

# Mahdieh T. Ebrahimi

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Department Of Mechanical Engineering  
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## EDUCATION

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### **PhD in Science** in *Theory and Simulation of Materials* 2013-2016

Department of Physics, Faculty of Natural Science, Imperial College London, UK  
Department of Mechanical Engineering, Imperial College London, UK  
Element Six Ltd, Global Innovation Center, Oxford, UK  
Supervisors: Prof Daniele Dini, Prof Adrian Sutton, Dr Daniel Balint, and Serdar Ozbayraktar  
*Dissertation: Discrete crack Dynamic*  
*New computational software is developed to model mixed mode fractures in solids.*

### **Master of Science** in *Theory and Simulation of Materials*, Awarded Distinction, 2013

Department of Physics, Faculty of Natural Science, Imperial College London, UK  
*Dissertation: Multiscale investigation of failure in bonded diamond aggregate*

### **Master of Science** in *Gravity and Astronomy Physics*, GPA: 3.2/4.0 via 32 credits, 2007

Department of Physics, Faculty of Natural Science, University of Tehran, Iran  
*Dissertation: Atmospheric Neutrino And Neutrino Oscillation In Super Kamiokande Detector*

### **Bachelor of Science** in *Solid State Physics*, GPA: 3.23/4.0 via 134 credits, 2004

Department of Physics, Faculty of Natural Science, University of Tehran, Iran

## Experience

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- Research
  - Research Assistant, 2009-2010, Masdar Institute (Collaborative program with Massachusetts Institute of Technology (MIT)), Abu Dhabi, UAE.
    - *Simulation of Fabrication of One-Dimensional Photonic Crystal for Maximum Reflection on Thermal Photovoltaic (TPV).*
    - *Light trapping enhancement in thin-film solar cells using photonic crystal Bragg reflector and grating.*
    - *Dye synthesised Solar cell.*
- Teaching
  - Graduate Teaching Assistant, 2013-2015, Mathematics, Material Department, Imperial College London.
  - Teaching Assistant, 2004-2005, Advanced Mathematical Physics, Tehran University, Iran.
- Management
  - Co-organiser of TSM Annual Conference, June 2016, Imperial College London.
  - CDT-TSM student representative, 2015-2016, Imperial College London.
  - Organiser of the Masterclass, June 2015, “Material Challenge Lecture”, by Serdar Ozbayraktar from Element Six, Imperial College London.
  - Co-organiser of Phoenix high school mentoring for A-level physics students, 2013, London.
  - Student Council, 2004, Tehran University, Iran.

## COMPUTER EXPERIENCE

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- Visual C/C++
- Matlab
- Mathematica
- LAMMPS (molecular dynamic simulator package SANDIA)
- Meep (Photonic crystal software package MIT)
- Latex

## Prizes/ Awards

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- Certificate of Distinction in MSc in Theory and Simulation of Material, 2013, Imperial College London.
- Honours student in the bachelor degree, 2004, Tehran University, Tehran, Iran.
- Top 1% in the Iran's M.Sc. Entrance Examinations, 2nd Quarter. 2004
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## Invited talks/ WORKSHOP

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- Invited Talks
  - Ebrahimi, M.T., July 2016 (speaker), WCCM XII & APCOM VI, The 12th World Congress on Computational Mechanics and The 6th Asia Pacific Congress on Computational Mechanics, Seoul, South Korea.
  - Ebrahimi, M.T., June 2016 (speaker), ECCOMAS Congress, European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece.
  - Ebrahimi, M.T., June 2016 (speaker), TYC Postgraduate Student Day, Imperial College London.
  - Ebrahimi, M.T., June 2016 (speaker), Diamond Conference 2016, Warwick University, Warwick, UK.
  - Ebrahimi, M.T., June 2015 (speaker), Diamond Conference 2015, Warwick University, Warwick, UK.
- Workshops
  - Future Leaders, Oct 2016, London, UK
  - The LERU Doctoral Summer School, 13-17 July 2015, “Sharing Excellence – The Value of Knowledge Exchange”, University of Oxford, Oxford, UK
  - Career Course, 2-3 Feb 2015, “PhD - What Next? ”, Cumberland Lodge, Windsor, UK.
  - Science Communication Workshop, 7-9 Jan 2015, Cumberland Lodge and the BBC, London.
  - Business and Enterprise Workshop, 26-28 Feb 2014, Business School, Imperial College London.

## FUNDING

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- £85K Industrial studentship from Element Six Ltd, Global Innovation Center, Oxford, UK (2013)
- £10K from Masdar Institute studentship, Abu Dhabi, UAE (2009)

## REFERENCES

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Professor Adrian Sutton  
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