CyberSnake

Design and manufacturing of a flexible robot for laparoscopy

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Goals

The main purpose is to explore the abdominal cavity, specially the liver, in order to locate and destroy tumors.

Motivations for research

- **Many people** are having **tumors** in hepatic area;
- Steady tools don't permit a convenient exploration of the liver's surface (tumors are located by pre-operative scan but they are not visible during surgical intervention);
- Surgeons working at Léon Bérard Hospital ask LAI researchers to develop a flexible device.

Motivations for research

- There are some **devices** but they are not flexible and can't bend inside the abdominal cavity (e.g. [de Mathelin, 2005]).

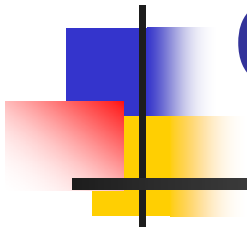
Status of research

State of the art in flexible robots:

many applications in colonoscopy, but scarce works focusing on liver surgery.

Function Analysis:

Some FA methods are implemented in order to have specific medical requirements from surgeons and then take them into account in design procedures.



Questions?