

TIE Venture Grants Final Report

LEAD PRINCIPAL INVESTIGATOR:

| Name | Email | Phone |
|---------------------------|------------------------|--------------|
| Prof. Paul Arthur Berkman | paul.berkman@tufts.edu | 617-627-6959 |

CO-INVESTIGATORS:

(please provide name, school, and primary department, as well as all institutional and academic affiliations, for each project contributor)

| Name | Title | School/Institute/Department |
|-------------------------------|--|---|
| Prof. Abi Williams | Director / Professor Practice of | Institute for Global Leadership / Fletcher |
| | International Politics | School of Law and Diplomacy |
| Prof. Kelly Sims Gallagher | Director / Professor of Energy and Environmental Policy | Center for International Environment and Resource Policy / Fletcher School of Law and Diplomacy |

PROJECT TITLE: SCIENCE DIPLOMACY MINI-SYMPOSIUM

(Please answer the following sections, not to exceed 3 single spaced pages in 12pt Times Roman font, excluding pictures)

1. SUMMARY OF ACCOMPLISHMENTS:

(please describe the work that was accomplished)

The work accomplished fits into three phases:

Pre-Symposium

- Coordinate with initial Tufts faculty interested in science diplomacy
- Develop and disseminate questionnaire to assess education and research activities at Tufts with regard to the <u>17 United Nations Sustainable Development Goals</u> (SDG) at global-local scales

Mini-Symposium (15 May 2018; 12:00-16:00; Behrakis Auditorium, Jaharis Building, 150 Harrison Avenue, Boston, MA 02111)

- Provide venue for initial presentations from Tufts faculty relating to science diplomacy
- Facilitate dialogues about science diplomacy among Tufts faculty and audience

Post-Symposium

- Continue dialogue with Tufts faculty, staff and students regarding science diplomacy
- Coordinate with interested Tufts faculty to submit a letter-of-intent (please see attached) to the Vice-Provost for Research (OVPR) for the internal competition at Tufts regarding the annual National Science Foundation Research Traineeship (NRT) call
- The submitted OVPR letter-of-intent regarding *Research Enhancement with Science Diplomacy* was approved (please see attached) to go forward with the NRT submissions with the following timeline: Letter of Intent Window (6 November 2018 6 December 2018) and Full Proposal Deadline (6 February 2019)



2. DEVIATIONS OR EXTENSIONS:

(please describe any significant deviations from or extensions to the original project proposal)

None

3. OUTCOMES AND IMPACTS:

(please provide quantifiable figures, if available, or other narrative about the project achievements)

Pre-Symposium

• The survey of SDG activities at Tufts was created, but sample size was too small to reveal and meaningful results

Mini-Symposium

There were nine (9) participants, including Tufts faculty and researchers as well as representation from the Science and Technology Diplomatic Circle (S&TDC) of Boston consulates participating in a 4-hour dialogue.

Post-Symposium

Participants from the mini-symposium are now collaborating on a NRT proposal, with approval of Tufts OVPR to proceed, based on the earlier letter-of-intent (see above).

4. NEXT STEPS:

(please describe any planned or suggested follow-on activities identified through the project as beneficial next steps)

Next steps involve planning, development and submission of the NRT proposal (see above).

5. SUPPLEMENTAL MATERIALS:

(please provide pictures captured during the project and attach or share weblinks for any materials produced)

Science Diplomacy Mini-Symposium – Website

Introduction:

[https://sites.tufts.edu/sciencediplomacy/research/theory-practice/science-diplomacy-minisymposium-summary/] – Information about the first Science-Diplomacy Mini-Symposium at Tufts University on 15 May 2018, co-convened by the Science Diplomacy Center, Institute for Global Leadership and Center for International Environment and Resource Policy.

Registration:

[https://sites.tufts.edu/sciencediplomacy/research/theory-practice/scidip-mini-symposium-survey/] Registration and accompanying survey: Please check THREE (or less) of the following SDGs that are MOST relevant to your research and education activities. If your activities do not fall within any of these categories, please feel free to leave boxes unchecked and to move to the next question.



Slides:

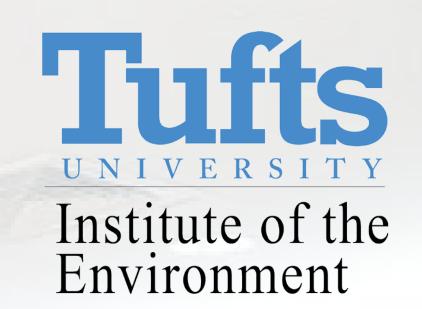
[https://sites.tufts.edu/sciencediplomacy/research/theory-practice/science-diplomacy-mini-symposium-slides/] – Presentations from speakers at the Science Diplomacy Mini-Symposium can be downloaded from links.

Agenda:

[https://sites.tufts.edu/sciencediplomacy/research/theory-practice/science-diplomacy-mini-symposium-agenda/] — Tuesday 15 May, 2018 / 12:00-16:00 / Behrakis Auditorium, Jaharis Building, 150 Harrison Avenue, Boston, MA 02111 — please see attached flyer







The Fletcher School • Tufts University

Science Diplomacy Mini-Symposium

PROGRAM

| 12:00 – 13:00 | Registration and Light Lunch Jaharis Building Lobby |
|---------------|---|
| 13:00 – 13:05 | Welcome & Remarks Prof. Diana Chigas, Senior International Officer & Associate Provost, Tufts University |
| 13:05 – 13:15 | The Science & Technology Diplomatic Circle of Boston (S&TDC) Ms. Patricia Gruver, Québec Government (representing Canada as S&TDC co-Chair) |
| 13:15 – 13:35 | Science Diplomacy Center (SDC): An Overview Prof. Paul Arthur Berkman, Science Diplomacy Center |
| 13:35 – 13:55 | Science Training Encouraging Peace - Graduate Training Program Dr. Allen Taylor, USDA Human Nutrition Research Center on Aging |
| 13:55 – 14:15 | Building Inclusive Dialogue on Divisive Science Issues: A Civic Science Approach Dr. Jonathan Garlick, Sackler School of Biomedical Sciences |
| 14:15 – 14:35 | Advancing Global Disaster Resilience Through International Scientific Collaboration Dr. Katia Kontar, Science Diplomacy Center |
| 14:35 – 14:55 | Water & Sanitation Interventions in Low-Income and Emergency Contexts Prof. Daniele Lantagne, Civil and Environmental Engineering |
| 14:55 – 14:15 | The American Offshore Wind Industry: Status Update Prof. Eric Hines, Civil and Environmental Engineering |
| 15:15 – 15:35 | Climate Policy in Practice: What Works, What Doesn't, and Why? Prof. Kelly Gallagher, Center for International Environment and Resource Policy |
| 15:35 – 16:00 | Open discussion: Moving the Science Diplomacy Center Forward Prof. Paul Arthur Berkman, Dr. Jean-Christophe Mauduit & Ms. Molly Douglas |





Berkman, Paul A

From: Berkman, Paul A

Sent: Tuesday, September 11, 2018 5:36 PM

To: Tufts Limited Submissions

Cc: Abriola, Linda M; Garlick, Jonathan A.; Lantagne, Daniele Susan; Sunter, Deborah; Taylor, Allen; Williams,

Abiodun; Douglas, Molly B.; Dalby, Anna; Lewis, Susan E.; Shakked, Nitsan; Simpson, Gregory; Smith, Ruth;

Berkman, Paul A

Subject: RE: NSF Research Traineeship (NRT) - Letter of Intent - Research Enhancement with Science Diplomacy

Importance: High

Follow Up Flag: Follow up Flag Status: Flagged

Dear Limited Submissions Teams:

Thank you for your excellent message.

On behalf of my collaborators – identified and to come – I am excited to proceed in an international, interdisciplinary and inclusive (holistic) manner at Tufts to build a Science, Technology, Innovation (STI) ecosystem in Boston as a working prototype for training science diplomacy at global-local levels within a major city.

I look forward to next steps on this shared journey with informed decision-making for the benefit of all on Earth across generations.

With lifelong passion,

Paul

PROF. PAUL ARTHUR BERKMAN

Director, Science Diplomacy Center Professor of Practice in Science Diplomacy Fletcher School of Law and Diplomacy Tufts University 160 Packard Avenue, Medford MA 02155 Office: +1-617-627-6959

Cell: +1-617-902-8361
Email: paul.berkman@tufts.edu
http://sites.tufts.edu/sciencediplomacy/

www.scidiplo.org

www.panarcticoptions.org

<u>Science Diplomacy: Antarctica, Science and the Governance of International Spaces</u> (2011), available from the Smithsonian Institution (https://repository.si.edu/handle/10088/16154), celebrating the first fifty years of the 1959 *Antarctic Treaty* at the 2009 Antarctic Treaty Summit in "the interests of science and the progress of all mankind" (www.atsummit50.aq).

From: Tufts Limited Submissions

Sent: Tuesday, September 11, 2018 3:59 PM **To:** Berkman, Paul A <Paul.Berkman@tufts.edu>

Cc: Abriola, Linda M <Linda.Abriola@tufts.edu>; Garlick, Jonathan A. <Jonathan.Garlick@tufts.edu>; Lantagne, Daniele Susan <Daniele.Lantagne@tufts.edu>; Sunter, Deborah <Deborah.Sunter@tufts.edu>; Taylor, Allen <allen.taylor@tufts.edu>; Williams, Abiodun <Abiodun.Williams@tufts.edu>; Douglas, Molly B. <Molly_B.Douglas@tufts.edu>; Dalby, Anna <Anna.Dalby@tufts.edu>; Lewis, Susan E. <Susan.Lewis@tufts.edu>; Shakked, Nitsan <Nitsan.Shakked@tufts.edu>; Simpson, Gregory <Gregory.Simpson@tufts.edu>; Smith, Ruth <Ruth.Smith@tufts.edu>

Subject: Re: NSF Research Traineeship (NRT) - Letter of Intent - Research Enhancement with Science Diplomacy

Dear Paul and team,

I am pleased to inform you that you have been selected to move forward with the NSF NRT opportunity (found here: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505015). Please work with your assigned research administrator in your school (I've cc'd Greg Simpson here) on this opportunity. Additionally, please include this email with your application as an indication of your ability to apply for this limited submission opportunity.

Please let us know if you have any questions, and we wish you the very best of luck on your application!

Best regards,

The Limited Submissions Team

From: "Berkman, Paul A" < Paul.Berkman@tufts.edu>

Date: Monday, September 3, 2018 at 11:19 PM

To: Tufts Limited Submissions < limitedsubmissions@tufts.edu>

Cc: "Abriola, Linda M" <<u>Linda.Abriola@tufts.edu</u>>, "Garlick, Jonathan A." <<u>Jonathan.Garlick@tufts.edu</u>>, "Lantagne, Daniele Susan" <<u>Daniele.Lantagne@tufts.edu</u>>, "Sunter, Deborah" <<u>Deborah.Sunter@tufts.edu</u>>, "Taylor, Allen" <<u>allen.taylor@tufts.edu</u>>, "Williams, Abiodun" <<u>Abiodun.Williams@tufts.edu</u>>, "Douglas, Molly B."

<<u>Molly B.Douglas@tufts.edu</u>>, "Dalby, Anna" <<u>Anna.Dalby@tufts.edu</u>>, "Lewis, Susan E." <<u>Susan.Lewis@tufts.edu</u>>, "Shakked, Nitsan" <Nitsan.Shakked@tufts.edu>, "Berkman, Paul A" <Paul.Berkman@tufts.edu>

Subject: NSF Research Traineeship (NRT) - Letter of Intent - Research Enhancement with Science Diplomacy

Hello,

As described in the attached announcement, please find below the email-of-intent details to submit a proposal for the NSF Research Traineeship (NRT) regarding *Research Enhancement with Science Diplomacy*.

1. Name of the Solicitation:

National Science Foundation Research Traineeship Program (NRT)

2. Name of the Principal Investigator and any co-PIs (at Tufts):

Prof. Paul Arthur Berkman – Principal Investigator (PI)

Science Diplomacy Center; Fletcher School of Law and Diplomacy

Prof. Linda Abriola - co-PI

Tufts Institute of the Environment; Civil and Environmental Engineering; Chemical and Biological Engineering; School of Engineering

Prof. Jonathan Garlick – co-PI

School of Dental Medicine; School of Medicine; School of Engineering; Sackler School of Graduate Biomedical Sciences; Tisch College of Civic Life

Prof. Daniele Lantagne – co-PI

Department of Civil and Environmental Engineering; School of Engineering

Prof. Deborah Sunter - co-PI

Department of Mechanical Engineering; School of Engineering

Prof. Allen Taylor – co-PI

Laboratory for Nutrition and Vision Research; USDA Human Nutrition Research Center on Aging; Science Training Encouraging Peace (STEP) – Graduate Training Program, International Nutrition Foundation Prof. Abiodun William – co-PI

Institute for Global Leadership; Fletcher School of Law and Diplomacy

3. The NSF Big Idea or other Interdisciplinary Theme to be Addressed:

"Science diplomacy" is central to the NSF 10 Big Ideas – as described in the approved change of scope and pending supplement request for the *Arctic Options: Holistic Integration for Arctic Coastal-Marine Sustainability* project from 2013-2019 – recognizing that informed decision-making is a cross-cutting theme across the natural and social sciences. Big ideas that will be emphasized include: Navigating the New Arctic, Harnessing the Data Revolution and Future of Work at the Human-Technology Frontier.

4. A 2-3 Sentence Description of the Proposed Project.

This *Research Enhancement with Science Diplomacy* project will build on: (1) training workshops co-convened by Tufts Science Diplomacy Center and MIT Science Impact Collaborative at <u>Tufts in 2017</u> and <u>MIT in 2018</u>, involving close collaboration from the Science and Technology Diplomatic Circle (S&TDC) of Boston consulates, representing Foreign Ministries from nearly sixty nations; (2) joint video-conferencing course between The Fletcher School (Medford) and MGIMO University (Moscow) on <u>Science Diplomacy</u>; and (3) collaborative activities with the International Network for Government Science Advice regarding <u>science and technology advice in foreign ministries</u>; and (4) many co-convened international meetings.

Associated methods, skills and theory of informed decision-making (questions < data < evidence < options < informed decision) will be trained, applied and refined during this NRT project with regard to global-local implementation of the 17 United Nations Sustainable Development Goals.

Building on the acceleration of science-diplomacy partnerships globally – this NRT project will be developed on a university-wide basis at Tufts in collaboration with other Boston universities, S&TDC of Boston and the private sector in Boston as well as the City of Boston and State of Massachusetts, representing a regional Science, Technology and Innovation (STI) ecosystem that can be replicated in other major cities around the world for the benefit of all on Earth across generations.

On behalf of the co-PIs at Tufts and other institutions, thank you for your kind consideration. Along with the broad network of collaborators, I look forward to next steps to submit a compelling NRT proposal to the National Science Foundation.

With best regards,

Paul

PROF. PAUL ARTHUR BERKMAN

Director, Science Diplomacy Center Professor of Practice in Science Diplomacy Fletcher School of Law and Diplomacy Tufts University 160 Packard Avenue, Medford MA 02155

Office: +1-617-627-6959 Cell: +1-617-902-8361

Email: paul.berkman@tufts.edu

http://sites.tufts.edu/sciencediplomacy/

www.scidiplo.org

www.panarcticoptions.org

<u>Science Diplomacy: Antarctica, Science and the Governance of International Spaces</u>. (2011), available from the Smithsonian Institution (https://repository.si.edu/handle/10088/16154), celebrating the first fifty years of the Antarctic Treaty in "the interests of science and the progress of all mankind" (www.atsummit50.aq).

From: Berkman, Paul A

Sent: Tuesday, August 21, 2018 7:59 PM

To: Chigas, Diana V < Diana. Chigas@tufts.edu>; Taylor, Allen < allen.taylor@tufts.edu>; Garlick, Jonathan A.

<Jonathan.Garlick@tufts.edu>; Kontar, Yekaterina < Yekaterina.Kontar@tufts.edu>; Lantagne, Daniele Susan

<<u>Daniele.Lantagne@tufts.edu</u>>; Gallagher, Kelly Sims <<u>Kelly.Gallagher@tufts.edu</u>>; Johnson, Noor <<u>Noor.Johnson@tufts.edu</u>>;

Douglas, Molly B. < Molly B.Douglas@tufts.edu; noor.johnson@gmail.com; Williams, Abiodun

<a href="mailto:Abriola@tufts

Dalby, Anna < Anna.Dalby@tufts.edu; Gottlieb, Gregory < Gregory.Gottlieb@tufts.edu; Islam, Shafiqul

<<u>Shafiqul.Islam@tufts.edu</u>>; Lewis, Susan E. <<u>Susan.Lewis@tufts.edu</u>>; Rogers, Chris <<u>Chris.Rogers@tufts.edu</u>>

Cc: Berkman, Paul A < Paul. Berkman@tufts.edu >

Subject: INVITATION - NSF RESEARCH TRAINEESHIP PROPOSAL RE: Science Diplomacy Mini-Symposium / Thank you / Slides

Importance: High

Hi Science Diplomacy Collaborators,

Thank you for your kind collaboration with the Science Diplomacy Mini-Symposium at Tufts in May 2018.

Following up, I am writing to invite your collaboration with a National Science Foundation (NSF) Research Traineeship proposal (please see attached announcement from the Office of the Vice Provost). An internal letter of intent is due by 4 September 2018 and I welcome your collaboration for a university-wide proposal regarding Science Diplomacy. Please let me know if you or your colleagues are interested to collaborate on the proposal, which at this point is just a couple-sentence letter of intent.

For background, please find attached the justification section for a NSF proposal supplement request that relates to the NSF '10 Big Ideas,' including figures and tables that reflect the theory, methods and skills that are being applied, trained and refined with regard to science diplomacy. Please also find attached the executive summary for the Science Diplomacy Center.

In addition, the following link is for the 2nd Science Diplomacy: Dissertation Enhancement Workshop that will be convened this year at MIT on 27-28 September 2018, building on the success of the first workshop at Tufts in August 2017. Please do share details with your students who may be interested in the workshop.

I look forward to our next meetings and hope you are enjoying a pleasant summer.

With best regards,

Paul

PROF. PAUL ARTHUR BERKMAN

Director, Science Diplomacy Center Professor of Practice in Science Diplomacy Fletcher School of Law and Diplomacy **Tufts University**

160 Packard Avenue, Medford MA 02155

Office: +1-617-627-6959 Cell: +1-617-902-8361

Email: paul.berkman@tufts.edu http://sites.tufts.edu/sciencediplomacy/

www.scidiplo.org

www.panarcticoptions.org

<u>Science Diplomacy: Antarctica, Science and the Governance of International Spaces</u> (2011), available from the Smithsonian Institution (https://repository.si.edu/handle/10088/16154), celebrating the first fifty years of the 1959 Antarctic Treaty at the 2009 Antarctic Treaty Summit in "the interests of science and the progress of all mankind" (www.atsummit50.aq).

From: Mauduit, Jean-Christophe J. Sent: Monday, May 21, 2018 6:29 PM

To: Chigas, Diana V < Diana. Chigas@tufts.edu>; Gruver, Patricia < patricia.gruver@mri.gouv.qc.ca>; Taylor, Allen

<allen.taylor@tufts.edu>; Garlick, Jonathan A. <Jonathan.Garlick@tufts.edu>; Kontar, Yekaterina

<Yekaterina.Kontar@tufts.edu>; Lantagne, Daniele Susan <Daniele.Lantagne@tufts.edu>; Hines, Eric

<ehines@lemessurier.com>; Gallagher, Kelly Sims <Kelly.Gallagher@tufts.edu>

Cc: Berkman, Paul A <<u>Paul.Berkman@tufts.edu</u>>; Douglas, Molly B. <<u>Molly B.Douglas@tufts.edu</u>>; <u>noor.johnson@gmail.com</u>; Williams, Abiodun <<u>Abiodun.Williams@tufts.edu</u>>; Abriola, Linda M <<u>Linda.Abriola@tufts.edu</u>>; Shakked, Nitsan

< Nitsan. Shakked@tufts.edu >

Subject: Science Diplomacy Mini-Symposium / Thank you / Slides

Dear Mini-Symposium speakers,

Thank you very much for your kind participation and contribution to the Science Diplomacy Mini-Symposium! Thanks to you, the event has led to significant engagement across campus and will enhance interdisciplinary collaboration at Tufts and Fletcher.

Your slides (in PDF) and talk (audio) are available on the <u>Science Diplomacy Center website</u>. Please let me know if you would prefer the webpage to be password-protected, or if you would like your talk removed, as the access is public at this time (please only respond to me, not reply-all).

We would also like to thank our co-conveners, the Center for International Environment and Resource Policy and the Institute for Global Leadership for their constant support and enthusiasm. Finally, this event would not have been possible without the generous contribution of the Tufts Institute of the Environment: we are very grateful for the opportunity. The minisymposium is a direct outcome of the TIE Ventures Program (https://environment.tufts.edu/funding/).

We look forward to collaborating further with you!

Best regards,

JC

Jean-Christophe Mauduit, Ph.D.
Science Diplomacy Center | www.scidiplo.org
The Fletcher School, Tufts University
Phone: +1-617-909-9914 | +33-6-85-12-00-30
Email: jean-christophe.mauduit@tufts.edu
twitter.com/jcmauduit | linkedin.com/in/jcmauduit