

## ME Graduate Seminar - Spring 2019

**February 8, 2019, 3:00 – 4:00 PM, JB 127**



### **Design of 3-D Nanostructured Material systems for High-Performance Nanocomposites and devices**

**Speaker:** Dr. Davood Askari

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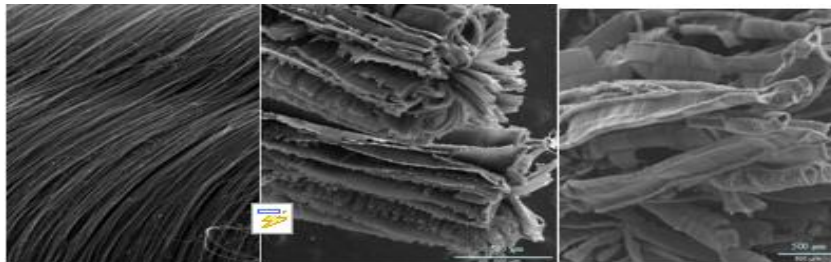
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#### **Abstract:**

Because of their exceptional properties and unique structural configurations, carbon nanostructures have been widely investigated for various high-performance applications during past two decades. Their potential applications as additional reinforcements in polymeric composites has been successfully demonstrated. On the other hand, laminated composites suffer from the lack of reinforcement in thickness direction and in between the laminae. The interlaminar properties are controlled by the matrix, yielding poor interlaminar and through-the-thickness properties. Our recent work have shown that presence of carbon nanotubes (CNTs) can considerably enhance the properties of matrix material and can create nanocomposites with tunable properties and multifunctional behavior. In this talk, synthesis and functionalization of CNTs with various geometrical configurations will be discussed and their applications in design and fabrication of highly interlocked multifunctional nanocomposite materials systems with be explored.



**Speaker Biography:** Dr. Davood Askari has worked in academia and industry as assistant professor, postdoc, researcher, and design engineer, since 1996. His research experience includes: (1) modeling, synthesis, functionalization, characterization, and applications of nanomaterials, nanostructures, (2) design, modeling, fabrication, and testing of mechanical systems, high-performance composites, nanocomposites, thin films, nanodevices, and sensors. His research efforts have resulted in number of awarded and pending international patents and research grants, and publication of journal articles, conference papers, and technical reports. He serves as reviewer, referee, symposium organizer, session chair, and technical committee member for several federal funding agencies, scientific journals, technical conferences, and professional societies.