## High-Sensitivity Optical Fiber Refractive Index Sensors

We are currently seeking a motivated and ambitious Ph.D. student to join our research group in the development of **advanced optical fiber refractive index sensors**. The research will focus on the design of novel sensor structures and their applications in biosensing and chemical analysis.

## **Research Overview:**

This project aims to enhance the sensitivity of optical fiber sensors by utilizing **interference between modes within the fiber**, a technique that enables precise detection of changes in the surrounding refractive index. The work involves both **theoretical modeling** and **experimental investigations** to develop new sensor configurations that offer higher performance than conventional designs.

Once developed, the sensors will be evaluated for their potential applications in **biosensing** and **analytical instruments**, where high sensitivity and reliability are essential.

## Ideal Candidate:

- Background in optics, photonics, physics, electrical engineering, or a related field.
- Interest in optical fiber sensors, interferometry, or optical device design.
- Experience in optical experiments or simulation tools (e.g., COMSOL, MATLAB, or similar) is a plus.
- Eagerness to learn and contribute to an interdisciplinary research environment.

## **Opportunities:**

- Work on state-of-the-art sensor technologies with real-world applications.
- Gain experience in both theoretical and hands-on experimental research.
- Publish your work in high-impact journals and present at international conferences.
- Collaborate with researchers across disciplines, including photonics and biomedical engineering.

If you are interested, please contact us with your CV, academic transcript, and a short statement of your research interests. We welcome applications from both domestic and international students.