

# SMYLE, an International Swiss-French Collegium

(Smart sYstems for a better LiFE)

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On October 10, 2013 was signed the agreement for a French-Swiss Collegium SMYLE. Thanks to scientific and geographical proximity between the FEMTO-ST Institute and the STI (Sciences et Techniques de l'Ingénieur) Faculty at the EPFL, the launching of the "SMYLE" Collegium will create an ideal framework for long-term collaboration combining research education and innovation. The SMYLE Collegium aims at building a strong Joint Knowledge Hub in promising research fields such as :

- In-vivo biomedical imaging with the development of components and MEMS scanners for endomicroscopes, and the implementation of on-chip microscopy demonstrators applied to imaging of biological tissues,
- Multi-scale microrobots for biomedical applications: (i) millimeter-scale microrobots for inspection and manipulations inside the human body, and (ii) micrometer-scale microrobots for ultra fast and ultra selective sorting of biological cells, and
- The alliance of MEMS and time-frequency, targeted towards a new generation of miniature high-stability atomic clocks based on MEMS technologies.



*Figure 1: Signature of the Collegium agreement: from left to right Bernard CRETIN (Director of the ENSMM) Christian ENZ (Director of the IMT/EPFL) Philippe PIERI (CNRS), Philippe Gillet (Interim President of EPFL), Jacques BAHl (President of the UFC), Abdellah EL Moudni (Vice- President of the UTBM).*



*Figure 2 : Lab course session in the clean room of FEMTO-ST, with EPFL master students (February 21, 2013).*

The educational actions will permit :

- The implementation of new joint high education modules (master level) between French and Swiss partners,
- The joint organization of thematic workshops, and
- The organization of SMYLE summer schools to disseminate the research results and stimulate innovation.

Finally, the innovation actions will permit :

- The creation of a club of industrial partners,
- Organization of seminars to promote industrial partnerships, and
- Stimulate dissemination actions and technology exploitation.

The research program concerns the strategically important field of «Smart Systems», combining the potential of two major research institutions in the field of Engineering Sciences, and it aims to establish an international leadership in topics with a strong potential of applications.