

US Coast Guard Academy Honors Program

NEWSLETTER – FALL 2019

Dr. Alina M. Zapalska, Director, Honors Program

CONGRATULATIONS TO THE 2020-2021 FULBRIGHT APPLICANTS WHO RECENTLY COMPLETED THE RIGOROUS APPLICATION CYCLE THIS FALL

Ensign Gyumin Lee – 2020-2021 Fulbright Estonia (Electrical Engineering major, Class of 2019)

Ensign Gyumin Lee has applied for a 2020-2021 Fulbright Scholarship (*Open Study/Research Award*) to pursue a two-year Master of Science degree in *Cyber Security* at the School of Information Technology (joint program with University of Tartu), Tallinn University of Technology in Tallinn, Estonia. His proposed Fulbright project, *Designing “Software Defined Networking” Technique to Protect Networks from Cyber-Attacks*, will develop a cyber security system that will monitor network traffic to detect cyber-attacks and to secure network infrastructure and industrial control systems. The *Software Defined Networking* tool will be designed with a goal to enhance networks’ security in Estonia, the U.S., and worldwide. After his graduation from the CG Academy, Ensign Lee assumed the position of Information Systems Security Officer within the USCG Cyber Protection Team at the Cyber Security Operations Center in Washington, DC. He will have an opportunity to collaborate with the cyber security experts from the NATO Cooperative Cyber Defense Centre of Excellence, located in Tallinn, Estonia, as well as with Technische Universität München, Delft University of Technology, and KTH Royal Institute of Technology.

1/c Valerie Hines – 2020-2021 Fulbright UK (Marine and Environmental Sciences major, Class of 2020)

1/c Valerie Hines has filed an application for a Fulbright - University of Bristol - Award to pursue a one-year Master of Science degree in *Environmental Policy and Management* at the Faculty of Science, School of Geographical Sciences at the University of Bristol, Bristol, the United Kingdom. As a Fulbright scholar, she will work on the research project: *Contributions to Sea Level Variability along the UK Coast and the US East Coast*. The project will examine how natural and anthropogenic (human-induced) climate change factors individually and collectively contribute to sea level rise in open-ocean waters versus coastal waters. Her research will improve local sea level rise predictions along selected coastlines of the UK and the US to advance global knowledge of the oceanic environment through the combined analysis of both interfaces. University of Bristol (UoB) is one of the top-ranked academic programs in the UK for research and teaching in the areas of glaciology, oceanography, and climate change. She will work with researchers from the UoB's Cabot Institute: Professors Jonathan Bamber and Sam Royston, experts in climate change and ocean studies. Professor Bamber is the cryosphere expert for the Intergovernmental Panel on Climate Change, Geneva, Switzerland. Professor Royston is one of the first researchers to examine the differences between coastal and open ocean environments with respect to sea level rise.

1/c Owen Gibson – 2020-2021 Fulbright Germany (Civil Engineering major, Class of 2020)

1/c Owen Gibson is applying for a Fulbright Scholarship (Open Study/Research Awards) to pursue a Master of Science Degree in *Water Resource Engineering and Management* at the University of Stuttgart in Stuttgart, Germany. Using a climate change and soil erosion modeling approach, his proposed Fulbright research project, *Predicting the Impact of Climate Change on Coastal Soil Erosion*, will identify the most efficient model to evaluate the patterns and severity of coastal erosion. His model will be developed to project the integrated impacts of climate change and anthropogenic activity on soil erosion in selected coastal areas of Germany. In his proposal, 1/c Gibson argues that the establishment of a feasible strategy to cope with the impacts of climate change is an essential step in the direction of soil conservation and infrastructure protection in the coastal and watershed areas. Professors Silke Wiewrecht and Kristina Terheiden from the University have agreed to supervise his graduate study and research project. He has also received a full acceptance to the program in order to pursue his two-year graduate studies and research at the University of Stuttgart.

THE NEWS - THE USCGA HONRS PROGRAM UPCOMING ACTIVITIES

U.S. Coast Guard Academy

Alpha Lambda Delta

National Honor Society for First Year Students

Initiation Ceremony for the Class of 2022

4 November 2019



Dinner: 18:00-19:30 Location: U.S. CGA Officer's Club (Cost \$15.00)

Reservations by October 28th: 2/c Andre Horner

Andre.K.Horner@uscga.edu

3/C CADETS OF CLASS 2020 INDUCTED INTO THE CGA ALD

- | | | |
|--------------------------|------------------------|--------------------------|
| 1. Benjamin Acebo | 26. Brian Gollither | 51. John Orefice |
| 2. Chris Jinsei Alemania | 27. Jay Griffin | 52. John Overstreet |
| 3. Anne Allman | 28. Andrew Hardy | 53. Michael Palermo |
| 4. William Anderson | 29. Khalfani Hargrow | 54. Madison Pugh |
| 5. Glen Armstrong | 30. Clara Hay | 55. Lindsay Richardson |
| 6. Kathryn Barnett | 31. Tana Hiigel | 56. Philip Rogers |
| 7. Ryan Berry | 32. Sean Hunter | 57. Allison Ruth |
| 8. Domenico Bulone | 33. Ryan Hurst | 58. Jacob Schellman |
| 9. Christian Burzycki | 34. Damaso Jaime | 59. Samuel Severson |
| 10. Elizabeth Cheatham | 35. Adam Jibril-Barnes | 60. Josephine St. Ledger |
| 11. Julia Churbuck | 36. Daniel Johnson | 61. Sophia Stafford |
| 12. Gregory Costello | 37. Nolan Johnson | 62. Riley Stark |
| 13. Juliana Curtis | 38. Ariyanna Jurkowski | 63. Bryce Sturtz |
| 14. Irissa Danke | 39. Rasa Kirvelevicius | 64. Andrew Suh |
| 15. Brandon De La Fuente | 40. Macauley Kolonko | 65. Nayalina Tamariz |
| 16. Paul Detwiler | 41. Emma Langenbacher | 66. Ryan Taylor |
| 17. Adeline Dietrich | 42. Morgan Lusk | 67. Jessica Thorne |
| 18. Laurel Felt | 43. Colin Madaus | 68. Logan Tobias |
| 19. Steven Ferrandino | 44. Karin Maher | 69. David Tunder |
| 20. Isabella Firenzi | 45. Laura May | 70. Ryan Von Brock |
| 21. Matthew Fritz | 46. Devin McClure | 71. Benjamin Waalkes |
| 22. Casey Gale | 47. Jeffrey Meyer | 72. Peter White |
| 23. Jarred Gaudineer | 48. Luke Monaco | 73. Joshua Williams |
| 24. Connor Glynn | 49. Brianna Nelson | 74. Erin Wood |
| 25. Abigail Goetsch | 50. Adam Nix | |

THE NEWS - THE USCGA FULBRIGHT SCHOLARS

LTJG Chris DiBari 2017-2018 Fulbright Iceland (Government Major, Class 2016) - LTJG Chris DiBari has been representing the U.S. and the Coast Guard Academy as a cultural ambassador while pursuing a Master of Arts degree in Environment and Natural Resources with a concentration in Natural Resource Management at the University of Iceland, Reykjavik, Iceland. LTJG DiBari will be completing his final thesis project by conducting a feasibility study for implementing renewable energy technologies on Grimsey Island, the only portion of Iceland that lies above the Arctic Circle. Grimsey relies exclusively on diesel generators to produce electricity for the island's population of roughly 80 people. Many other Arctic communities face similar challenges to Grimsey that may be mitigated by implementing low cost, abundant renewable technologies. In addition to work on the thesis, LTJG DiBari will be taking courses in Environmental Law, Renewable Energy, and Cost Benefit Analysis. Since coming to Iceland, he has been working with the Director of Operations for the Icelandic Coast Guard Commodore Ásgrímur Ásgrímsson (USCGA '87) to spend time underway with Icelandic Coast Guard assets and was afforded the opportunity to sail with the Icelandic Coast Guard Ship THOR in April 2018. Furthermore, LTJG DiBari has been mentoring a member of the Icelandic Coast Guard who has just completed swab summer with the class of 2022.

LTJG Patrick Ledzian 2017-2018 Fulbright Netherlands and 2017-2019 Justus en Louise van Effen Excellence Scholarship TU Delft, Delft, Netherlands (Electrical Engineering Major, Class of 2017) - LTJG Ledzian received his 2017-2018 Fulbright U.S. Student Program grant to pursue a two-year Master of Science degree in Systems and Control at the Technical University of Delft (TU Delft) in Delft, Netherlands. Ledzian was also a recipient of a Justus en Louise van Effen Excellence Scholarship 2017-2019 from TU Delft, Delft, Netherlands which complemented his Fulbright scholarship. LTJG Ledzian graduated with a Master of Science in Systems and Control from the Delft University of Technology (TU Delft) in August 2019. During his two years of graduate study at TU Delft he studied control theory, system identification, non-linear system analysis, multi-variable control, and design driven engineering approaches, among other topics. His Master's thesis, *Network-Decentralized Collision Avoidance with Applications in a Scalable Unmanned Aerial Systems Testbed*, was on developing a network-distributed algorithm, which enabled formation-producing behavior in multi-agent systems with collision avoidance guarantees. The approach was proved through multi-agent simulations of 2-D and 3-D holonomic agents, as well as quadcopters. Additional work was done to develop and virtualize the Network-Distributed Robotics Lab at TU Delft. After his graduation, LTJG Ledzian reported to USCG Cyber Command for assignment as the Vulnerability Assessment Team lead in Washington D.C.

LTJG Laura Beck 2018-2019 Fulbright Award to Norway (Naval Architecture Major, Class 2017) - LTJG Laura Beck has begun her second year of studies at The Norwegian University of Science and Technology in Trondheim, Norway as a 2018-2019 Fulbright Student Award recipient. She is pursuing a Master's Degree in *Marine Technology* with an emphasis in Marine Engineering. This year, LTJG Beck is working on her Master's thesis that centers on the development of a high-pressure LNG engine for marine use to improve the environmental impact of large ships. Use of LNG in ships offers significant benefits including reduced carbon dioxide and particulate matter emissions; however, this technology requires refinement to overcome the problem of "Methane slip," or leakage of the fuel into the atmosphere. Her project is conducted with the researchers from SINTEF, one of Europe's largest independent research organizations. In the summer 2019, LTJG Beck was selected for an internship in the Hybrid Ship Power Lab at the university to conduct research and advance the skills necessary for the final year of her study. She also serves as a teaching and laboratory assistant in the Marine Technology department. At the university, LTJG Beck has been involved with the student organization AIESEC, an UN-affiliated group focused on facilitating international exchanges of volunteers and interns. She also helps promote Norwegian start-up companies to an international audience as they develop novel products and technologies to improve the environmental impact of a broad range of industries.

LTJG(s) Erin Wright 2018-2019 Fulbright Award to the UK (Mechanical Engineering Major, Class 2018) - LTJG(s) Wright has completed her 2018-2019 Fulbright award to study Energy Engineering at Newcastle University in Newcastle, UK. She recently submitted her Master of Philosophy thesis *Experimental Investigation of Nanoparticle Additives and Biodiesel on the Performance and Emissions of a C.I. Engine* for examination. Her research focused on diesel fuel enhancement using nanoparticle material additives and biodiesel and she is currently working to publish a journal article detailing her findings. During her time at Newcastle University, LTJG(s) Wright volunteered with North East Solidarity and Teaching helping the refugee community in the area and at Techy Tea Party events teaching community members how to use technology. LTJG(s) Wright returns from the UK in October 2019 and will be assigned to the Incident Management Division at Sector Houston-Galveston.

THE NEWS - THE USCGA UPCOMING VISITS AND PROGRAMS

U.S COAST GUARD ACADEMY ESTABLISHED THE FULBRIGHT ASSOCIATION INSTITUTIONAL MEMBERSHIP 2019-2020 ACADEMIC YEAR

<https://fulbright.org/membership/institutional-membership/>

MEMBER BENEFITS:

- Advocacy
- Networking and engagement
- Events and recognition
- Access to resources



Official Visit of General Bruce Scott, President of the Olmsted Foundation (28-29 October 2019) POC: Dr. Zapalska and LT Perez



American Service Academies Program Internship is a three-week Holocaust educational initiative that was created by the Auschwitz Jewish Center specifically for a select group of cadets and midshipmen from the four U.S. military academies.

2020 SUMMER - ASAP Internship - online application deadline November 1, 2019

<https://mjhnyc.wufoo.com/forms/american-service-academies-program-2020/>