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**Dean Emeritus and Professor
Catholic University of America**

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Honoree Virtual Keynote No. xxx

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Time: xx-xx

Date

Chair: TBN,

“From NASA Robot to Head of College “

ABSTRACT: As a brand-new doctoral graduate looking for a teaching and research position at a university in the 80s, like many of you, I intended to join a major American university to solely focus on teaching and research and intentionally leave the "dirty" job of administration to the unwise. So I often said that I never wanted to be an administrator at a university. Never say "never"! In this speech I will share with you how I managed to expand my knowledge in linear time-varying multivariable control systems, which you could guess stemmed from my doctoral dissertation to obtain my first grant as a small purchase from NASA to investigate closed-kinematic chain mechanism (CKCM) for potential development of robot manipulators for space applications. This initial grant enabled me to ultimately receive a multi-million dollar grant from NASA to develop one of the first CKCM robot end-effectors for high-precision assembly and maintenance of the International Space Station (ISS). Along the way, we solved a number of issues of CKCM manipulators including dynamics, kinematics and intelligent control of these robots. I will also share how I as a very passionately administration-resisting person

became a department chair and then a four-term dean of an engineering college totalling 20 years of administration. Key characteristics for a successful academic leader will be presented. Along with the discussion of the dos and don'ts of an administrative job, the stark difference between a manager and a leader will be reviewed. The notion of avoidable and unavoidable enemies in administration will be discussed. Finally I will demonstrate the usefulness of fuzzy logic in successful administration.

Bio: Charles Cuong Nguyen is a researcher, educator, administrator, and presidential appointee. He is currently Professor and Dean Emeritus at the Catholic University of America (CUA). He is the second Dean Emeritus at CUA due to his contributions to the university. He served as Dean for 4 consecutive terms totaling 16 years. Elected Dean in 2001, he has been the first Vietnamese American Dean of a college at a major university in the U.S. He has also been the first Asian American dean at Catholic University in the history of the university. He was Chairman of the Department of Electrical Engineering and Computer Science at CUA from September 1997-June 2001. He earned the Diplom Ingenieur in Electrical Engineering at Konstanz University, West Germany where he was also named "Best Graduate of the Class of 1978," in 1978. Later he received his Master of Science in 1980 and Doctor of Science in 1982 both with honor at the George Washington University. He was valedictorian of his class when he graduated from his high school, Institut de la Providence (Thien Huu), Hue, Vietnam in 1971. Professor Nguyen has published over 100 technical and scientific papers in the area of control and robotics, co-edited three books and guest-edited 10 special issues in major journals. He also presented numerous research papers, organized, and chaired numerous technical sessions at many international conferences. He is a fellow of American Association for the Advancement of Science (AAAS) and senior member of the IEEE. He was a member of the Board of Directors, Asian Division of the U.S. Library of Congress and member of the Board of Directors, Library and Education Assistance for Vietnam (LEAF-VN) and a member of the Advisory Board of the Vietnamese Culture and Science Association (VCSA).

He received the Asian Heritage Award from The Asian Heritage Society in November 2014 and the *Academic Vice President Research Excellence Award* in February 1989 from the Catholic University of America. He was a recipient of the *Distinguished Alumni Scholar Award* from the George Washington University in 2002. Among many other awards, he received the *Lifetime Achievement Award* from World Automation Congress (WAC) for contribution to robotics and intelligent automation in June 2004 and the *Community Service Award* from Asia Entertainment for Achievements in Education in August 2004. He received the 2006 Excellence in Community Service Award from the Vietnamese American Medical Research Foundation (VAMRF) in February 2007, the *Leadership Award* from the

International Network of Engineering Education and Research (INEER) in September 2007 and the *Lifetime Achievement Award* from the District of Columbia Council of Engineering and Architectural Societies (DCCEAS), February 2009. In addition, in October 2017, through an endowment made by several engineering alumni, the Board of Visitors of the School of Engineering of The Catholic University of America (CUA) established a leadership award, “Dean Charles Cuong Nguyen Leadership Award” to be presented annually to a graduating engineering student demonstrating leadership talent.

In May 2004 he was appointed by President Bush to serve on the Board of Directors of the Vietnam Education Foundation (VEF). As dean of the School of Engineering at CUA, he established numerous educational programs such as student’s exchange programs and 2+2 programs with Southeast Asian countries including Vietnam, Taiwan and Hong Kong. As one of the group leaders of BUILD-IT, a project funded by USAID for improvement of the educational system of Vietnam, Dr. Nguyen has given workshops to educational leaders of major Vietnamese universities that pursue assessment certification and accreditation from accreditation agencies including ABET and AUN (Asian University Network). He is the founding Editor of International Journal of Intelligent Automation and Soft Computing (AutoSoft) and currently serves as the chair of the Editorial Advisory Board of AutoSoft. He was a member of the Advisory Committee of the International Journal of Intelligent Computing in Medical Informatics and Image Processing, TSI Publisher, an associate editor of the IEEE Systems Journal, Institute of Electrical and Electronics Engineers, IEEE Publisher and a member of the editorial board of the Journal of Electronics and Advanced Electrical Engineering (JEAE). He is a member of the Editorial Board of the International Journal of Robotics and Automation Technology, a member of the Editorial Board of the Journal of Electronics and Advanced Electrical Engineering (JEAE).

His research interests lie in the areas of medical robotics, time-varying control systems, control of large space structures, decentralized control, control of robot manipulators, closed-kinematic chain manipulators, robot vision, intelligent control and neural networks.