

# Optical coherence tomography (OCT) for guidance of robotized interventional endoscopy

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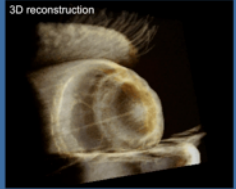
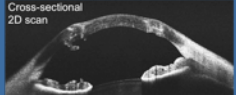
Equipe: IPP - Instrumentation et Procédés Photoniques  
AVR - Automatic, Vision, Robotique

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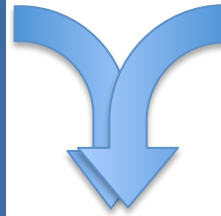
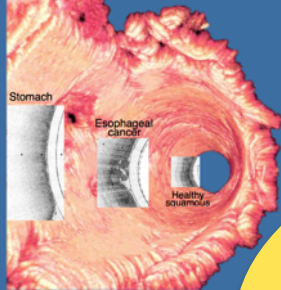
# Optical Coherence Tomography

Allows early diagnosing of diseases based on microscopic imaging of the internal tissue structures using a near infrared light

ANTERIOR CHAMBER OF THE HUMAN EYE AFTER CORNEA TRANSPLANT



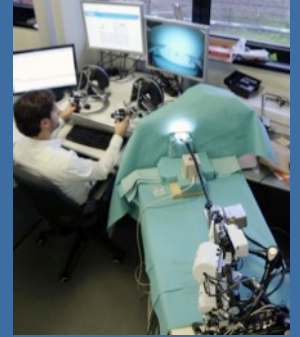
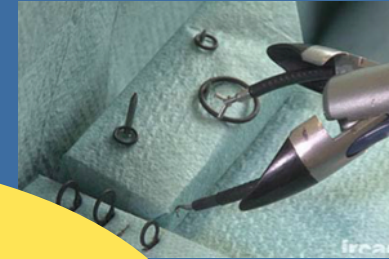
3D RECONSTRUCTION OF THE HUMAN ESOPHAGUS FROM TETHERED CAPSULE OCT ENDOMICROSCOPY



FUSION

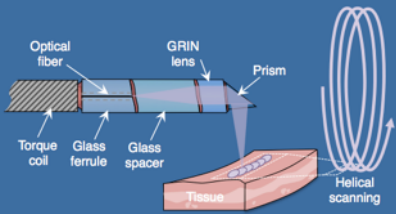
# Robotized Flexible Endoscopy

Allows a single operator to perform complex treatment by telemanipulating the endoscope and therapeutic instruments with joysticks

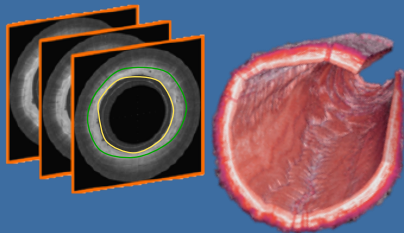


Early detection and minimally invasive treatment of the digestive cancer

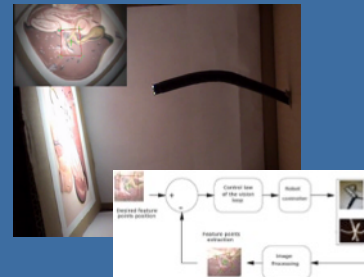
# Opto-mechatronics



# Image Processing & Reconstruction



# Visual servoing



# Clinical translation & Medical devices



## To be eligible, the candidate must fulfill the following criteria:

- To hold a MASTER diploma from a foreign university or to have enrolled in a MASTER program at the University of Strasbourg in order to register in doctoral studies, after completion of a complete bachelor's degree course in a university abroad ;
- Research process undergoing in a Research Unit of the site "Alsace" .

## The pre-selection application file must contain :

- Detailed CV with a list of publications (if any)
- One page motivation letter

## Pre-selection process:

- Please send the application **before May 10, 2016** to: [michalina.gora@icube.unistra.fr](mailto:michalina.gora@icube.unistra.fr)
- Selected candidates will be contacted and scheduled for a phone/skype interview.