

## List of Publications in peer-reviewed journals (Included in thesis)

- [1] **Hussain, I.** and Nath, P. Smartphone-based platform optical setup measuring /256 optical phase difference in an interference process. *Applied Optics*, 54(18):5739-5742, 2015.
- [2] **Hussain, I.**, Ahamad, K., and Nath, P. Water turbidity sensing using a smartphone. *RSC Advances*, 6(27):22374-22382, 2016.
- [3] **Hussain, I.**, Ahamad, K. U., and Nath, P. Low-cost, robust, and field portable smartphone platform photometric sensor for fluoride level detection in drinking water. *Analytical chemistry*, 89(1):767-775, 2016.
- [4] **Hussain, I.**, Das, M., Ahamad, K. U., and Nath, P. Water salinity detection using a smartphone. *Sensors and Actuators B: Chemical*, 239:1042-1050, 2017.
- [5] **Hussain, I.**, Bora, A.J., Sarma, D., Ahamad, K. U., and Nath P. Design of a Smartphone Platform Compact Optical System Operational Both in Visible and Near Infrared Spectral Regime. *IEEE Sensors Journal*, 18:4933-4939, 2018.
- [6] **Hussain, I.** and Nath, P. Design of a 3D printed compact interferometric system and required phone application for small angular measurements. *Review of Scientific Instruments*, 89(10):103111-103119, 2018.

## Papers presented in conferences

- [1] **Hussain I.** and Nath P. Design and development of a highly sensitive inclinometer using a smartphone, International Conference on Optics and Photonics (ICOP), Calcutta University, India, 2015.
- [2] **Hussain I.** and Nath P. Low cost, robust and field portable smartphone based sensor for water quality monitoring, India International Science Festival (IISF), National Physical Laboratory, Delhi, India, 2016.
- [3] **Hussain I.** and Nath P. Estimation of turbidity and total suspended solid concentration in environmental water bodies using a smartphone, International Conference on Electronic Devices, Circuits, Applied Electronics

and Communication Technology (EDCAECT), Guwahati University, India, 2015.

- [4] **Hussain I.** and Nath P. Smartphone based instrumentation for water quality monitoring with reference to resource poor regions, International Conference on Light and Light based Technologies (ICLLT), Tezpur University, India, 2016.

### **Awards and Honors**

- [1] BIRAC-SRISTI Gandhian Young Technological Innovation (GYTI) Award, presented during the Festival of Innovation at Rashtrapati Bhawan, New Delhi, March 05, 2017.