John O. Dabiri ’01
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Region III Alumni Trustee Candidate

The son of Nigerian immigrants who settled in Toledo, Ohio, John Dabiri arrived at Princeton thinking he would work in the auto industry, like his engineer father. But on the advice of professor Lex Smits, he turned down a generous internship at Ford to spend the summer before his senior year at the California Institute of Technology. “Smits said that it would be a good chance to explore something new, which is the purpose of college,” he said. “That research experience convinced me that I wanted to have this career — being able to do research and teach. It is that desire to invest in the next generation of scientists and engineers that has inspired my career as a professor.”

Today, Dabiri is the Centennial Chair Professor at Caltech, with appointments in the Graduate Aerospace Laboratories (GALCIT) and mechanical engineering. His research — applying concepts from the hydrodynamics of biological systems like jellyfish and fish schools to advance technologies ranging from wind energy to biomedicine — earned him a MacArthur Foundation “Genius” grant, the Presidential Early Career Award for Scientists and Engineers, the National Medal of Science and a place on the President’s Council of Advisors on Science and Technology.

With the exception of a four-year stretch when he taught at Stanford University, Caltech has been Dabiri’s home ever since Princeton. He received his M.S. in aeronautics and Ph.D. in bioengineering from Caltech, joined its faculty in 2005, and served as chair of the Caltech faculty board and dean for undergraduate students before returning from Stanford to become Centennial Chair in 2019. Dabiri began studying the pulsating propulsion of jellyfish as a

graduate student, and his detailed mathematical analysis of the fluid vortex rings that jellyfish generate for mobility proved useful for a host of seemingly unrelated applications in fluid dynamics, from blood flow in the human heart to the design of wind power generators. His research even broke through on the big screen when he provided the scientific foundation for the look and motion of the alien in Jordan's Peele's 2022 sci-fi blockbuster, "Nope." "For a researcher, it's typically the case that our biggest hit is going to be a published paper that is read by 100 specialists," he said. "It was a whole other thing to go to a Hollywood screening and see my name in the finishing credits as an adviser."

Since 2020, Dabiri has served on the board of directors of Nvidia and on the board of trustees of the Gordon and Betty Moore Foundation, a nonprofit dedicated to environmental conservation, scientific research, higher education and the San Francisco Bay Area. Combined with his career in academia, those experiences have provided a multifaceted view on the priorities and challenges of different stakeholders.

Dabiri was vice president of the Princeton Class of 2001 for six years and he has served on the University's Advisory Council for Mechanical and Aerospace Engineering (MAE) since 2014. One of his great joys is coming back to campus to meet with MAE students and seeing the "incredible breadth of backgrounds that Princeton is able to attract to campus." As a student who just missed the advent of no-loan financial aid at Princeton and spent about 15 years paying off his college loans, Dabiri is incredibly proud of the University's leadership on this issue. "To see students who come from a broader range of walks of life, who get to graduate without loans, I think Princeton is closer to that ideal of being that true economic ladder," he said. "Students can

come to Princeton and know if they put in the effort that they're going to come out on the other side with an incredible opportunity in life."