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Draper Fellows 2019

Since 1974, the Draper Fellow Program has supported the graduate study of exceptional students pursuing advanced degrees in engineering and the sciences. Draper Fellow Alumni are from both civilian and military backgrounds and excel worldwide in the technical, corporate, government, academic and entrepreneurship sectors.

FOLLOWING ARE THE 20 RECIPIENTS WHO WILL BEGIN THEIR STUDIES IN 2019.

B

Nate Bragg
Currently pursuing a Ph.D. in computer science at **Tufts University.**

Nate received an undergraduate degree in electrical engineering from Rensselaer Polytechnic Institute. In graduate school, he is focusing on program synthesis, a technique for automatic program generation. He would like to scale the approach to larger, real-world software problems.

C

Manwei Chan
Will pursue a Ph.D. in aeronautics and astronautics at the **Massachusetts Institute of Technology.**

Manwei grew up in Ardsley, New York and received undergraduate degrees in both physics and mathematics from Johns Hopkins University. In graduate school, he will focus his research on autonomy, guidance, navigation and control. He would like to learn more about on-orbit assembly.

2nd Lieutenant Chris Clark, U.S. Air Force
Will pursue a master's in aeronautics and astronautics at the **Massachusetts Institute of Technology.**

Chris grew up in Tampa, Florida and will receive an undergraduate degree in astronautical engineering from the United States Air Force Academy in May. In graduate school, he will focus his research on methods of reducing space debris using CubeSats.

D

Levi Davies
*Currently pursuing a Ph.D. in electrical and computer engineering at **Purdue University.***

Levi grew up in Kennewick, Washington and received an undergraduate degree in electrical engineering from the University of Alabama in Huntsville. In graduate school, he is focusing his research on microelectronics and nanotechnology. He would like to characterize radiation effects on new 3D logic and memory devices with the goal of improving long-term extreme environment reliability.

Ensign George Denove, U.S. Navy
*Will pursue a master's in aeronautics and astronautics at the **Massachusetts Institute of Technology.***

George grew up in Naples, Florida and will receive an undergraduate degree in naval architecture and marine engineering from the United States Naval Academy in May. In graduate school, he wants to build on his knowledge of shipboard control systems and how to integrate security mechanisms into the initial ship design phase as well as apply these same principles to air platforms.

Ryan de Freitas Bart
*Currently pursuing a Ph.D. in aeronautics and astronautics at the **Massachusetts Institute of Technology.***

Ryan grew up in Los Angeles, California and received an undergraduate degree in electrical and computer engineering from Cornell University. His research is on developing scheduling and planning software for CubeSats as well as studying methods for in-space assembly.

F

Sam Fedeler
*Currently pursuing a Ph.D. in aerospace engineering at the **University of Colorado, Boulder.***

Sam grew up in Lynchburg, Virginia and received undergraduate degrees in both physics and computer science from North Carolina State University. In graduate school, he is focusing on image processing and multi-target tracking, with applications to space situational awareness and spacecraft navigation.

G

Axel Garcia
*Will pursue a master's in aerospace engineering at the **Massachusetts Institute of Technology.***

Axel grew up in San Juan, Puerto Rice and received an undergraduate degree in aerospace engineering from Embry-Riddle Aeronautical University. In graduate school, he will focus his research on optimization and control for re-entry vehicles.

K

Captain Thomas P. Kendall, U.S. Army
*Will pursue a master's in operations research at the **Massachusetts Institute of Technology.***

Thomas was born in Nishkayuna, New York, grew up in Charlotte, North Carolina and received an undergraduate degree in mathematics from the United States Military Academy. In graduate school, he will focus on operations research to help make a positive impact throughout the world.

Averyonna Kimery
*Will pursue a master's in materials science and engineering at **Purdue University.***

Averyonna grew up in Gillette, Wyoming and received an undergraduate degree in metallurgical engineering from the South Dakota School of Mines and Technology. In graduate school, she will focus her research on developing materials for hypersonic flight. She would like to broaden her knowledge of materials engineering, especially hypersonic materials and their structure/property relationships.

Nicholas Klugman
*Will pursue a master's of engineering in electrical engineering and computer science at the **Massachusetts Institute of Technology.***

Nicholas grew up in Gainesville, Florida and received undergraduate degrees in both electrical engineering and mathematics from the Massachusetts Institute of Technology. In graduate school, he will focus his research on communication systems. He also plans to study RF electronics and applied physics.

Griffin Knipe
*Will pursue a master's in electrical and computer engineering at **Northeastern University.***

Griffin grew up in Encinitas, California and will receive an undergraduate degree in computer engineering from Northeastern University in May. In graduate school, he will focus his research on the mitigation of side-channel vulnerabilities in embedded devices.

2nd Lieutenant Zade Koch, U.S. Army
*Will pursue a master's in urban studies and planning at the **Massachusetts Institute of Technology.***

Zade grew up in Milford, Michigan and will receive an undergraduate degree in civil engineering from the United States Military Academy in May. In graduate school, he will focus his research on urban planning. He will investigate ways to improve transportation safety and security through urban design.

O

Ensign Charles Oestreich, U.S. Navy

Will pursue a master's in aeronautics and astronautics at the Massachusetts Institute of Technology.

Charles grew up in Pittsburgh, Pennsylvania and will receive an undergraduate degree in aerospace engineering from the United States Naval Academy in May. In graduate school, he will focus his research on developing vision-based relative navigation methods for autonomous spacecraft rendezvous and proximity operations.

P

Ensign Stefano Pineda, U.S. Navy

Will pursue a master's in mechanical engineering at the Massachusetts Institute of Technology.

Stefano grew up in Hockessin, Delaware and will receive an undergraduate degree in mechanical engineering from the United States Naval Academy in May. In graduate school, he will focus his research on autonomous systems and controls and renewable energy.

2nd Lieutenant Mary Grace Pollin, U.S. Army

*Will pursue a master's in computation for design and optimization at the **Massachusetts Institute of Technology.***

Mary Grace grew up in Burke, Virginia and will receive an undergraduate degree in computer science from the United States Military Academy in May. In graduate school, she will focus her research on machine learning and artificial intelligence. She would like to contribute to the optimization of algorithms for autonomous robots.

Eric Puma

*Currently pursuing a Ph.D. in applied physics at **Harvard University.***

Eric grew up in Phoenix, Arizona and received an undergraduate degree in physics from Pomona College. His research focuses on optics, and under the fellowship, he will expand his study of optical devices to include the field of integrated photonics and quantum optics.

R

Ensign Catalina Rico, U.S. Navy

Will pursue a master's in mechanical engineering at the Massachusetts Institute of Technology.

Catalina grew up in San Jose, California and will receive an undergraduate degree in robotics and controls engineering from the United State Naval Academy in May. In graduate school, she will focus her research on naval construction and engineering.

Serena Russell

*Will pursue a master's in epidemiology at **Brown University.***

Serena grew up in Melrose, Massachusetts and received an undergraduate degree in mechanical engineering from the University of Massachusetts, Amherst. In graduate school, she will focus her research on reproductive epidemiology. She would like to combine engineering and epidemiology to solve issues facing assisted reproductive technologies.

W

Ensign Drew Weninger, U.S. Navy

Will pursue a master's in materials science at the Massachusetts Institute of Technology.

Drew grew up in Cleveland, Ohio and will receive an undergraduate degree in physics from the United States Naval Academy in May. In graduate school, he will focus his research on materials science and engineering. He hopes to create micron and sub-micron scale device elements for integration with circuit systems.

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