Prof D. T. Mook

Muhammad R. Hajj · Sergio Preidikman · Balakumar Balachandran ·
Walter Lacarbonara

Published online: 16 October 2020
© Springer Nature B.V. 2020

Professor Dean T. Mook, August 3, 1935 – June 19, 2020

On June 19, 2020, the mechanics community lost one of its pioneers, Professor Dean T. Mook. He was 84.

M. R. Hajj (✉)
Department of Civil, Environmental and Ocean
Engineering, Stevens Institute of Technology, 1 Castle
Point Terrace, Hoboken, NJ 07030, USA
e-mail: mhajj@stevens.edu

S. Preidikman
Departamento de Estructuras, Universidad Nacional de
Córdoba Oficina 109, Córdoba 5000, Argentina
e-mail: spreidikman@unc.edu.ar

Professor Mook was one of the most prolific mechanicians of his time. His research and teaching interests spanned the fields of fluid mechanics, solid mechanics, and dynamics. He applied his knowledge and expertise over a span of fifty years to educate generations of students about structural dynamics, nonlinear aeroelasticity, hydrodynamic stability, ship hydrodynamics, nonlinear dynamics, perturbation techniques, unsteady aerodynamics, aircraft stability and dynamics, and aircraft control.

Professor Mook was born in Ridgeway, Pennsylvania, on August 3, 1935. He received his BSc and MSc degrees in Engineering Mechanics from Virginia Tech in 1958 and 1960. Upon earning his PhD also in Engineering Mechanics from the University of Michigan in 1966, he returned to his alma mater to start a very productive career. He combined broad and deep knowledge of different fields with unique

B. Balachandran
Faculty Member, Applied Mathematics and Scientific
Computation Mechanical Engineering, University of
Maryland, 2181, Glenn L. Martin Hall, Building 088,
College Park, MD, USA
e-mail: balab@umd.edu

W. Lacarbonara
Department of Structural and Geotechnical Engineering,
SAPIENZA University of Rome via Eudossiana 18,
Rome 18 – 00184, Italy
e-mail: walter.lacarbonara@uniroma1.it

communication skills to effectively advise more than 50 graduate students, write over 100 journal articles, and develop and teach over twenty undergraduate and graduate courses. He generously continued to support and teach many other students after his retirement in 2003, both at Virginia Tech and at other institutions. He co-authored the famous “Nonlinear Oscillations” book with the late Ali Nayfeh. Through his appointments at the Air Force Office of Scientific Research and the Office of Naval Research, Professor Mook left his mark on the field by developing new research initiatives and directions.

Beyond his scientific career, Dr. Mook held a strong interest in learning about the history and cultures of different parts of the world. Anyone who traveled or had dinner or a cup of “strong” coffee with him ended up learning about the history or a specific culture of a place in addition to mechanics. He was also an avid pilot.

Professor Mook’s humble and dependable nature put those who worked for and with him at ease. Because of his enthusiasm, knowledge, and inventive mind, everyone left his office feeling wiser and happier. He fostered his students and junior colleagues by wholeheartedly promoting them within the mechanics community. He befriended his staff and students and made it enjoyable to be associated with him. His assistant of 32+ years, Sally Shrader said “Dr. Mook was a wonderful mentor and I learned so very much from him. There was laughter every day. Dr. Mook loved his work and teaching. Such a loss to me and everyone that knew him.”

Professor Mook was an unusually inspirational and visionary man. He was a super-friendly person, always cheerful, and encouraging and motivating colleagues and students with his passion and insight. His warmth, enthusiasm, sense of humor, and openness left a mark on everyone he interacted with. He will be deeply missed by all those who knew him.

Dr. Mook’s impact on our lives is summarized in the following quotes from his colleagues and students.

Professor Saad Ragab, his colleague from Virginia Tech of more than 40 years said that “For me he was a teacher, a mentor, a colleague, and a sincere friend. He dealt with people and appreciated them for who they are. We laughed when he said: ‘Money is cheap.’ Now, I see the wisdom in what he said.”

Professor Thomas Strgnac, a faculty member at Texas A&M University stated: “Professor Mook will

be missed. I was so very fortunate he allowed me to be one of his students. He was a wonderful mentor, teacher, friend, and source of inspiration. I always enjoyed my time with him in his office, at meetings, at conferences, and travels. I learned so much more from him than mere mechanics. He was patient, kind, tolerant of contrary ideas, and a wisdom that was persuasive. Throughout my career, I have tried to emulate his approach with others. He was a true gentleman.”

Professor Suzane Smith from the University of Kentucky stressed the influence of Dr. Mook on her and all mechanics students: “Mechanics grad students in the 1980s wanted to ‘be like Professor Mook’ to give a great lecture without notes, to explain complex ideas so clearly, to have such a generous spirit with everyone, and to exemplify the joy of being a college professor. When we were finally the same age he had been, we concluded that none of us had made it yet. We are all still working toward that, inspired by Dr. Mook to love the profession as much as he did. His passing is a great loss, but great memories remain. He inspired so many of us and through us our students, making a difference felt across the U.S. and around the world even if we never quite made it to be like him.”

Professor Giuseppe Rega, Emeritus at Sapienza University of Rome, Italy, wrote: “Upon knowing Professor Mook from his classical book on Nonlinear Oscillations with the late Ali Nayfeh and a number of meaningful papers, talking with him at VPI Conferences on Nonlinear Vibrations, Stability and Dynamics of Structures and Mechanisms I attended for about twenty years was always a great experience. To my eyes, Dr. Mook was the particularly gracious, pleasant and humble side of the formidable nonlinear vibration coin from VPI. His nice and friendly home receptions always highlighted his open mind, as well, along with his curiosity towards a variety of aspects of culture and life.”

Dr. Philip Beran of the Air Force Research Laboratory wrote after learning of Dr. Mook’s death: “That is very sad. I have many fond memories of Dean—at VPI, here at the base, and at OSR. He was a pillar of the aeroelasticity community and was a man of great intellect, integrity, and grace.”

Professor Anna Sinopoli, Emeritus at Sapienza University of Rome, wrote: “In addition to his scientific contributions, I shall remember him as an

outstanding supporter of inclusive practices in academic research.”

Professor Jose Balthazar from the University of Sao Paulo, Brazil wrote: “Prof Mook was an admirable person, I learned a lot from him during several visits to Virginia Tech. Prof Mook visited me for two months in Brazil and cooperated with many of my students and helped me in the development and execution of several projects in Rio Claro-DEMAC.”

Professor Mohamed Daqaq of NY University had the following to say: “Professor Mook left a legacy in nonlinear dynamics that will last for many generations. His book *Nonlinear Oscillations* co-authored with Professor Nayfeh is one of the greatest books written on the topic of nonlinear dynamics. Beyond science and mechanics, he left many lasting impressions. His smile, humbleness, and the warmth he spread everywhere are the things I will always remember of him. With the passing of Professor Mook, the world and most certainly our small community have lost a great man.”

Professor Mehdi Ghommem, who graduated in 2011, wrote: “Professor Mook was much more than a

mentor. He was always pleasant and cooperative. I will never forget his kindness and generous help.”

Dr. Ahmed Hussein, who graduated in 2017, wrote: “I’m may be the last PhD student who met with Dr. Mook to learn and code the 3D UVLM. I owe him a lot for the FSI work I did in my PhD. I admired his humbleness and simplicity when he was teaching me. It was a great honor to learn from him. I am really going to miss his presence and his kind smile.”

For us and many others, it is hard to imagine Burrus Hall at Virginia Tech without Professors Nayfeh and Mook. Yet, like others we will always cherish the memories, be it the knowledge that we gained and we still use, the support that has impacted our lives over thirty or more years, the articles that we wrote together, and, yes, the coffee and tea breaks and the breathtaking flights over the New River valley. The mechanics community will miss Professor Mook greatly. Still, we will always be thankful for what he has given to us as an educator, scientist, and amiable person.