Lockheed Martin funded Post-Doctoral Position: CARBON NANO STRUCTURED MATERIALS: FROM CHARACTERIZATION & MODELING TO INNOVATIVE PRODUCT DESIGN (Job Code: ME-PDSK022013)

Advanced Materials and Multi-functional Structures (**AM^{2}S**) group at Masdar Institute invites applications for the position of "Post-doctoral Research Fellow" as part of a multi-disciplinary collaborative project funded by **Lockheed Martin**. Successful candidate will work in the Institute Center for Energy (**iEnergy**) and will be based in Mechanical and Materials Engineering (**MME**) department. The main objective of the proposed research is to address the technological challenges connected to the integration of carbon nanotube array on carbon and glass fiber aerospace composites towards the realization of innovative solution. Specifically we aim at shedding light on the relation between carbon nanotube properties, their morphological distribution in the polymeric matrix and the macroscopic properties of the composite as a function of micro- and nano-structure (in flake, fiber and paper form). We aim at providing the elements that will enable the development of reliable manufacturing procedures and the integration of Carbon Nanostructure (CNS)-infusion process developed by Applied Nanostructured Solutions (ANS). This means that this inter-disciplinary research outcome would enable us to develop and design new hybrid, multi-functional materials for both structural and non-structural applications at several length scales. The Research Fellow will work on analytical and computational modeling, prototyping using 3D printing and experimental evaluation. He/She will interact with other principal investigators and their postdoctoral fellow who will work on micro- and nano-structural characterization of carbon nano-structured materials.

About Masdar Institute:

Masdar Institute (www.masdar.ac.ae) is the world's first graduate-level university dedicated to providing real-world solutions to issues of sustainability. The Institute's goal is to become a world-class research-driven graduate-level university, focusing on advanced energy and sustainable technologies. The Institute, which was created in collaboration with the Massachusetts Institute of Technology (MIT), integrates theory and practice to incubate a culture of innovation and entrepreneurship, working to develop the critical thinkers and leaders of tomorrow. Masdar Institute is situated in Masdar City (www.masdar.ae), an emerging global clean-technology cluster that aims to be one of the world's most sustainable urban developments, powered by renewable energy and providing students and researchers with a unique opportunity to live and learn in a true "living laboratory" environment.

Requirements:

The ideal candidate will have a PhD in a relevant discipline (Engineering or Applied Mathematics), and an established track record evident by publication in top quality journals. Expertise in one or more of the following areas is a must: analytical/computational solid mechanics; micro- and nano-composites; multi-scale modeling, biomimetic and/or soft matter, Rapid-prototyping and, experimental mechanics.

Package:

The position will offer a **very competitive** salary package (tax-free). The position will be for an initial duration of 12 months, extendable (up to 2 or 3 years) depending on funding and performance.

Application submittal information:

Application materials should include:

- applicant name and contact information,
- a curriculum vitae,
- statements of research and teaching interests,
- an application letter describing the applicant's current position and how his/her experience matches the position requirements,
- E-mail contact information for at least three references.

Materials must be submitted electronically as a single PDF file to **Dr. S. Kumar** (s.kumar@eng.oxon.org and skumaar@mit.edu) specifying the Job Code ME-PDSK022013. Review of applications will begin immediately and continue until the position is filled. The candidate is expected to start at the earliest possible date. While we thank all applicants for their interest, only those under consideration will be contacted for a follow-up interview.