Conference site

Direct TGV to/from Roissy-CdG Airport
2h37 by TGV

Other Airports
Mulhouse-Basel, 160 km
Geneva, 170 km
Zurich, 250 km
Lyon, 250 km

French candidature for IEEE/ASME AIM 2014
Conference site

“High quality of life”, Capital of the Franche-Comté Region

Besançon

French candidature for IEEE/ASME AIM 2014
Conference site

Some pictures of Besançon

French candidature for IEEE/ASME AIM 2014
Some pictures of Besançon

As of Vauban’s masterpiece (engineer and military architect, XVIIe century), the Citadel belongs to the UNESCO World Heritage
Attractions, social events

Museums, citadel
(museum-pass is possible)

Museum of fine arts and archaeology
Time museum

French candidature for IEEE/ASME AIM 2014
Beautiful landscapes, famous food (cheese) and wine
typical temperature in July ~ 25°C

French candidature for IEEE/ASME AIM 2014
Hotel information

1700 available rooms in the city

Ibis  Novotel  Mercure

French candidature for IEEE/ASME AIM 2014
Conference location (tentative)

Solution 1: Congresses and exhibition centre, Micropolis, Besançon

French candidature for IEEE/ASME AIM 2014
Conference location (tentative)

Solution 2: In the heart of the high education and research
National Engineering Institute in Mechanics and Microtechnologies, Besançon

French candidature for IEEE/ASME AIM 2014
Transportation

Convenient public transportation by bus

(Bus-pass is possible)
Micromechanics, Microtechniques, Watch industry,
Car industry, Medical devices

Imasonic, Statice, MMT, Photline, Parkeon, Fabricom,
Micropierre, DIMECO, AR électronique, Alstom...

A technical tour can be organized

French candidature for IEEE/ASME AIM 2014
Industry

**MICRONORA**

**18th INTERNATIONAL MICROTECHNOLOGY TRADE FAIR**

`multi-technology and high precision`

Smaller, More accurate, More intelligent

- Annual exhibition alternately in Besançon and Lyon, end of April


“MEDTEC France is ideally located in Besancon at the centre of one of the highest concentrations of medical manufacturing companies in the country. Within easy driving distance of Besancon, or accessible directly by TGV high speed train - are nearly 1000 medical OEMs employing thousands of design and manufacturing engineers, QA/QC staff and procurement executives. Besancon itself is very close to the Swiss border, therefore MEDTEC France also provides a focus at which to meet design and manufacturing professionals from medical technology companies based in French speaking Switzerland.”

French candidature for IEEE/ASME AIM 2014
Some recently organized conferences

<table>
<thead>
<tr>
<th>Conference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFM 2011</td>
<td>French Applied Mechanics congress - 900 participants</td>
</tr>
<tr>
<td>JNOG 2010</td>
<td>French guided optics congress - 220 participants</td>
</tr>
<tr>
<td>EFTF 2009</td>
<td>European Frequency and Time Forum - 500 participants</td>
</tr>
<tr>
<td>MUT 2009</td>
<td>International Micromachined Ultrasonic Transducers Workshop - 60 participants - 11 countries</td>
</tr>
<tr>
<td>IFTOMM 2007</td>
<td>World Congress in Mechanism and Machine Science - 700 participants - 54 countries</td>
</tr>
<tr>
<td>IWMF’06</td>
<td>International Workshops on Microfactories - ~150 participants</td>
</tr>
<tr>
<td>IEEE ISATP’03</td>
<td>5th International Symposium on Assembly &amp; Task Planning - ~150 participants</td>
</tr>
<tr>
<td>Mecatronics’01</td>
<td>5th Edition of France-Japan - 3rd Europe-Asia Congress on Mechatronics - ~200 participants</td>
</tr>
</tbody>
</table>
University, Engineer School

~ 20,000 students in Besançon

University of Franche-Comté
- Multidisciplinary University
- More than 6000 students in science and technology
- Many international cooperations

National Engineering School in Mechanics and Microtechnologies, 1000 students

French candidature for IEEE/ASME AIM 2014
About FEMTO-ST Institute...

**FEMTO-ST**

The roots of our activity comes from **Watchmakers industry** in Besançon area & **Automotive industry** in Belfort area.

- A wide range of technical competencies in **ENGINEERING SCIENCES**
- A **MULTIDISCIPLINARY** research institute
- A **high level MICROFABRICATION TECHNOLOGY** facility
- A culture of **INNOVATION** : from basic research to industrial partnership

- 550 staff people, 175 Professors and permanent Researchers
- 28 M€ annual overall budget including 10 M€ operational budget
- About 250 running research contracts

French candidature for IEEE/ASME AIM 2014
About FEMTO-ST Institute...

FEMTO-ST Key figures 2006 - 2009

- Scientific production: 52 Scientific Awards, 809 Peer-reviewed journal papers, 193 Invited conferences, 45 Patents

- 12 remarkable papers (IF>7): 1 Review of Modern Physics (33,1), 2 Nature Photonics (22,9), 2 Nature Physics (15,5), 1 Hepatology (11,4), 1 Current Biology (10,8), 1 Journal of the American Chemical Society (8,1), 5 Physical Review Letters (7,3).

- Highly-cited researchers (H>15): 18


- A+ evaluated laboratory (highest mark in France).

- 2011: member of 1 LABEX FIRST-TF, 1 EQUIPEX ROBOTEX (National Excellence Initiative)
Research Departments

**TIME & FREQUENCY**
- High-stability oscillators
- Acousto-electronics and piezoelectricity
- Time-frequency metrology

**OPTICS**
- Photonics and telecommunications
- Nano-optics
- Optoelectronics
- Non-linear optics
- Biophotonics

**MICRO NANO SCIENCES & SYSTEMS**
- Micro and nano-instrumentation
- Nanosciences
- Micro & Nano-acoustics
- Multiphysical Microsystems
- Micro, Nanomaterials and surfaces

**AUTOMATIC CONTROL & MICRO-MECHATRONIC SYSTEMS (AS2M)**
- Automatic control
- Microrobotics
- Micromechatronics
- Micromanipulation and micro-assembly
- Prognostics and health management

**ENERGY & MULTIPHYSICAL SYSTEMS**
- Energy metrology and modelling
- Energy system design
- Radio protection and medical physics

**APPLIED MECHANICS**
- Mechanical properties of materials
- Structural dynamics
- Material forming and microfabrication
- Surface microanalysis

*A new Department on Computer Science in 2012*

French candidature for IEEE/ASME AIM 2014
AS2M Department
Automatic Control & Micro-Mechatronic Systems
Prof. N. Zerhouni

Automatique & Systèmes Micro-Mécatroniques

French candidature for IEEE/ASME AIM 2014
Staff and structure

~ 70 Persons

- 22 professors and assistant professors, 2 CNRS researchers
- 4 engineers, 2 technicians
- 3 assistants for administration and finance
- 18 PhD students, 6 postdocs
- 3 contract engineers
- Master and engineers school levels students

2 Research Groups

- SAMMI group
  Automated Systems for Micromanipulation and Microassembly
  *Headed by Prof. Ph. Lutz*

- PROMI group
  PHM: Prognostics & Health Management of systems
  *Headed by Prof. B. Morello*
General objectives

- Create and control microrobots and microrobotic stations for flexible micromanipulation and microassembly

- Advanced control for microsystems

French candidature for IEEE/ASME AIM 2014
Major addressed issues (modelling, design, control)

- Microworld characterization and modelling
- Smart materials (piezo, SMA, MSM), micromechatronics, adaptronics
- Methods and technologies for microrobots
- Sensing (force measurement)
- Microrobots and microrobotic stations (liquid environment)
- Signal processing (vision), control of microactuators and microsystems
- Micromanipulation and microassembly systems
- Microrobotics for medical applications
From IEEE Robotics and Automation Society

Most Active Technical Committee Award 2009 to the Micro/Nanorobotics and Automation Technical Committee

Co-chairs: F. Arai, N. Chaillet (corresponding), A. Requicha

French candidature for IEEE/ASME AIM 2014
During IEEE ICRA 2010, Anchorage

- World record of the 2 mm dash at the 2010 ICRA NIST&IEEE Mobile Microrobotics Challenge
- Official record: 28 ms.

French candidature for IEEE/ASME AIM 2014
During IEEE ICRA 2011, Shanghai

- Winner of the mobility challenge at the 2011 ICRA NIST&IEEE Mobile Microrobotics Challenge
- Official record: 1.86 s.
AIM 2014

- General organization chair: Prof. N. Chaillet
- Active researchers in the area of Mechatronics will be invited to participate in the organizing committee. Colleagues from EPFL (1h30 from Besançon by car) can participate to the local organizing committee
- International program committee: representative from regions with strong scientific activities in Mechatronics

*University of Franche-Comté, ENSMM and FEMTO-ST Institute staff will strongly support the organization.*
Dear Sir,

Professor Nicolas CHAILLET of the Besançon FEMTO ST Institute is candidate for the “Advanced Intelligent Mechatronics” Congress to be held in Besançon in early July 2014.

I am proud to announce that Besançon City, our Tourist Office and Convention Bureau, are clearly supporting Prof. CHAILLET’s candidacy, since we are all deeply concerned about hosting his event in Besançon.

We would be glad and honored to welcome you and your board in Besançon for a guided tour: this could be the opportunity to show you our advantages: Besançon is a Region Capital, renowned for its quality of life, but also for its Art and History patrimony. Its Vauban fortifications were added to the UNESCO world heritage sites’ list in 2008.

Looking forward to welcoming you in Besançon,

Best regards,

Jean-François GIRARD,
Vice Mayor of Besançon,
In charge of Tourism and Congress
We deeply hope to welcome you at Besançon in 2014!