

# Ersin HÜSEYİNOĞLU, Ph.D.

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## Skills

Clean Room	5+ years of experience in a Research Center Clean Room Facility involving (but not limited to) the following equipment; Photolithography (UV-Lithography), Spin Coating (Photoresist Coatings), Wafer Dicing Saw, Thermal Coating, Sputter Coating, Plasma Etching (ICP, Asher), Chemical Etching (involving BOE), Scanning Electron Microscope (SEM).
Optics Laboratory	5+ years of experience in the Research Center Optics Laboratory involving (but not limited to); Optical Setups, Optical Components, Optical Microscopes, Oscilloscopes, Optical Power Meters, Optical Fibers (& Fiber Cleaving, Splicing), Optical Coupling (mostly Evanescent Field Coupling from Fiber to Optical Resonators).
Research & Development	Literature Search, Scientific Writing, Research & Development, Component Design via SolidWorks. Apart from the aforementioned skills I gained from my past experiences, I am currently improving myself in project management, proposal writing (for local and European funding bodies)
Languages	Turkish (Native), English (Full Professional Proficiency - C1) - Türkiye-ÖSYM YDS-İngilizce (English): 92.5 (Validity: Valid until November 22, 2029), - TOEFL iBT Score 99 (Validity: Expired 10 years ago)
Computer	MS Office, OriginLab, MatLab, LabVIEW, COMSOL, SolidWorks, C & C++, Qt, HTML, L <sup>A</sup> T <sub>E</sub> X Typesetting and Publishing.
People & Communication	I have experience as a team member and leader; therefore, I have adequate people and communication skills, involving knowledge transfer, people management and organization.

## Education

2012 – 2022	<b>Ph.D., Bilkent University</b> Materials Science and Nanotechnology, CGPA : 3.80 Thesis title: <i>Tuning the Resonances of High-Q-Factor Whispering Gallery Mode Resonators for Optoelectronic Applications</i>
2008 – 2011	<b>M.Sc., Koç University</b> Materials Science and Engineering, CGPA : 3.39 Thesis title: <i>Elastic light scattering from silica and silicon microresonators</i>
2003 – 2009	<b>B.Sc., Yeditepe University</b> Electrical and Electronics Engineering, CGPA : 3.06 Double Major
2005 – 2005	<b>B.Sc., Rijksuniversiteit Groningen</b> Physics ERASMUS Student Exchange Program
2002 – 2007	<b>B.Sc., Yeditepe University</b> Physics, CGPA : 3.42

## Employment History

- 2024 – Present  **Part Time Instructor**, Yeditepe University  
Instructor Duties: Physics I course instructor duties include the preparation of course material, giving lectures, and examinations.
- 2023 – 2025  **R&D Engineer**, IRADETS İnovatif Radyasyon Dedektör Sistemleri A.Ş.  
R&D Engineer & Project Management Duties: Engineering tasks for various R&D projects, software development, software debugging, software manual preparation, project documentation, workflow, determining project tasks and timeline, Leading the project.
- 2012 – 2019  **Teaching Assistant**, Materials Science and Nanotechnology, Graduate School of Science and Engineering, Bilkent University.  
Teaching Assistant Duties: Physics I Lab., Physics II Lab., Micro and Nanofabrication, Concepts in Materials Science
- 2017 – 2018  **R&D Engineer**, Devintek Biyoteknoloji Ar-Ge San. ve Tic. Ltd. Şti.  
R&D Engineer Duties: SolidWorks design of a biomedical sensor
- 2008 – 2011  **Teaching Assistant**, Materials Science and Engineering, Graduate School of Science and Engineering, Koç University.  
Teaching Assistant Duties: General Chemistry Lab.
- 2005 – 2005  **Intern** SİMKAL Kalibrasyon ve Danışmanlık San. ve Tic. Ltd. Şti. - Siemens Türkiye  
Duties: Calibration of general measurement equipment.

## Research Publications







*h*-index: 4

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## Journal Articles

- 1 **Hüseyinoğlu, E.**, Özgür, E., Bakan, G., Ortaç, B., & Dana, A. (2020). Permanent tuning of optical resonant modes of chalcogenide-coated microresonators. *Appl. Opt.*, 59(16), 4814–4820.  
 doi:10.1364/AO.392924
- 2 Ozgur, E., **Hüseyinoğlu, E.**, & Dana, A. (2017). Wafer-scale arrays of high-q silica optical microcavities. *Appl. Opt.*, 56(9), 2489–2493.  doi:10.1364/AO.56.002489
- 3 Ozgur, E., Toren, P., Aktas, O., **Hüseyinoğlu, E.**, & Bayindir, M. (2015). Label-free biosensing with high selectivity in complex media using microtoroidal optical resonators. *Scientific Reports*, 5.  
 doi:10.1038/srep13173
- 4 Aktas, O., Ozgur, E., Tobail, O., Kanik, M., **Hüseyinoğlu, E.**, & Bayindir, M. (2014). A new route for fabricating on-chip chalcogenide microcavity resonator arrays. *Advanced Optical Materials*, 2(7), 618–625.  doi:https://doi.org/10.1002/adom.201400072
- 5 Khudiyev, T., **Hüseyinoğlu, E.**, & Bayindir, M. (2014). Non-resonant mie scattering: Emergent optical properties of core-shell polymer nanowires. *Scientific Reports*, 4, 4607 1–10.  
 doi:https://doi.org/10.1038/srep04607
- 6 Ince, R., & **Hüseyinoğlu, E.** (2007). Decoupling refractive index and geometric thickness from interferometric measurements of a quartz sample using a fourth-order polynomial. *Appl. Opt.*, 46(17), 3498–3503.  doi:10.1364/AO.46.003498

## Conference Proceedings




- 1 Alpat, A. B., Bartolini, G., Wusimanjiang, T., Raheem, H., **Hüseyinoğlu, E.**, Bayram, R., ... Gigli, S. (2024). Mradsim (matter-radiation interactions simulations). In *75th international astronomical congress (iac)* (IAC-24-A-1.5.8).
- 2 Alpat, A. B., Bozkurt, A., Bartolini, G., Bayram, R., **Hüseyinoğlu, E.**, Shah, A. I., ... Gigli, S. (2024). Iradcal: A monolithic inorganic scintillator and thin scintillators to measure low energy electron, proton and heavy ion albedo spectrums from lunar surface. In *75th international astronomical congress (iac)* (IAC-24-A3, IP, 193).
- 3 **Hüseyinoğlu, E.**, Özgür, E., Bakan, G., Ortaç, B., & Dana, A. (2021). Resonant mode tuning of Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> coated silica microresonators. In *2021 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC)*.
- 4 **Hüseyinoğlu, E.**, Murib, M. S., Serpenguzel, A., & Beccherelli, R. (2009). Ruby microsphere and liquid crystal based tunable optical filter. In *2009 IEEE LEOS Annual Meeting Conference Proceedings* (pp. 191-192). doi:10.1109/LEOS.2009.5343309

## Awards and Achievements

- 2012  **Scholarship**, Received Ph.D. Scholarship ( 60.000 US\$) from Scientific and Technological Research Institution of Turkey (TÜBİTAK).
- 2007  **Graduation, Top Student**, Graduated from Yeditepe University Physics B.Sc. Program as Top student.

## Miscellaneous




### Information & Certificates

-  Nationality: Republic of Turkey (Compulsory Military Service is completed)
-  Driving License: M, B1, B Classes
-  Passport

### Social Activities

- 2016-2017  Former/Founding Member of **Bilkent University Nanoscience Society**
- 2015  Participated the **2nd Ankara Science Slam** organized by German Embassy in Turkey, Siemens and Bilkent University.
- 2014  Attended the **1st Ankara Science Slam** organized by German Embassy in Turkey and İpek University.
- 2007-2008  Former Member of **Yeditepe University Search and Rescue Club (YÜDAK)**. Attended several Earthquake and Fire trainings and drills in Local Fire Departments.
- 2004-2005  Former Member of **Yeditepe University Solar Car Team (YÜGAT)**. 3rd Place in **1st TÜBİTAK Solar Car Race (Formula-G)** as a team.
- 2003-2004  Former/Founding Member of **Yeditepe University Science and Technology Club**.

### Hobbies & Interests

-  Interested in Science-Fiction
-  Search & Rescue Trainings & Drills (possibly as a team member), Camping & Nature, Basketball
-  Massively Multiplayer Online Role-Playing Game: Eve Online.

## References

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