Name : **Ramin Aghababaei**

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Education:

Ph.D.	**M.E.**	**National University of Singapore**	**2007- 2011***(expected)*
B.E. (Second honor)	**M.E.**	**University of Tehran**	**2002- 2006**

Research Interest

- Computational Elasticity and Inelasticity
- Multi scale (Nonlocal) theory
- Dislocation mechanics
- Mechanics of Li-ion battery

Awards and Honors

- Travel award for attending the 2010 US National Congress of Theoretical and applied Mechanics (US-NCTAM) , June 2010
- *NUS Scholarship* for Ph.D. of Engineering in NUS , 2007-2011
- Ranked **2nd** in the *Khwarizmi International Award* for First solar car of Iran, Jan 2007. (http://khwarizmi.irost.ir)
- Qualified as *exceptional talent* and awarded to enter Master Studies of ME. Department, University of Tehran, 2006.
- Ranked 2nd among graduates of 2006 in B.E. Degree in ME. Department, University of Tehran.
- Invited by *MIT Vehicle Design Summit* (VDS) to develop sustainable vehicles, June 2006. (http://www.vehicledesignsummit.org/website/)

Work experience

- Research Engineer, NUS (Singapore), Sep 2011-Present.
- Mechanical engineer at Iran Khodro Co. (Iran) 2006-2007.
- Teaching Assistant for the Course "Strength of Material (II)" (1st Semester 2005-2006)

  instructor : Dr. M.H. Naei, ME. Department, University of Tehran.
- Member of "Persian Gazelle" Solar Car Designing & Manufacturing Team of University of Tehran, (Iran) October 2004- September 2005.

- Teaching Assistant for the Course "Strength of Materials (I)" (2nd Semester 2004-2005) instructor : Dr. Afaghi, ME. Department, University of Tehran.

Publications

1- **Aghababaei, R** and Joshi, SP (2011) Grain size–inclusion size interaction in metal matrix composites using mechanism-based gradient crystal plasticity. *International Journal of Solids and Structures, 48 (18) 2585-2594.*

2- **Aghababaei, R**, Joshi, SP and Reddy, JN (2011) Nonlocal continuum crystal plasticity with internal residual stresses. *Journal of the Mechanics and Physics of Solids, 59, 713–731.*

3- **Aghababaei, R** and Reddy, JN (2009), Nonlocal Third-Order Shear Deformation Plate Theory with Application to Bending and Vibration of Plates. *Journal of Sound and Vibration, 326, 277-289.*

4- **Aghababaei, R** and Joshi, SP. A Crystal Plasticity Analysis of Length-scale Dependent Internal Stresses with Image Effects (*under review in Journal of the Mechanics and Physics of Solids*).

5- **Aghababaei, R** and Joshi, SP. Length-scale dependent composite response induced by thermal residual stresses (In prepration)

Conference Oral Presentations

1- **Aghababaei, R** and Joshi, SP (2011) Grain Size-Inclusion Size Interaction in Metal Matrix Composites at Moderate Strains. *International Conference on Materials for Advanced Technologies,* ICMAT, (June 26-July 1, 2010), Singapore.

2- **Aghababaei, R,** Joshi, SP and Reddy, JN (2010) A Nonlocal Continuum Theory Accounting for Size Dependent Bauschinger Effect. *9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics,* WCCM/APCOM 2010 (19 – 23 July 2010), Sydney, Australia

3-**Aghababaei, R** and Joshi, SP (2010) A Nonlocal Continuum Theory Accounting for Size Dependent Bauschinger Effect. *16th US National Congress on Theoretical and Applied Mechanics,* USNCTAM (June 27-July 2, 2010), Penn State University, Pennsylvania, USA

4-**Aghababaei R,** Joshi, SP *(Presentor)* and Zhang, J (2010) Length-Scale Dependent Response of Hierarchical Composites using Enriched Polycrystal Plasticity. 16th US National Con Congress on Theoretical and Applied Mechanics (June 27-July 2, 2010), Penn State University, Pennsylvania, USA.

Invited Seminars at Universities

1- **Aghababaei, R** (2010) Grain Size-Inclusion Size Interaction in Metal Matrix Composites at Moderate Strains, Johns Hopkins University, June 2010.

Peer-review activities

- Journal reviewer for Computational Materials Science
- Journal reviewer for Finite Elements in Analysis and Design
- Journal reviewer for Science and Engineering of Composite Materials

Computer skills

- Finite element software's (ABAQUS, ABAQUS/CAE)
- Computer Programming (Fortran , C++)
- Other programs: Maple, Matlab, Microsoft Office, Origin.

Undergraduate student's co-supervision (With Dr. Shailendra P. Joshi)

Student	***Topic***	***Year***
Chi Huan Nguyen	Finite element modeling of size dependent elasticity in materials	2010-2011
Shihua Zhang	Microstructural modeling of nano/micro heterogeneous composites	2010-2011
Piyush Mehta	Modeling of nano-crystalline materials	2009-2010
Meryl Song	Size-dependent crystal plasticity of heterogeneous materials	2009-2010

References

- ***Dr. Shailendra P. Joshi*** Shailendra@nus.edu.sg (65) 6516 4496
- ***Prof. JN Reddy*** jnreddy@tamu.edu (979) 862-2417
- ***Dr. Prakash Thamburaja*** mpept@nus.edu.sg (65) 6516 5539