



Written on 24 February 2019



5 minutes of reading



Events

Fundamental Research

Analysis and characterization

Microfluidics



13 - 15 November 2019



Co-Organized by



After two decades of development, **microfluidics is now pushing back the boundaries** to tackle a range of industrial challenges, including high-throughput experimentation, on-chip analysis, extreme conditions (pressure, temperature, etc.) and environmental footprint limitation.

**Microfluidics 2019: From laboratory tools to process development** (13-15 November 2019), an international academic and industrial conference, organized by IFPEN, has examined these topics in detail!



[Download Microfluidics 2019 synthesis](#) (PDF - 400 Ko)

## THE SESSIONS WERE FOCUSED ON:

- Fluids and flow characterization
- Fluid separation and on-chip analysis
- Synthesis and performance monitoring
- New technologies for the environment and alternative energies

## TWO INNOVATIVE FORMATS:

### 1/ Tutorial session led by internationally recognized experts:

- Impact of miniaturization on the representativity of results
- Microfabrication for extreme conditions
- Miniaturized on-line analysis

## 2/ Debates with startups:

- Start-ups and experts interviews: “from lab to market”
- Success and non-success stories, take-home solutions



Thank you to all participants, speakers, authors, sponsors. You made the event a success!  
*The Organizing Committee*

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[Rob Lammertink](#), University of Twente, Netherlands

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Marie Moiré-Marsiglia, Applied Physical Chemistry and Mechanics Division

## Scientific Correspondents

[Marie Moiré-Marsiglia](#) and **Claire Marlière**  
IFP Energies nouvelles – Applied Physical Chemistry and Mechanics Division

## Program



[Download the program](#) (PDF - 460 Ko)

## Keynotes speakers

[Gunther Kolb](#), Eindhoven University of Technology, Netherlands  
[Rob Lammertink](#), University of Twente, Netherlands  
[David Sinton](#), University of Toronto, Canada  
[David Weitz](#), Harvard University, USA

## Startuppers

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## Abstract book



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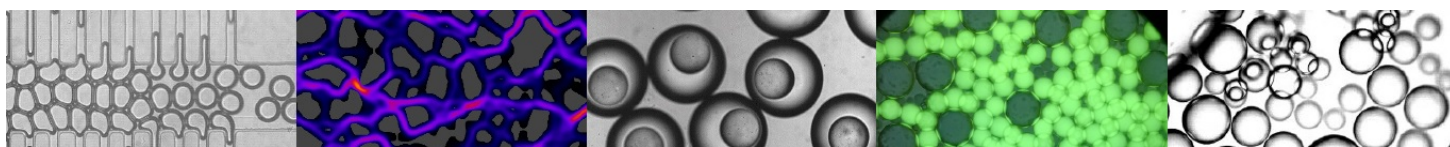
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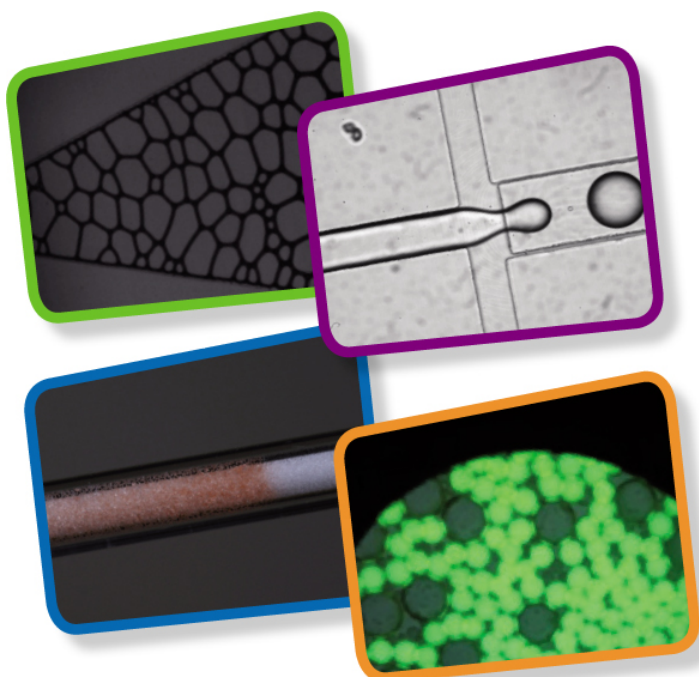




[Previous edition: Microfluidics 2015](#)

## MICROFLUIDICS 2015

IFPEN / Rueil-Malmaison - 4-5 November 2015



### Context and objectives

IFP Energies nouvelles has organized last 4 and 5 November the international scientific conference “**Microfluidics: from laboratory tools to process development**”, in collaboration with the Pierre-Gilles de Gennes Institute.

**Microfluidics** refers to the sciences and technologies that allow to handle fluids from the micron scale to sub-millimetric scale. Laboratories are increasingly exploiting this field, reflecting its potential role in leading the emergence of radically improved industrial processes.

**Microfluidics 2015** has been the opportunity to bring together academic and industrial researchers to discuss recent developments in microfluidics and its impact in a wide range of fields, such as product and object synthesis, microchemistry, labs on a chip, the management of complex fluid flows in confined geometries and high-throughput screening.



[Download the Review](#) (PDF - 60 Ko)



Thanks all participants, speakers, authors, chairpersons and sponsors.

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## **PROGRAM (2015)**

The conference program includes 4 main sessions to put in perspective academic, engineering and finally industrial approaches.

All sessions welcome biology, chemistry, earth sciences and physics disciplines.

### **1. Basic science with microfluidics**

- complex fluids, bubble and droplet microfluidics, biphasic flow, multiphase flow, hydrodynamics
- electro-osmotic flow, electrohydrodynamics, mass transport, heat transfer
- interfacial phenomenon, chemistry, biology, chemical kinetics
- thermodynamics, simulation

Fundamental studies with use of microfluidic or nanofluidic devices are welcome in this session as well as experimental or theoretical physics and chemistry at micro/nano scale.

## **2. Analysis and micro-measurement**

- detection, sensors
- pre-treatment, image analysis
- microextraction, etc.

This session welcomes all works focusing on microfluidic devices able to perform fluid characterizations or dedicated to any specific measurement.

## **3. New development for microfluidic devices**

- 3D printing, micro-fabrication, new materials, connectics, actuators
- dedicated chemistry, surface treatment, high pressure
- high pressure, high temperature

Here will be considered development of Microelectromechanical systems (*MEMS*), new fabrication techniques or dedicated components to achieve studies with difficult fluids in non-standard thermodynamic conditions.

## **4. Toward industrial applications**

- integration, process development
- upscaling/downscaling
- lab on a chip, high throughput screening

Microfluidics 2019: From laboratory tools to process development  
24 February 2019

Link to the web page :