Contribution ID: **1318** Type: **Oral (Student, In Competition) / Orale (Étudiant(e), inscrit à la compétition)**

Development of a tapered fiber probe

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Recent advancements in nanotechnology have attracted worldwide attention. The potential applications of metallic nanoparticles, especially gold nanoparticles or nanorods (or gold colloids), are very promising and attractive. The unique optical, chemical, and physical properties of gold nanoparticles make them an ideal candidate for biochemical sensing, medical diagnostics/therapeutics, imaging contrast agents, and photonic devices. The Photonics Research Group at Lakehead University is working towards the development of a photonics device to detect chemicals (e.g., proteins) using Surface-Enhanced Raman Spectroscopy (SERS). We will present the design of a probe using an optical fiber and its application in sensing.

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