

## Recent Publications

2009

- S. Joseph Sekhar, B. Raja and D. Mohan Lal, Thermal-fluid modeling of a Visi-Cooler, *Computational Thermal Sciences*, (In Press).
- L. Godson, B. Raja, D. Mohan Lal, and S. Wongwises, Enhancement of Heat Transfer using Nanofluids - An Overview, *Renewable and Sustainable Energy Reviews*, (In Press).
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- B.Raja, S.Joseph Sekhar and D.Mohan Lal (2010), Heat transfer correlation for a refrigerant mixture in a vertical helical coil evaporator, *Thermal Science*, (In Press).
- M. Sreekumar, M. Singaperumal, A generalized analytical approach to the coupled effect of SMA actuation and elastic deflection, *Smart Materials and Structures*, (In Press).
- Sreekumar M, Nagarajan T, Singaperumal M, Design of a Shape Memory Alloy Actuated Compliant Smart Structure: Elastic Approach, *ASME Journal of Mechanical Design*, (In Press).
- Sreekumar M, Nagarajan T, Singaperumal M, Application of Trained NiTi SMA Actuators in a Spatial Compliant Mechanism: Experimental Investigations, *Materials & Design*, Vol. 30, pp. 3020-3029, 2009.
- Ganesh Sundara Raman S, P Navaneethakrishnan, and R Gnanamoorthy, Influence of counterbody material on fretting wear behaviour of uncoated and diamond-like carbon-coated Ti-6Al-4, *Proc. IMechE, J. Engg Tribology* Vol. 222 Pt J: DOI: 10.1243/13506501JET509, 2009.
- M. Sreekumar, T. Nagarajan, M. Singaperumal, Kinetostatic Analysis of a Spatial Compliant Mechanism Actuated by Multiple Shape Memory Alloy Wires in Differential Form, *Mechanics of Advanced Materials and Structures*, (In Press).
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- M. Sreekumar, T. Nagarajan, M. Singaperumal, Experimental Investigations on the Large Deflection Capabilities of a Compliant Parallel Mechanism Actuated by SMA wires, *Smart Materials and Structures*, Dec. 2008, Vol. 17: 065025.
- Binsu J Kailath, Nandita DasGupta and Amitava DasGupta, Ultra thin Oxide by Chemical Vapour Oxidation of Si" *Transactions of Electro Chemical Society*, Vol. 22, No.1, pp 151-159, 2009.
- Naveen Kumar Vats, A Truncated Pyramid Non-Tracking Type Multipurpose Domestic Solar Cooker/ Hot Water, *Applied Energy*, (In Press).
- L. Vachhani, K. Sridharan and P. Meher, Efficient FPGA Realization of CORDIC with Application to Robotic Exploration, *IEEE Transaction on Industrial Electronics*, (In Press).
- M. Sreekumar, T. Nagarajan and M. Singaperumal, A smart compliant mechanism made of SMA actuators utilizing shape memory and superelastic effects, SPIE 16<sup>th</sup> International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, San Diego, USA 8-12 March 2009.
- M. Sreekumar, Shape Memory Alloys in Automotive Applications, Proc. of the National Conference on Design and Manufacturing Issues in Automotive and Allied Industries (IPRoMM 2009), pp. 105-115, Chennai, 10-11 July, 2009.
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- Narendra K. Babu, Leena Vachhani, V. Rajarao and K. Sridharan, `Performing High Level Tasks with a Sole Microcontroller-Based Mobile Robot, *IEEE Symposium on Industrial Electronics and Applications*, Kuala Lumpur, Oct 2009.
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- Naveen Kumar, Comparison of Exergy and Energy Efficiency of Truncated Pyramid Type Solar Cooker, *International Conference on Advances in Energy Research*, Dec 9-11, IIT Bombay, 2009.

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- S Kirupa Sankar, R Gnanamoorthy, R Velmurugan (2009) 'Effect of area, load, filler content on the sliding friction characteristics of polymer nanocomposites', *Proc. IMechE Pt J: J. Engg Tribology*, (in Press).
- M Mubarak Ali, Ganesh Sundara Raman S, Pathak SD, Gnanamoorthy R, (2009) 'Influence of plasma nitriding on fretting wear of Ti-6Al-4V', *Tribology Int*, (in Press).
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## 2008

- Kodeeswaran M, Gnanamoorthy R, Effect of strain rate on nanocrystalline surface formation in controlled ball impact process in AISI 304 SS, *Materials Letters*, 62 (30), pp. 4516-4518, 2008.
- Ramkumar A, Gnanamoorthy R, Axial fatigue behaviour of polyamide-6 and polyamide-6 nanocomposites at room temperature, *Composites Science and Technology*, 68 (15-16), pp. 3401-3405, 2008.
- N Govindarajan and R Gnanamoorthy, Computation of sliding friction and ratcheting of sintered and hardened steel under rolling contact fatigue, *ASME J of Tribology*, 130 (4), Art. no. 041602, 2008 .

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- Timmaraju V. M, Gnanamoorthy R, Krishna Kannan, Flexural Fatigue Behavior of Nylon 66 in Humid Conditions, *Proc. Int Symp For Research Scholars (ISRS – 08)*, Chennai, Dec. 10-12 2008.