tacit Knowledge Intensive Steps in the Nuclear Fuel Cycle.</i>) | |
| Midwest Political Science Association (MPSA) Annual Conference. Chicago, IL | April, 2013 |
| (Contributed Paper (presented by co-author): <i>The Broader Implications of CTBT Verification Mechanisms</i>) | |
| Public Policy, Nuclear Threats (PPNT) Winter Conference. Washington, D.C. | March, 2013 |
| (Presented Paper (sole author): The CTBT Verification Regime.) | |

Languages

English – native language
Spanish –beginner
German – beginner

Memberships

American Chemical Society (ACS) (since 2000)
International Studies Association (since 2010)
American Nuclear Society (ANS) (2011-present)
World Affairs Council (WAC) Atlanta (2011-present)
Daisy Alliance, Board Member (2011-present)
Institute of Nuclear Materials Management (INMM) (2012 – present)
Institute Network of Emerging Nuclear Specialists (2013 -present)

Personal Experience

Sample Volunteerism

Guest Instructor- Science Laboratory

2008-2012

Vanderlyn Elementary/Dunwoody Elementary; Atlanta, GA

Developed and taught a standards-aligned laboratory series for grades K-4. The content is designed to complement the state GPS science standards by highlighting features of infrastructure (e.g. wastewater treatment through a filtration experiment), energy (e.g., the role of water in power generation through a thermal transfer lab on heat capacity) and environment (e.g., an oil spill cleanup through a lab examining solubility and water surface tension) that can be addressed through hands-on laboratory instruction using common materials.

Laboratory Instructor and Docent– “Marie Curie: Women in Discovery”

March, 2000

Georgia Institute of Technology

Served as an organizer for the teaching component of the exhibit, as a docent for the exhibit itself and as a classroom and lab instructor for the visiting students.

Family

My husband and I have four boys, ages 14, 13, 11 and 9. We are frequent participants in the affairs of our community and church, and active participants in a variety of social and political initiatives.