



## **Antoine Barbot**

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## Fibre based catheter for surgical actuation, sensing and drug delivery

**Abstract :** After briefly presenting my PhD work on helicoidal microrobot, I will present the fibrebot project. This project is currently developed in the Hamlyn Centre (imperial college, London). It aims to extend the reach of medical catheter by a fibre with a diameter lower to 0.5 mm. Three challenges are currently investigated:

- 1. Pneumatics actuation at the fibre tip for biopsy gripper design.
- 2. Microrobot assisted transfer method for electro-chemical and physical sensors on the fibre.
- 3. Microfluidic designs on the fibre for drug delivery and sampling.

**Short bio:** Antoine Barbot is a Post-doctoral researcher in microrobotics at Imperial College London.



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