

Rana Muhammad Armaghan Ayaz

Education

- Aug. 2020 Ph.D., Biomedical Sciences and Engineering
Koç University, Istanbul-Turkey.
- Sept. 2015 M.Sc., Mechatronics and Control Engineering
University of Engineering and Technology, Lahore-Pakistan (Distinction).
- Sept. 2012 B.Sc., Mechatronics and Control Engineering
University of Engineering and Technology, Lahore-Pakistan (Distinction).

Research Interests

- Whispering Gallery Modes | Near and Mid infrared Lasers | Optical Detection and Sensing | Nano/Bio-Photonics | Fibre optics | Optoelectronics | Optical Micro-cavities/resonators | Fibre Bragg Gratings | Time Resolved Spectroscopies

Journal Publications

- **Rana M. Armaghan Ayaz**, Yigit Uysalli, Berna Morova, Alper Kiraz “Linear Cavity Tapered Fiber Sensor Using Amplified Phase Shift Cavity Ring Down Spectroscopy” J. Opt. Soc. Am. B (Accepted, (2021)).
- M. Daniyal Ghauri, Zajif Hussain, Ubaid Ullah, **Rana M. Armaghan Ayaz**, Rahman Shah Zaib Saleem, Alper Kiraz, M. Imran Cheema, “Detection of Aflatoxin M1 by Fiber Cavity Attenuated Phase Shift” Optics Express (Opt. Express 29 (3), 3873-3881 (2021)).
- **Rana M. Armaghan Ayaz**, Yigit Uysalli, Berna Morova, Nima Bavili, Ubaid Ullah, M. Daniyal Ghauri, M. Imran Cheema, Alper Kiraz “Linear Cavity Tapered Fibre Sensor Using Mode Tracking Phase Shift Cavity Ring Down Spectroscopy”(J. Opt. Soc. Am. B 37(6), 1707-1713 (2020)).
- Adil Mustafa, Ahmet Erten, **Rana M. Armaghan Ayaz**, Oğuz Kayıllıoğlu, Aysenur Eser, Mustafa Eryürek, Muhammad Irfan, Metin Muradoglu, Melikhan Tanyeri, Alper Kiraz, “Enhanced Dissolution of Liquid Micro-droplets in the Extensional Creeping Flow of a Hydrodynamic Trap” (Langmuir 32 (37), 9460–9467 (2016)).

Conferences Papers

- M. Imran Cheema, Ubaidullah, M. Daniyal Ghauri, **R. M. Armaghan Ayaz**, Yigit Uysalli, Berna Morova, Alper Kiraz “Amplified Phase Shift Fibre Cavity Ring-down Spectroscopy for Biosensing Applications at 1550nm”. SPIE Photonics West BIOS, San Francisco, February, 2020.
- **Rana M. Armaghan Ayaz**, Yigit Uysalli, Berna Morova, Nima Bavili, M. Imran Cheema, Alper Kiraz “Refractive Index Sensing by Phase Shift Cavity Ring-down Spectroscopy”. Quantum Nano-Photonics, Springer (to appear 2021).

Summer Schools and Workshops

- 37th Course of International School of Atomic and Molecular Spectroscopy on “Light-Matter Interaction Towards the Nanoscale”, Erice, Italy, 2019 (100 % Scholarship Granted).
- 21st National Optics, Electro-Optics and Photonics Workshop (21. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştayı), Istanbul-Turkey (100% Scholarship Granted).

Conferences and Talks

- Conference on Lasers and Electro–Optics (“CLEO”), San Jose, California, USA May 2020.
- “Refractive Index Sensing by Phase Shift Cavity Ringdown Spectroscopy”, 37th Course of International School of Atomic and Molecular Spectroscopy, Erice-Italy, 2019.
- COST MP1205 General Meeting and Conference, 11-13 April 2016, Istanbul-Turkey.

Teaching Experience

- General Physics-1 (Phys.01) | General Physics-2 (Phys.02) | Classical Physics for Health Sciences (Phys.123) | Modern Physics (Phys.206) | Experimental Physics (Phys.405/505)

Advanced Computer Skills

- MATLAB | Python | C++ | COMSOL | Proteus | PSpice | Solid Edge | Origin | Latex
MPLAB | AutoCAD 2019 | Prolog