**HATICE CEYLAN KOYDEMIR, Ph.D.**
Assistant Project Scientist - UCLA
HHMI Mentor – The Ozcan Research Group
NSF PATHS-UP ERC Scholar

Lab Address: UCLA Electrical and Computer Engineering Dept., Engr.IV, 14-128B, Los Angeles, CA, 90095, USA
Email: hceylan@ucla.edu
Webpages: http://org.ee.ucla.edu/hhmi/hhmi-mentors/hatice-ceylan-koydemir
https://www.linkedin.com/in/hatice-ceylan-koydemir-06914246/

## EDUCATION

- 2013, Ph. D. in Chemical Engineering, Middle East Technical University (METU), Ankara, Turkey
- 2007, M.Sc. in Chemical Engineering, METU, Ankara, Turkey
- 2004, Minor in Food Engineering, METU, Ankara, Turkey
- 2004, B. Sc. in Environmental Engineering, METU, Ankara, Turkey

## RESEARCH EXPERIENCE

- Aug 2018 – Present, Assistant Project Scientist, Electrical and Computer Engineering, University of California, Los Angeles, CA, USA
- Aug 2013 – Aug 2018, Postdoctoral scholar, Electrical and Computer Engineering, University of California, Los Angeles, CA, USA
- Feb 2013 – Aug 2013, Postdoctoral scholar, Electrical and Electronics Engineering, METU, Ankara, Turkey
- Nov 2010 – Aug 2013, Scientific project expert, METU-MEMS Research and Application Center, Ankara, Turkey
- Dec 2007 – Oct 2010, Research assistant, Graduate School of Natural and Applied Sciences, METU, Ankara, Turkey

## DISSERTATIONS

- Ph.D. Thesis: MEMS based electrochemical DNA sensor to detect methicillin resistant *Staphylococcus aureus* (MRSA) and vancomycin resistant *Enterococcus* species
  Supervisors: Prof. Canan Özgen (METU, Chemical Engineering)
  Prof. Haluk Külah (METU, Electrical and Electronics Engineering)
  This work comprises design, fabrication, and implementation of a micro electrochemical sensor for early diagnosis of MRSA infection using MEMS technology and surface chemistry procedures.

- M.Sc. Thesis: Control and simulation studies for a multicomponent batch packed distillation column
  Supervisor: Prof. Canan Özgen (METU, Chemical Engineering)

## AWARDS & FELLOWSHIPS

- 2013, METU Ph.D. Thesis of the Year Award, given by METU Prof. Dr. Mustafa N. Parlar Education and Research Foundation
- 2013, Dr. Haluk Sanver Technology Award, given by Department of Chemical Engineering, METU
- 2011, Prof. Dr. Hasan Orbey, Ph.D. Thesis Award, given by Department of Chemical Engineering, METU
- 2011, The Scientific and Technological Research Council of Turkey Incentive Award for the International Scientific Publications, given by TUBITAK
- 2011, METU Publication Award, given by METU
- 2010, The Best Paper Award in the 15$^{th}$ National Biomedical Engineering Conference
- 2007 – 2012, The Scientific and Technological Research Council of Turkey Ph.D. Fellowship
- 2005 – 2007, The Scientific and Technological Research Council of Turkey M. Sc. Fellowship

## EDITORIAL BOARDS & PROFESSIONAL SERVICE

- 2019, Session Chair, SPIE Photonics West, Tomographic Methods.
- 2019, Technical Program Committee Member, IEEE Global Humanitarian Technology Conference

## PUBLICATIONS

### Patents

1. A. Ozcan, Y. Zhang, H. Ceylan Koydemir, "Motility-based label-free detection of parasites in bodily fluids using holographic speckle analysis and deep learning", submitted disclosure document through UCLA Tech Transfer Office, filed in July 2018.
2. A. Ozcan, B. Cortazar, H. Ceylan Koydemir, D. Tseng, S. Feng, "Method and device for quantification of plant chlorophyll content", issued on Jan 2019.
3. H. Ceylan Koydemir, H. Külah, C. Özgen, "Micro electrochemical sensor", International patent application was filed in 2012.

### Book chapter

1. H. Ceylan Koydemir, H. Külah, C. Özgen, "Thin films and biosensors", in "Thin Films and Coatings in Biology", Editors: S. Nazarpour, M. Chaker, Springer, 2014.

### Articles

1. T. Ghonge, H. Ceylan Koydemir, E. Valera, G.Berger, C. Garcia, N. Nawar, J. Tiao, G. Damhorst, A.Ganguli, U. Hassan, A. Ozcan, R.Bashir, "Smartphone-imaged, microfluidic technique for measuring CD64 expression from whole blood", Analyst (Under Review)
2. J. W. Snow, H. Ceylan Koydemir, D. K. Karinca, K. Liang, D. Tseng, A. Ozcan, "Rapid imaging, detection, and quantification of *Nosema ceranae* spores in honey bees using mobile phone based fluorescence microscopy", Lab on a Chip, 2019, DOI:10.1039/C8LC01342J.
3. H. Ceylan Koydemir, J.T. Coulibaly, D. Tseng, I. I. Bogoch, A. Ozcan, "Design and validation of a wide-field mobile-phone microscope for the label-free diagnosis of *Schistosomiasis*", Travel Medicine and Infectious Disease, 2018, DOI: 10.1016/j.tmaid.2018.12.001.

4. V. Müller, J. Sousa, H. Ceylan Koydemir, M. Veli, D. Tseng, L. Cerqueira, A. Ozcan,N. Azevedo, F. Westerlund, "Identification of pathogenic bacteria in complex samples using a smartphone based fluorescence microscope", RSC Advances, 2018, DOI: 10.1039/C8RA06473C.
5. Y. Zhang, H. Ceylan Koydemir *(co-first author)*, M. Schimogowa, et al. "Motility-based label-free detection of parasites in bodily fluids using holographic speckle analysis and deep learning", Nature: Light Science and Applications, 2018, https://doi.org/10.1038/s41377-018-0110-1.
6. Z. Gorocs, M. Tamamitsu, V. Bianco, P. Wolf, S. Roy, K. Shindo, K. Yanny, Y. Wu, H. Ceylan Koydemir, Y. Rivenson, and A. Ozcan, "A deep learning-enabled portable imaging flow cytometer for cost-effective, high-throughput and label-free analysis of natural water", Nature: Light Science and Applications, 2018, DOI:10.1038/s41377-018-0067-0.
7. Y. Wu, A. Calis, Y. Luo, C. Chen, M. Lutton, Y. Rivenson, X. Lin, H. Ceylan Koydemir, Y. Zhang, H. Wang, Z. Göröcs, and A. Ozcan, "Label-freebio-aerosol sensing using mobile microscopy and deep learning", ACS Photonics, 2018, DOI: 10.1021/acsphotonics.8b0110.
8. H. Ceylan Koydemir and A. Ozcan, "Smartphones Democratize Advanced Biomedical Instruments and Foster Innovation", Clinical Pharmacology & Therapeutics, 2018, DOI: 10.1002/cpt.1081.
9. Y. Rivenson, H. Ceylan Koydemir *(co-first author)*, H. Wang, Z. Wei, Z. Ren, H. Günaydın, Y. Zhang, Z. Göröcs, K. Liang, D. Tseng, and A. Ozcan, "Deep learning enhanced mobile-phone microscopy", ACS Photonics, 2018, DOI:10.1021/acsphotonics.8b00146.
10. H. Ceylan Koydemir and A. Ozcan, "Wearable and implantable sensors for biomedical applications", Annual Review of Analytical Chemistry, 2018, DOI: 10.1146/annurev-anchem-061417-125956.
11. H. Ceylan Koydemir, S. Feng, K. Liang, R. Nadkarni, P. Benien, and A. Ozcan, "Comparison of supervised machine learning algorithms for waterborne pathogen detection using mobile-phone fluorescence microscopy," Nanophotonics, 2017, DOI: nanoph-2017-0001
12. H. Ceylan Koydemir, A. Ozcan, "Mobile phones create new opportunities for microbiology related research and clinical applications", Future Microbiology, 2017, DOI: 10.2217/fmb-2017-0046
13. I.I. Bogoch, H. Ceylan Koydemir, D. Tseng, R.K.D. Ephraim, E. Duah, J. Tee, J.R. Andrews, and A. Ozcan, "Evaluation of a mobile phone based microscope for screening of *Schistosoma haematobium* infection in rural Ghana", 2017, DOI: https://doi.org/10.4269/ajtmh.16-0912.
14. Z. Göröcs, Y. Rivenson, H. Ceylan Koydemir, D. Tseng, T. L. Troy, V. Demas, and A. Ozcan, "Quantitative fluorescence sensing through highly autofluorescent, scattering, and absorbing media using mobile microscopy", ACS Nano, 2016. DOI: 10.1021/acsnano.6b05129.
15. B. Cortazar, H. Ceylan Koydemir *(co-first author)*, D. Tseng, S. Feng and A. Ozcan, "Quantification of plant chlorophyll content using Google Glass," Lab on a Chip, 2015, DOI: 10.1039/c4lc01279h
16. H. Ceylan Koydemir, Z. Göröcs, D. Tseng, B. Cortazar, S. Feng, R.Y.L. Chan, J. Burbano, E. McLeod, and A. Ozcan, "Rapid imaging, detection and quantification of *Giardia lamblia* cysts using mobile-phone based fluorescent microscopy and machine learning," Lab on a Chip, 2015, DOI: 10.1039/C4LC01358A, (Selected as cover article of the journal, and it is a part of themed collection: Lab on a Chip Recent HOT articles)
17. H. Ceylan Koydemir, H. Külah, A. Alp, A. Uner, G. Hasçelik, C. Özgen, "A fully microfabricated electrochemical sensor and its implementation for detection of methicillin resistance in *Staphylococcus aureus*", IEEE Sensors, 2014. DOI: 10.1109/JSEN.2014.2305152

18. H. Ceylan Koydemir, H. Külah, C. Özgen, "Solvent compatibility of parylene C film layer", JMEMS, Vol. 23, No.2, 298-307, 2014. DOI: 10.1109/JMEMS.2013.2273032
19. H. Ceylan Koydemir, H. Külah, C. Özgen, A. Alp, G. Hasçelik, "MEMS biosensors for detection of methicillin resistant *Staphylococcus aureus*", Biosensors and Bioelectronics, 2011. DOI: 10.1016/j.bios.2011.07.071, (In the list of most downloaded articles between October 2011 - February 2012)

**Conference proceedings/presentations**

1. Y. Wu, A. Calis, Y. Luo, C. Chen, M. Lutton, Y. Rivenson, X. Lin, H. Ceylan Koydemir, Y. Zhang, H. Wang, Z. Göröcs, A. Ozcan, "Label-free Bio-aerosol Sensing Using On-Chip Holographic Microscopy and Deep Learning", OSA Conference on Lasers and Electro-optics (CLEO'19), May 5-10, 2019, San Jose, CA USA.
2. Z. S. Göröcs, M. Tamamitsu, V. Bianco, P. Wolf, S. Roy, K. Shindo, K. Yanny, Y. Wu, H. Ceylan Koydemir, Y. Rivenson, A. Ozcan, "Portable Imaging Flow-cytometer Using Deep Learning-based Holographic Image Reconstruction", OSA Conference on Lasers and Electro-optics (CLEO'19), May 5-10, 2019, San Jose, CA USA.
3. Y. Zhang, H. Ceylan Koydemir, M. Shimogowa, S. Yalcin, K. Hill, A. Ozcan, " High-Throughput and Label-Free Detection of Motile Parasites in Bodily Fluids Using Lensless Time-Resolved Speckle Imagin" OSA Conference on Lasers and Electro-optics (CLEO'19), May 5-10, 2019, San Jose, CA USA.
4. J. Snow, H. Ceylan Koydemir, D. Karinca, K. Liang, D. Tseng, A. Ozcan, "Honey bee parasite detection using a smartphone", The Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), Feb 21-23, 2019, Washington, DC, USA.
5. Y. Wu, A. Calis, Y. Luo, C. Chen, M. Lutton, Y. Rivenson, X. Lin, H. Ceylan Koydemir, Y. Zhang, H. Wang, Z. Göröcs, A. Ozcan, "Deep-learning enabled label-free bio-aerosol sensing using mobile microscopy", SPIE Photonics West 2019, Optics and Biophotonics in Low Resource Settings V, February 2-7, 2019, San Francisco, CA, USA.
6. Y. Rivenson, H. Ceylan Koydemir, H. Wang, Z. Wei, Z. Ren, H. Gunaydin, Y. Zhang, Z. Gorocs, K. Liang, D. Tseng, A. Ozcan, "Deep learning enhances mobile microscopic imaging", SPIE Photonics West 2019, Optics and Biophotonics in Low Resource Settings V, February 2-7, 2019, San Francisco, CA, USA.
7. Z. S. Göröcs, M. Tamamitsu, V. Bianco, P. Wolf, S. Roy, K. Shindo, K. Yanny, Y. Wu, H. Ceylan Koydemir, Y. Rivenson, A. Ozcan, "Deep learning-based label-free imaging flow cytometry for on-site analysis of water samples", SPIE Photonics West 2019, Optics and Biophotonics in Low Resource Settings V, February 2-7, 2019, San Francisco, CA, USA
8. J. Snow, H. Ceylan Koydemir, D. Karinca, K. Liang, D. Tseng, A. Ozcan, "Bee parasite detection using a smartphone", SPIE Photonics West 2019, Optics and Biophotonics in Low Resource Settings V, February 2-7, 2019, San Francisco, CA, USA.
9. Y. Zhang, H. Ceylan Koydemir, M. Shimogowa, S. Yalcin, K. Hill, A. Ozcan, "Time-resolved holographic speckle analysis for label-free and high-throughput detection of motile parasites in bodily fluids", SPIE Photonics West 2019, Optics and Biophotonics in Low Resource Settings V, February 2-7, 2019, San Francisco, CA, USA.
10. Y. Rivenson, H. Ceylan Koydemir, H. Wang, Z. Wei, Z. Ren, H. Gunaydin, Y. Zhang, Z. Gorocs, K. Liang, D. Tseng, A. Ozcan, "Deep learning bridges the gap between mobile and laboratory

grade microscopes", BMES (Biomedical Engineering Society) Annual Meeting, Advances in Sensing and Imaging Technology, October 17-20, 2018, Atlanta, Georgia, USA.

11. Y. Zhang, H. Ceylan Koydemir, M. Shimogowa, S. Yalcin, K. Hill, A. Ozcan, "Label-free and high-throughput detection of motile parasites from bodily fluids using time-resolved speckle imaging", BMES (Biomedical Engineering Society) Annual Meeting, Advances in Sensing and Imaging Technology, October 17-20, 2018, Atlanta, Georgia, USA.
12. T. Ghonge, H. Ceylan Koydemir, E. Valera, J. Berger, A. Ganguli, G. Damhorst, A. Ozcan, and R. Bashir, "A smartphone-assisted microfluidic assay for measuring CD64 expression on neutrophils in suspected sepsis-positive patients", BMES (Biomedical Engineering Society) Annual Meeting, Nanotechnologies for Global Health and Infectious Diseases, October 17-20, 2018, Atlanta, Georgia, USA.
13. Y. Rivenson, H. Ceylan Koydemir, H. Wang, Z. Wei, Z. Ren, H. Gunaydin, Y. Zhang, Z. Gorocs, K. Liang, D. Tseng, A. Ozcan, Deep learning improves mobile-phone microscopy, SPIE Optical Engineering and Applications 2018, August 19-23, 2018, San Diego, CA, USA
14. H. Wang, Y. Rivenson, H.C. Koydemir, Z. Wei, Z. Ren, H. Gunaydin, Y. Zhang, Z. Gorocs, K. Liang, D. Tseng and A. Ozcan, "Deep learning enhances mobile microscopy," OSA Imaging and Applied Optics Congress, June 25-28, 2018, Orlando, Florida, USA (Postdeadline Paper).
15. Y. Rivenson, H. Ceylan Koydemir, H. Wang, Z. Wei, Z. Ren, H. Günaydın, Y. Zhang, Z. Göröcs, K. Liang, D. Tseng, A. Ozcan, "Deep learning improves smartphone microscopy using a convolutional neural network," 20th TechConnect World Innovation Conference, Chemical, Physical & Bio-Sensors Symposium, May 13-16, 2018, Anaheim, CA, USA.
16. Z. Göröcs, Y. Rivenson, H. Ceylan Koydemir, D. Tseng, T.L. Troy, V. Demas and A. Ozcan, "Compact imaging system for quantitative fluorescence sensing through autofluorescent, scattering and absorbing media", SPIE Photonics West 2018, Optics and Biophotonics in Low Resource Settings III, 27 January – 1 February 2018, San Francisco, CA, USA, Paper # 10485-23
17. Z. Göröcs, Y. Rivenson, H. Ceylan Koydemir, D. Tseng, T.L. Troy, V. Demas and A. Ozcan, "Quantitative fluorescence sensing through an autofluorescent skin tissue phantom using a portable microscope," 18th Annual UC Systemwide Bioengineering Symposium, June 28-30, 2017, University of California, Los Angeles, CA, USA
18. H. Ceylan Koydemir, I. I. Bogoch, D. Tseng, R.K.D. Ephraim, E. Duah, J. Tee, J. R. Andrews, and A. Ozcan, "Field testing of a mobile phone microscope for screening of schistosomiasis in Sub-Saharan Africa," 18th Annual UC Systemwide Bioengineering Symposium, June 28-30, 2017, University of California, Los Angeles, CA, USA
19. H. Ceylan Koydemir, S. Feng, K. Liang, D. Tseng, R. Nadkarni, P. Benien, and A. Ozcan, "Automated detection and enumeration of waterborne pathogens using mobile phone microscopy and machine learning," OSA Conference on Lasers and Electro-optics (CLEO '17), May 14-19, 2017, San Jose, CA, USA
20. Z. Göröcs, Y. Rivenson, H. C. Koydemir, D. Tseng, T. Troy, V. Demas, and A. Ozcan "Mobile microscope for quantitative fluorescence sensing through highly autofluorescent and scattering media" OSA Conference on Lasers and Electro-optics (CLEO '17), May 14-19, 2017, San Jose, CA USA
21. H.C. Koydemir, S. Feng, K. Liang, R. Nadkarni, D. Tseng, P. Benien and A. Ozcan, "Rapid detection and quantification of waterborne pathogens using smartphone based fluorescence microscopy and machine learning," The Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), March 2-4, 2017, Washington, DC, USA

22. H. Ceylan Koydemir, S. W. Feng, K. Liang, R. Nadkarni, D. Tseng, P. Benien, A. Ozcan, "A survey of supervised machine learning models for mobile-phone based pathogen identification and classification", SPIE Photonics West 2017, Optics and Biophotonics in Low Resource Settings III, 28 January – 2 February 2017, San Francisco, CA, USA, Paper # 10055-9
23. H. Ceylan Koydemir, and A. Ozcan, "Waterborne pathogen detection using a smartphone based fluorescence microscope and machine learning", Biological and Chemical Sensors Summit, December 5-7, 2016, La Jolla, CA, USA
24. H. Ceylan Koydemir, and A. Ozcan, "Waterborne pathogen detection using a smartphone based fluorescence microscope and machine learning", Clean Air and Water Solutions Conference, American Filtration and Separations Society, October 25-26, 2016, San Diego, CA, USA
25. H. Ceylan Koydemir, I.I. Bogoch, D. Tseng, R.K.D. Ephraim, E. Duah, J. Tee, J. R. Andrews, and A. Ozcan, "Label-free field screening of *Schistosoma haematobium* eggs in urine samples using a cost-effective smartphone based microscope", BMES (Biomedical Engineering Society) Annual Meeting, Micro/Nano Tools in Medicine, October 5-8, 2016, Minneapolis, Minnesota, USA
26. H. Ceylan Koydemir, E. Van Dyne, D. Tseng, S. Feng, D. Karinca, K. Liang, R. Nadkarni, R. Varma, and A. Ozcan, "Sickle cell detection using a smartphone based transmission microscope", 17th Annual UC Systemwide Bioengineering Symposium, June 13-15, 2016, University of California, San Francisco, CA, USA
27. H. Ceylan Koydemir, I. I. Bogoch, D. Tseng, R.K.D. Ephraim, E. Duah, J. Tee, J.R. Andrews, and A. Ozcan, "Field-testing of a cost-effective mobile-phone based microscope for screening of *Schistosoma haematobium*", SPIE Photonics West 2016, Optics and Biophotonics in Low Resource Settings II, February 13-18, 2016, San Francisco, CA, USA, Paper # 9699-23
28. H. Ceylan Koydemir, Z. Göröcs, D. Tseng, B. Cortazar, S. W. Feng, R. Yan Lok Chan, J. Burbano, E. McLeod, A. Ozcan, "Rapid and sensitive detection of waterborne pathogens using machine learning on a smartphone based fluorescence microscope", SPIE Photonics West 2016, Optics and Biophotonics in Low Resource Settings II, February 13-18, 2016, San Francisco, CA, USA, Paper # 969934
29. H. Ceylan Koydemir and A. Ozcan, "Mobile-phone based optical imaging platform for rapid and accurate detection and quantification of waterborne pathogens in low resource settings", The Knowledge Foundation's Sensor Global Summit 2015, Track 3: Sensor R&D – Advanced Materials, Design, Modeling & Fusion for Sensor Applications, (November 10 - 11, 2015), La Jolla, California, USA. (Invited Talk)
30. H. Ceylan Koydemir, Z. Göröcs, D. Tseng, B. Cortazar, S. Feng, R. Yan Lok Chan, J. Burbano, E. McLeod, and A. Ozcan, "Mobile-phone based optical microscopy and machine learning platform for rapid detection and quantification of waterborne pathogens in low resource settings", IEEE Global Humanitarian Technology Conference (GHTC), (October 8-11, 2015), Seattle, Washington, USA
31. B. Cortazar, H. Ceylan Koydemir, D. Tseng, S. Feng, and A. Ozcan, "Non-destructive and rapid plant chlorophyll quantification using Google Glass," BMES (Biomedical Engineering Society) Annual Meeting, October 7-10, 2015, Tampa, Florida, USA
32. H. Ceylan Koydemir, B. Cortazar, D. Tseng, S. Feng, and A. Ozcan, "Non-invasive and field-based quantification of plant chlorophyll content using Google Glass", 16th Annual UC Systemwide Bioengineering Symposium, June 22-24, 2015, University of California, Santa Cruz, CA, USA

33. H. Ceylan Koydemir, Z. Göröcs, D. Tseng, and A. Ozcan, “Rapid and sensitive detection and counting of Giardia lamblia cysts in water samples using a field portable and cost-effective fluorescence imaging platform on a mobile-phone”, University of California, Global Health Day, April 18, 2015, University of California, Los Angeles, CA, USA
34. H. Ceylan Koydemir, Z. Göröcs, E. Mcleod, D. Tseng and A. Ozcan, “Field portable fluorescence microscopy for detection of Giardia lamblia cysts in water samples,” SPIE Photonics West, Optics and Biophotonics in Low-Resource Settings, February 7-12, 2015, San Francisco, CA, USA, Paper # 9314-28
35. B. Cortazar, H. Ceylan Koydemir, D. Tseng, S. W. Feng, and A. Ozcan, “Field quantification of plant chlorophyll content using Google Glass,” SPIE Photonics West, Optics and Biophotonics in Low Resource Settings, February 7-12, 2015, San Francisco, CA, USA, Paper # 9314-4
36. H. Ceylan Koydemir, Z. Göröcs, E. McLeod, D. Tseng, A. Ozcan, “Waterborne pathogen detection using a smart phone based fluorescent microscopy,” MicroTAS 2014 – The 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences, October 26-30, 2014, San Antonio, Texas, USA
37. A.P. Gifford, H. Ceylan Koydemir, and A. Ozcan, "Automated Detection of *Giardia lamblia* Cysts and *Cryptosporidium parvum* Oocysts in Microscopy Images Using Digital Image Processing," BMES (Biomedical Engineering Society) Annual Meeting, October 22-25, 2014, San Antonio, Texas, USA
38. H. Ceylan Koydemir, Z. Göröcs, E. McLeod, D. Tseng, A. Ozcan, " Smartphone enabled waterborne pathogen detection using fluorescence microscopy", 15th Annual UC Systemwide Bioengineering Symposium, June 18-20, 2014, University of California, Irvine, USA
39. G. Bahrieh, H. Ceylan Koydemir, M. Erdem, E. Özgür, U. Gündüz, H. Külah, "Dielectric characterization of imatinib resistant K562 leukemia cells through electrorotation with 3-D electrodes", IEEE SENSORS 2013 Conference, November 3-6, 2013, Baltimore, Maryland, USA
40. H. Ceylan Koydemir, D. Hocaoglu, H. Külah, C. Özgen, “Femtogram-level detection of *Staphylococcal enterotoxin* B using MEMS based micro electrochemical sensor”, 44th World Chemistry Congress, 11-16 August, 2013, İstanbul, Turkey
41. H. Torul, U. Tamer, Y. Adıgüzel, H. Çiftçi, H. Ceylan Koydemir, and H. Külah, “SERS based nonenzymatic glucose detection on chip”, 8th International Conference on Instrumental Methods of Analysis Modern Trends and Applications, 15-19 September, 2013, Thessaloniki, Greece
42. H. Ceylan Koydemir, H. Külah, C. Özgen, “Integration of a disposable microelectrochemical sensor with microfluidics for point of care applications”, Uluslararası Katılımlı Elektrokimya Çalıştayı – Nanoyapı Modifiye Elektrokimyasal ve Biyoelektrokimyasal Sistemler, 23-28 June, 2013, Muğla, Turkey
43. H. Ceylan Koydemir, H. Külah, C. Özgen, “Thin film biosensor for electrochemical detection of hybridization of DNA”, 10th National Chemical Engineering Congress, 3-6 September 2012, İstanbul, Turkey
44. H. Ceylan Koydemir, H. Külah, C. Özgen, İ. Tosun, “Effects of solvents on dissolution of photoresist in parylene microchannels”, TechConnect World 2012(Nanotech), 18-21 June 2012, Santa Clara, California, USA
45. H. Ceylan Koydemir, H. Külah, C. Özgen, A. Alp, G. Hasçelik, “MEMS based micro electrochemical sensor for detection of MRSA”, 7th National Molecular and Diagnostic Microbiology Congress, 5-8 June 2012, Ankara, Turkey

46. H. Ceylan Koydemir, H. Külah, C. Özgen, "A micro electrochemical sensor for the detection of methicillin resistance in Staphylococcus aureus", 22nd Anniversary World Congress on Biosensors, 15-18 May 2012, Cancun, Mexico
47. D. Ertürkan, H. Ceylan Koydemir, H. Külah, and C. Özgen, "Detection of *Candida albicans* with the use of protocol developed for MEMS based biosensors", Turkish National Committee of Automatic Control, 14-16 September 2011, İstanbul, Turkey
48. H. Ceylan, H. Külah, A. Alp, G. Hasçelik, C. Özgen, "Design and fabrication of MEMS based electrochemical biosensor", 9th National Chemical Engineering Congress, 22-25 June 2010, Ankara, Turkey
49. H. Ceylan, H. Külah, A. Alp, C. Özgen and G. Hasçelik, "A disposable MEMS DNA biosensor for antibiotic resistant gene detection in *Staphylococcus aureus*", 15th National Biomedical Engineering Meeting, 21-24 April 2010, Antalya, Turkey
50. H. Ceylan, H. Külah, C. Özgen, A. Alp, G. Hasçelik, "Detection of bacterial DNA using MEMS based DNA biosensor", Turkish National Committee of Automatic Control, 13-16 October 2009, İstanbul, Turkey
51. H. Ceylan, C. Özgen, "Dynamic modelling and optimal control of a multicomponent batch distillation column", 17th IFAC World Congress, 6-11 July 2008, Seoul, Korea
52. H. Ceylan, C. Özgen, "Dynamic modeling and simulation studies for a multicomponent batch packed distillation column", 8th National Chemical Engineering Congress, 26-28 August 2008, Malatya, Turkey
53. H. Ceylan, C. Özgen, "Optimal control of multicomponent batch packed distillation column", Turkish National Committee of Automatic Control, 05-07 September 2007, İstanbul, Turkey

## TEACHING AND MENTORING EXPERIENCE

- Summer 2018, Summer Intern, Tasmima Nooshrat Khan, College of Science, University of Arizona
- Summer 2018 - Present, Summer Intern, Nahal Bagheri, Electrical Engineering & Chemistry, Sharif University of Technology
- Summer 2018 - Present, Summer Intern, Enis Cagatay Yilmaz, Faculty of Medicine, Bahcesehir University
- 2018 – Present, HHMI Undergraduate Researcher, Esin Gumustekin, Molecular Biology and Genetics, UCLA
- 2018 – Present, HHMI Undergraduate Researcher, Thamira Skandakumar, Bioengineering, UCLA
- 2016 – 2018, HHMI Undergraduate Researcher, Simi Rajpal, Bioengineering, UCLA
- 2015 – Present, HHMI Undergraduate Researcher, Doruk Kerim Karinca, Electrical and Computer Engineering, UCLA
- 2015 – Present, HHMI Undergraduate Researcher, Kyle Liang, Computer Science, UCLA
- Summer 2017, Summer Intern, Can Firat Usanmaz, Electrical Engineering, Bilkent University
- Summer 2016, Summer Intern, Ilker Oguz, Electrical and Electronics Engineering, METU
- 2014 – Mar 2017, HHMI Undergraduate Researcher, Rohan Varma, Computer Science, UCLA
- 2014 – 2016, HHMI Undergraduate Researcher, Rohan Nadkarni, Bioengineering, UCLA
- 2014 – 2015, HHMI Undergraduate Researcher, Henry Zhu, Electrical Engineering, UCLA
- 2014 – 2015, HHMI Undergraduate Researcher, Bohan Zhang, Electrical Engineering, UCLA

- Summer 2015, Summer Intern, Safiye Selen Ozcan, Chemical Engineering, University of Montana & Bioengineering, Istanbul Technical University
- 2013 – 2014, Undergraduate Researcher, Andrew P. Gifford, Bioengineering, UCLA
- Summer 2016, Summer Intern, Wesley Goo, Diamond Bar High School
- 2007 – 2012, Teaching Assistantship at Chemical Engineering, METU, Course name: CHE 420 Chemical Engineering Laboratory III