Department of Mechanical Engineering Seminar

2PM, 5/30/2022 Tuesday

Steinman Hall Room 254 (Conference Room)

https://ccny.zoom.us/s/86054592177

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Biomimetic wearable assistive devices with embedded sensing capabilities

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ABSTRACT

Dr. Sanz-Pena's research focuses on developing wearable assistive robots and orthotics with embedded sensing capabilities for healthcare applications to increase biofeedback monitoring capabilities and improve the quality of life. His approach is the implementation of metamaterials in the components of biomechatronic devices using additive manufacturing and computational design. He is currently working on modular additively manufactured wearable robots to improve biomimicry and personalization and increase the proprioception of exoskeletons. As part of this effort, he is focusing on embedding pressure and motion sensing in the material and structural properties of robots using piezoresistive elements and parametric design of architected materials.

BIO

Dr. I. Sanz-Pena is a Postdoctoral Research Associate at the Rehabilitation Robotics Laboratory at the University of Illinois at Chicago, Department of Mechanical and Industrial Engineering. He received his Ph.D. with Summa Cum Laude honors from Universidad de La Rioja, Spain, in collaboration with New York University (NYU) and held post-doctoral appointments at Imperial College London at the Biomechanics Group. He was a Research Associate at the NYU Langone Orthopedic Hospital and a project engineer at Biele Group.