

**Department of Structural Engineering  
University of California, San Diego  
SE 290 Seminar**



Professor Peter Olubambi  
School of Mining, Metallurgy and Chemical Engineering

**“Innovations in Powder-Based Techniques for Processing Lightweight Metal  
Matrix Nanocomposites”**

Monday, October 22, 2018

12:00 pm - 12:50 pm, Pepper Canyon Hall, Room 122

<https://structures.ucsd.edu/seminars>

**Abstract**

As the competitive global technological development is increasingly advancing, materials engineers are constantly confronted with the challenge to design and rapidly produce innovative materials with improved properties for the emerging technological innovation and the wide range of their industrial environments. This has necessitated and motivated the research efforts of the Centre for Nanomechanics and Tribocorrosion (CNT) at the University of Johannesburg, on varying compositional formulations and innovative shaping processes for nanoengineered composites materials with enhanced multifunctional engineering properties as structural components for a variety of applications ranging from aerospace, chemical and allied, automotive, biomedical to civil engineering applications. This presentation gives an overview of our research efforts on titanium-based shape memory alloys (SMAs) and lightweight nanocomposites developed through innovative powder metallurgical techniques, for applications in the aerospace industries and biomedical implants. Our on-going efforts on self-healing recycled polymer-based nanocomposites for civil engineering applications are also highlighted.

**Biography**

Professor Olubambi's current research activities are focused on three key and interrelated fields of advanced materials; "Powder Metallurgy", "Nanomechanics" and "Tribocorrosion". He centers his research efforts on the utilization of innovative powder metallurgical technique for developing high strength, high-temperature and tribocorrosion resistance metallic alloys and metal-ceramics composites for the extreme environments in the aerospace, mines, chemical and allied industries as well as for biomedical applications. He is currently the Head of the Centre for Nanomechanics and Tribocorrosion, and the Head of the School of Mining, Metallurgy and Chemical Engineering.

*For more information on this seminar, contact Amber Samaniego,  
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