

## **THE EFFECT OF COVID-19 PANDEMIC IN ENGINEERING HIGHER EDUCATION**

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Ali Mehrabian earned his Ph.D. in Civil Engineering from the University of Arizona, and his MS and BS from SJSU in San Jose, CA. He worked for the engineering and research industry for some time before he was appointed as a faculty member at the University of Central Florida until August of 2010 where he moved with his entire ET Department to Daytona State College (DSC). He is currently a Professor and Assistant Chair of the BSET program. Some of his research and scholarly activities have been disseminated through more than 60 peer-reviewed publications. He has served as PI, co-PI, and PM of grants funded by NSF, FSGC, etc. His research interests also include technical and pedagogical aspects of engineering and technology.

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Alireza Rahrooh received his B.S., M.S., and Ph.D. in EE from the University of Akron. He worked as an Electronic Engineer from 1979 to 1984. He was involved in conducting research for the Electrical Power Institute and NASA Lewis Research Center from 1984 to 1998. He was appointed to a faculty position in EE at Penn State University in 1988. In 1994, he joined ET at UCF until August of 2010 when he moved to Daytona State College. He has presented numerous papers at various conferences, is the author of more than 100 technical articles and recipient of 30 awards. His research interests include simulation, nonlinear dynamics, system identification and adaptive control. He is a member of ASEE, IEEE, Eta Kappa Nu, and Tau Beta Pi.

## ABSTRACT

In an ongoing exploratory anecdotal study the authors endeavor to identify some fundamental effects of the COVID-19 Pandemic in course offerings in engineering higher education. A part of their efforts is presented in this article. In the process this study relies heavily on the internet search engines as tools to search and locate the resources provided in this paper. This study suggests that although most higher education institutions already had online programs in place, the magnitude of the effects of COVID-19 pandemic caught the profession by surprise. The sheer number of classes that some institutions convert from live to online in such a short period of time is astounding, to say the least. Inevitably there were obviously casualties in this process. All groups in higher education were affected by the pandemic with many people more than others. The effect is felt globally. Not for the first time or the last time human innovation and ingenuity, in some cases implemented in very small and simple increments help higher education overcome some of the ongoing challenges with more challenges still unidentified and unrecognized. Many more resources and time are needed to fully explore and study the effects. However, since the heartfelt effects of this pandemic have impacted every aspect of higher education, it is essential to understand and have the preparation mechanism in place for future pandemics. For the matter to be studied and understood comprehensively requires expediency and urgency for financial and other kinds of support from funding agencies at the federal and state levels.