

# Eddwi Hesky Hasdeo

CV last update on August 17, 2016



## PhD students

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## Personal

Indonesian. Male. Single. Born in Batu, East Java (Indonesia), on January 25, 1990.  
Able to speak and write in English (*fluent*) and Indonesian (*native*). Understand basic Japanese.

## Education

From	To	Position	Institution, City	Country	Remarks
10.2013	to date	PhD student	Tohoku University, Sendai	Japan	Doctoral viva July 2016
07.2015	08.2015	Visiting Researcher	MIT, Cambridge	USA	Visited Prof. M. S. Dresselhaus
10.2011	09.2013	Master student	Tohoku University, Sendai	Japan	Master of Science
08.2007	07.2011	Undergraduate student	Brawijaya University, Malang	Indonesia	Bachelor of Science

## Papers published/submitted

16. **E. H. Hasdeo**, A. R. T. Nugraha, M. Dresselhaus, R. Saito: "Fermi energy dependence of first-and second-order Raman spectra in graphene: Kohn anomaly and quantum interference effect", *Phys. Rev. B* **94**, 075104 (2016).
15. D. Zhang, J. Yang, **E. H. Hasdeo**, C. Liu, K. Liu, R. Saito, Y. Li: "Multiple Electronic Raman Scatterings in a Single Metallic Carbon Nanotube", *Phys. Rev. B* **93**, 245428 (2016).
14. N. T. Hung, **E. H. Hasdeo**, A. R. T. Nugraha, M. Dresselhaus, R. Saito: "Quantum effects on thermoelectric power factor of low-dimensional semiconductors", *Phys. Rev. Lett.* **117**, 036602 (2016).
13. A. R. T. Nugraha, **E. H. Hasdeo**, R. Saito: "Selective coherent phonon mode generation in single wall carbon nanotubes", [arXiv:1605.03114](https://arxiv.org/abs/1605.03114), *Submitted*.
12. M. S. Ukhtary, A. R. T. Nugraha, **E. H. Hasdeo**, R. Saito: "Broadband Transverse Electric Surface Wave in Silicene", *Appl. Phys. Lett.* **109**, 063103 (2016).
11. X. Ling, S. Huang, **E. H. Hasdeo**, L. Liang, W. M. Parkin, Y. Tatsumi, A. R. T. Nugraha, A. A. Puretzky, P. M. Das, B. G. Sumpter, D. B. Geohegan, J. Kong, R. Saito, M. Drndic, V. Meunier, M. S. Dresselhaus: "Anisotropic Electron-Photon and Electron-Phonon Interactions in Black Phosphorus", *Nano Lett.*, **16**, 2260 (2016).
10. P. Ayria, A. R. T. Nugraha, **E. H. Hasdeo**, T. R. Czank, S. Tanaka, R. Saito: "Photon energy dependence of angle-resolved photoemission spectroscopy in graphene", *Phys. Rev. B* **92**, 195148 (2015).
9. N. T. Hung, A. R. T. Nugraha, **E. H. Hasdeo**, M. S. Dresselhaus, R. Saito: "Diameter dependence of thermoelectric power of semiconducting carbon nanotubes", *Phys. Rev. B* **92**, 165426 (2015).
8. R. Saito, A. R. T. Nugraha, **E. H. Hasdeo**, S. Siregar, H. Guo, T. Yang: "Ultraviolet Raman spectroscopy of graphene and transition-metal dichalcogenides", *Phys. Status Solidi B* **252**, 2363 (2015)

7. M. S. Ukhtary, **E. H. Hasdeo**, A. R. T. Nugraha, R. Saito: "Fermi energy-dependence of electromagnetic wave absorption in graphene", *APEX* **8**, 055102 -1-4, (2015)
6. A. R. T. Nugraha, **E. H. Hasdeo**, G. D. Sanders, C. J. Stanton, R. Saito: "Origin of coherent G-band phonon spectra in single wall carbon nanotubes", *Phys. Rev. B* **91**, 045406 (2015).
5. H.-L. Liu, S. Siregar, **E. H. Hasdeo**, Y. Kumamoto, C.-C. Shen, C.-C. Cheng, L.-J. Li, R. Saito, S. Kawata: "Deep-ultraviolet Raman scattering studies of monolayer graphene thin films", *Carbon* **81**, 807-813 (2015).
4. **E. H. Hasdeo**, A. R. T. Nugraha, R. Saito, M. S. Dresselhaus: "Breit-Wigner-Fano lineshapes in Raman spectra of graphene", *Phys. Rev. B* **90**, 245140 (2014).
3. **E. H. Hasdeo**, A. R. T. Nugraha, K. Sato, R. Saito, M. S. Dresselhaus: "Electronic Raman scattering and the Fano resonance in metallic carbon nanotubes", *Phys. Rev. B* **88**, 115107 (2013).
2. A. R. T. Nugraha, E. Rosenthal, **E. H. Hasdeo**, G. D. Sanders C. J. Stanton, M. S. Dresselhaus, R. Saito: "Excitonic effects on coherent phonon dynamics in single wall carbon nanotubes", *Phys. Rev. B* **88**, 075440 (2013).
1. **E. H. Hasdeo**, M. Nurhuda, Abdurrouf: "The Optical Low-Pass Filter Gain of a Ring Cavity", *IJBAS-IJENS* **01**, 63-68 (2012).

## Colaborative research

Visited Prof. Mildred S. Dresselhaus (MIT, Cambridge MA), "Raman spectroscopy and thermoelectricity of atomic layered systems" (2015.07.24-8.10)

## Teaching and Research Assistantships

**Teaching assistant** for Statistical Physics II exercise (October 2013- February 2014), Department of Physics, Tohoku University. Instructor: Prof. Wataru Izumida.

**Teaching assistant** for Statistical Physics I exercise (April 2014- September 2014), Department of Physics, Tohoku University. Instructor: Prof. Wataru Izumida.

## Skills and Expertise

Programming language: Fortran

Calculation skills: Tight binding method, Group theory analysis, First-principles package (Quantum Espresso)

Other IT skills: Administrator of webserver, Unix,  $\LaTeX$ , Mathematica, Phyton, Matlab

## References

### **Prof. Riichiro Saito**

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