TIENCKEN DISTINGUISHED SEMINAR SERIES

ENGINEERING, COMPUTING AND APPLIED SCIENCES

Speaker: **Dr. Caroline Cruz-Neira**

Agere Chair in Computer Science
University of Central Florida
National Academy of Engineering Member

EVENT DETAILS

Nov. 11, 2022 11:15 a.m.–12:05 p.m.
Freeman Hall Auditorium or Zoom
Registration not required.
Add to your calendar

Title: **"The Reality of Virtual Reality"**

Abstract: The widespread use of virtual (VR) and augmented reality (AR) seems that it is finally happening with the technology available to a large audience of industry sectors and consumer markets as well as a rapidly growing number of applications available. Yet, it has also been a little bit disappointing to see that VR technology is mostly being portrayed in the public eye as the ultimate gaming and social environment.

However, there is much more to VR and AR than that. Sometimes it feels that the current generations of VR/AR users do not realize that we have been pushing the edge of innovation with these technologies for the past thirty years. We have a broad number of best practices, lessons learned, and success stories that show how these technologies have proven themselves as valuable tools to improve, accelerate, and advance processes and product-to-market operations, training, decision making and other areas. Furthermore, VR technology is also much more than headsets; there are many alternatives to build devices and systems to immerse users in virtual environments beyond headsets so the appropriate virtual reality platform can be used in the appropriate context or setting.

This talk will first present a wide perspective of what VR is as an innovation tool, the options we have today to explore virtual spaces to achieve innovation in different industry sectors, and its potential benefits and limitations when it is integrated in a variety of workflows. The speaker will discuss her professional journey on developing successful VR research centers and how collaborations between those centers and specific industries have been critical to accelerate VR technology development and deployment as well as to quickly determine technology development paths that, although exciting or "cool", may not yield successful practical outcomes. The talk will follow with a discussion of the speaker's experiences in developing VR technology, creating applications in many industry fields, exploring the effect of VR exposure to users, and experimenting with different immersive interaction models. The talk will include specific industry cases that the speaker has led through collaborations with her research centers in which VR has proven its value to enhance productivity and efficiency. The talk will end providing a vision on the future of VR applicability as a force of change in many industry markets and as a result, its potential to become a key innovation technology to improve many aspects of human life.

Bio: Dr. Carolina Cruz-Neira, a member of the National Academy of Engineering, is a pioneer in the areas of virtual reality and interactive visualization, having created and deployed a variety of technologies that have become standard tools in industry, government, and academia. She is known world-wide for being the creator of the CAVE virtual reality system. She has dedicated a part of her career to transfer research results into daily use by spearheading several Open-Source initiatives, such as VRJuggler, to disseminate and grow VR technologies and by leading entrepreneurial initiatives to commercialize research results. She has over 100 publications as scientific articles, book chapters, magazine editorials and others. She has been awarded over $75 million in grants, contracts, and donations. She is also recognized for having founded and led very successful virtual reality research centers: the Virtual Reality Applications Center at Iowa State University, the Louisiana Immersive Technologies Enterprise, and the Emerging Analytics Center at the University of Arkansas at Little Rock. She serves in many international technology boards, government technology advisory committees, and outside the lab, she enjoys extrapolating her technology research with the arts and the humanities through forward-looking public performances and installations. She has been named one of the top innovators in virtual reality and one of the top three greatest women visionaries in virtual reality. BusinessWeek magazine identified her as a "rising research star" in the next generation of computer science pioneers; she has been inducted as a member of the National Academy of Engineering, a member of the IEEE Virtual Reality Academy, an IEEE Fellow, and an ACM Computer Pioneer; She has received the IEEE Virtual Reality Technical Achievement Award and the Distinguished Career Award from the International Digital Media & Arts Society among other national and international recognitions. She has given numerous keynote addresses and has been the guest of several governments to advise on how virtual reality technology can help to give industries a competitive edge leading to regional economic growth. She has appeared in numerous national and international TV shows and podcasts as an expert on her discipline and several documentaries have been produced about her life and career. Currently, Dr. Cruz is the Agere Chair in Computer Science at the University of Central Florida.