SUMMARY

Alumni Distinguished Professor

June 6, 2023

The Alumni Distinguished Professorship (ADP) is a preeminent faculty appointment recognizing faculty members who demonstrate extraordinary accomplishments and academic citizenship through substantive scholarly contributions across all three of Virginia Tech's core mission areas of teaching, research or creative activity, and engagement. Each ADP is expected to make scholarly contributions in the three mission areas at the same high level, evident at the time of appointment. An extensive nomination and vetting process involves department and college honorifics committees, a specially convened university committee, the executive vice president and provost, and the president. The Board of Visitors confers upon an individual appointment as Alumni Distinguished Professor for a period of 10 years, at which time the appointment may be renewed. Currently, 10 ADPs may be appointed, and there is no quota by college, department, or department (Faculty Handbook, Section 3.2.2).

Having followed the established protocol and consistent with the recommendations received from the university committee, Executive Vice President and Provost Cyril Clarke recommends the appointment of Drs. William Devenport and Leo Piilonen as Alumni Distinguished Professors. This recommendation also has the enthusiastic endorsement of President Timothy Sands and the Executive Committee of the Alumni Association Board. Both faculty members are exceptional scholars and educators whose achievements have been recognized nationally and internationally. The appointment carries with it a base salary supplement from the endowment established by the Alumni Association and operating funds for scholarly support.

ALUMNI DISTINGUISHED PROFESSOR

Dr. William J. Devenport is currently the Crofton Professor of Engineering in the Kevin T. Crofton Department of Aerospace and Ocean Engineering (AOE) in the College of Engineering.

Appointed to the faculty in 1985, Dr. Devenport has spent his entire post-Ph.D. career at Virginia Tech. He has made a broad impact on the science of aeroacoustics and aerodynamics, as well as extraordinary contributions to the university's teaching, research, and engagement missions. He has touched the lives of generations of Virginia Tech students.

Dr. Devenport's commitment to classroom and experiential learning is inspiring. He is routinely rated as one of the best professors in the College of Engineering in large undergraduate and specialty courses and has received several teaching awards. His ability to integrate research into both undergraduate and graduate courses sets him apart. He and his team in the Stability Wind Tunnel have found creative ways to incorporate student learning into their work. As a result, hundreds of VT students have access to this unique research facility every year. This creativity proved invaluable during the pandemic when the operation of the wind tunnel and the ability for students to interface and run experiments remotely transitioned seamlessly. AOE was recognized in 1999 and 2015 as an Exemplary Department for effectively linking research and scholarship with teaching and innovative undergraduate education-this distinction is directly related to courses and labs developed by Dr. Devenport. As a mentor, Dr. Devenport has supervised 55 graduate theses/dissertations and ten post-doctoral scholars.

Dr. Devenport's research accomplishments have been supported by over $24M in external research funding with more than $7.5M in funding from industry; his sponsors include the Office of Naval Research, NASA, the National Science Foundation, GE Power and Water, GE Global Research, Boom Technologies, Siemens Wind Power, Gamesa, Vestas, and many others. He has won an unprecedented five prestigious Defense University Research Instrumentation Program (DURIP) instrumentation awards from the US Department of Defense, all directed at advancing the Stability Wind Tunnel as a key facility for teaching, research, training, and fundamental research. Dr. Devenport has two patents, 79 refereed journal publications, 192 conference papers, and seven book chapters. He is also the co-author of the *Aeroacoustics of Low Mach Number Flows,* a widely used textbook designed for use in graduate courses. He is currently under contract for an updated and expanded second edition due to be published this year.

Throughout his career, Dr. Devenport has been recognized for his outstanding dedication and commitment to the university's missions. He was awarded the W. S. "Pete" White Professorship for Innovation in Engineering Education in 2001, a rotating position that he held for three years. In 2021, he was named the Crofton Professor of Engineering in recognition of his contributions to the university and profession. He received the Dean's Award for Excellence in Education in 2021 and 1997, as well as a Certificate of Teaching Excellence in 2015 and the Dean's Award for Excellence in Research in 2007. Additionally, he received Special Recognition from the Associate Provosts of Academic

Affairs and Undergraduate Education in 2004 and the Excellence in Access and Inclusion Award for graduate student mentoring in 2013. He has served with high distinction and selfless service as the director of the Virginia Tech Stability Tunnel (2004-present) and as the assistant department head for facilities (2008-2016); these positions have allowed him to have a significant impact on the "hands-on minds-on" teaching of Virginia Tech students. He is the director and founder of the Center for Research and Engineering in Aero/hydrodynamic Technology (CREATe), a center chartered in 2014 that brings approximately ten faculty and fifty graduate students together. His vision, manifest in the structure and activities of the center, is that of a dynamic and robust academic community that fosters research and learning by promoting diversity and a caring, collaborative environment between students and faculty.

Dr. Devenport is nationally and globally recognized for outstanding scholarly contributions in teaching and research throughout his career, all of which have served to advance the stature of the department and the university, the profession, and the success of students.

<u>RECOMMENDATION:</u>

That Dr. William Devenport be appointed Alumni Distinguished Professor for a period of ten years, effective June 10, 2023.

June 6, 2023

ALUMNI DISTINGUISHED PROFESSOR

Dr. Leo Piilonen is currently a Professor of Physics in the Department of Physics in the College of Science.

Appointed in 1987, Dr. Piilonen began his career at Virginia Tech as an assistant professor after two years as a postdoctoral fellow at the Los Alamos National Laboratory. His impact on research, education, and service has gained him considerable acknowledgment and appreciation beyond the Virginia Tech community. He was asked by the Belle Collaboration, a group of outstanding physicists and engineers, to serve as a co-spokesperson for the Belle experiment, an honor and responsibility that is reserved for the most distinguished, capable, and respected members of the field and reflecting highly on Dr. Piilonen as a leader, scientist, mentor, and manager, providing visibility and prestige to Virginia Tech.

Dr. Piilonen's teaching load consists of 107 regular-credit courses, representing 21 distinct courses at all levels of the physics curriculum. This significant number is not solely due to his long career at Virginia Tech but also because associate chairs who assign teaching know that his extraordinary teaching skills can be deployed wherever needed and produce excellent outcomes. He has been a leader in implementing new technologies and best practices pedagogy including, for example, the early adoption of the world wide web for course information dissemination (1995), the first use of online homework in introductory physics (2003), the first use of interactive audience-response "clickers" (2004), and the development of interactive self-guided animations. He has been a long-time proponent of active learning techniques in the classroom and has successfully used them in introductory and upper-level major courses. He is so committed to teaching that he continued to teach through every term he served as department chair. His superior teaching performance has been recognized with a College of Science Carroll B. Shannon Award for Teaching Excellence and the University's highest teaching award, the William E. Wine Award for Teaching Excellence. He has supervised 21 Ph.D. students and 12 postdoctoral associates.

Dr. Piilonen has been continuously funded by the Department of Energy since 1988, with a career funding total of $13.6M. Among the most significant accomplishments in Dr. Piilonen's research with large-scale experiments at the Japanese National Laboratory (KEK) for High Energy Physics were measurements that confirmed theoretical predictions of the Standard Model of Particle Physics, which led to the 2008 Nobel Prize for the theorists that made the predictions. For each experiment, his group built instrumentation and delivered and operated it in the experiments at KEK. He regularly represents his collaborations in invited conference talks and other venues and has been asked or elected by his collaborators to take on numerous essential leadership roles in his large collaborations. These roles include co-spokesperson of the Belle collaboration, chair of the Institutional board for the Belle II collaboration, and many more. In 2013, he was elected as a fellow of the American Physical Society (APS), a distinction reserved for 0.5% of the APS membership. He was one of the recipients of the 2016 Breakthrough Prize in Fundamental Physics for his work as a member of the Daya Bay neutrino physics experiment in China. His research also earned him Virginia Tech's Alumni Award for

Excellence in Research in 2019. This year, he received one of the most distinct honors within the scientific community with his election as a fellow of the American Association for the Advancement of Science for his "distinguished contributions to experimental elementary particle physics, particularly for leadership in the Belle and Belle II collaborations and in their muin and K-long meson detection and identification."

Dr. Piilonen's commitment to academic citizenship is exemplary. His leadership capabilities made him the clear choice for chairing the department's Undergraduate and Graduate committees. He was the inaugural director of the department's Center for Neutrino Physics in 2010. During his tenure as chair of the Physics department (2012-2015), he recruited and hired 11 faculty members. The department also experienced a tripling in the number of incoming freshman physics majors in 2013, and he successfully led the department through the challenge of accommodating them. Recently, he has been devoting significant effort to improving diversity in the department by establishing a diversity working group (now the diversity committee), which he chaired for several years. At the college and university level, he chaired the College of Science Curriculum Committee and served as a member on both the college and university Promotion and Tenure committees. He has performed extensive professional service as well.

Dr. Piilonen has been recognized nationally and internationally for his teaching, research, and public service excellence. He earned the Physics Department's William E. Hassinger, Jr. Senior faculty fellowship (2010-2016), one of the most prestigious faculty recognitions. He also earned the Commonwealth of Virginia's highest honor for faculty at Virginia's public and private universities in 2019: the State Council of Higher Education for Virginia Outstanding Faculty Award, in recognition of his excellence in teaching, research, and public service.

RECOMMENDATION:

That Dr. Leo Piilonen be appointed Alumni Distinguished Professor for a period of ten years, effective June 10, 2023.

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