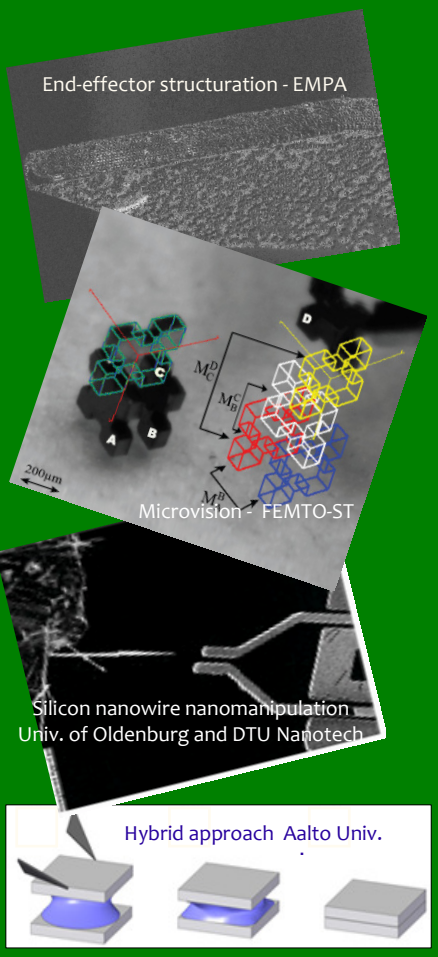
Summer school in

Microrobotics and Self-Assembly for Hybrid MEMS

June 29 – July 2, 2010, Besançon, FRANCE

(http://www.femto-st.fr/microassembly)



Context and Objectives

Today, emerging highly complex micro-devices with applications in mechanics,electronics, biological engineering, microfluidics and IT request ultra precision manufacturing processes.

The general context of the summer school concerns the micromanipulation and assembly of such complex microsystems. From the state-of-the-art, integration technologies for heterogeneous microsystems are based on ***Microrobotics*** or ***Self-assembly*** approaches. Microrobotics relies on high precision robotic pick-and-place machines and machine vision. Self-assembly technology deals with high throughput parallel stochastic process. Hybrid innovative approaches actually emerge, which combine autonomy and precision of self-alignment and the flexibility of robotic technology. This Summer School addresses particularly researchers, engineers and PhD students who want to acquire or to improve their skills for the micromanipulation and micro-assembly of microsystem devices.

This summer school is connected to the European FP6 project HYDROMEL (contract number 26622). One afternoon is common with the first workshop on design, control and software for distributed MEMS (http://www.dmems.univ-fcomte.fr).

29th June	30th June	1st July	2nd July
	Microworld Corpus-physical effects	Microvision	Self-assembly
		Control	
Welcome	Actuators and Sensors	Microrobotics assembly	Bio Manipulation
LUNCH			
Part common with the Workshop DMEMS	Microrobotic structures	Labs Experimentals platforms	Hybrid assembly
	Application MEMS		
	Industrial developments		Towards the nanomanipulation
Visit of Musée du temps		Visit of Citadelle de Besançon	
		Special Dinner	

Scientific Committee

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Bradley Nelson, ETHZ, CH
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Organizing Committee

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