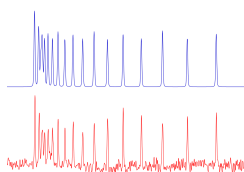


# THE TWENTY-SIXTH COLLOQUIUM ON HIGH RESOLUTION MOLECULAR SPECTROSCOPY



## DIJON 2019

26 – 30 August, 2019

<http://hrms2019.sciencesconf.org>



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## Second Circular: March 2019

The Colloquium will be held at the "Faculté des Sciences Mirande" of the "Université de Bourgogne", 9 avenue A. Savary, DIJON – FRANCE (approximately 20 min by tramway from the train station). The local organization will be undertaken by the "Laboratoire Interdisciplinaire Carnot de Bourgogne" (ICB).

All correspondence should be sent to the secretary of the local organizing committee:

**Mme Claire PRIOU-JACOTOT**

**Laboratoire Interdisciplinaire Carnot de Bourgogne, UMR 6303 CNRS-Université de Bourgogne**

9 avenue A. Savary, BP 47 870, F-21078 DIJON Cedex – France.

Tel. : +33 3 80 39 61 39, Fax : +33 3 80 39 59 71, E-Mail : [hrms2019@sciencesconf.org](mailto:hrms2019@sciencesconf.org).

### Scientific Program:

There will be **10 invited lectures** and **3 mini-symposia**. Parallel sessions will be dedicated to **36 contributed lectures given by PhD students and postdocs**. There will be **7 poster sessions**. A **special lecture** will celebrate the 50<sup>th</sup> anniversary of this conference series. The covered fields are:

- High resolution rotational, vibrational, and electronic spectroscopy of molecules (radicals, ions, complexes, clusters, ...).
- Molecular dynamics.
- Theory assisting the prediction, simulation, and interpretation of spectra.
- New techniques for high-resolution spectroscopy.
- Applications to atmospheric sciences, astrophysics, planetology, combustion, gas phase biomolecules, metrology and fundamental physics, cold molecules, etc.

**PLEASE READ CAREFULLY THE FOLLOWING INSTRUCTIONS BEFORE REGISTERING!**

## Important dates:

- Deadline for final registration and submission of abstracts: **June 1<sup>st</sup> 2019**
- Deadline for final reservation of accommodations: **June 1<sup>st</sup> 2019**
- 3<sup>rd</sup> circular with meeting information: **July 2019**

## Accommodations and meals:

Single rooms with shower are available in student dormitories on campus within easy walking distance of the conference site (40 € / night, including breakfast). Participants who prefer to stay in hotels should make the reservations themselves. For this purpose, a link to the official tourism office is available on the homepage of the colloquium (see below). However, these hotels may be located at some distance from the conference site. Hotel reservations should be made quite early, since August is a highly touristic period.

For participants arriving on Saturday, we offer the possibility to have a student dormitory room for the night from Saturday August 24<sup>th</sup> to Sunday August 25<sup>th</sup>.

Meals will be available at the campus restaurant (16.75 € / meal).

## Fees:

Conference fees are 320 €, with a reduction for students (190 €). This price includes congress participation, colloquium proceedings, welcome on Sunday August 25<sup>th</sup> in the evening, excursion and banquet for participants only. The price for accompanying persons is 95 €. Fees will increase in case of payment after June 1<sup>st</sup>, 2019.

## Registration:

### PLEASE READ VERY CAREFULLY THIS SECTION!

- Registration should be made **online only** at this address:

<https://www.azur-colloque.fr/DR06/inscription/inscription/33/fr>

- Once going to the above address, you are first asked for your coordinates.
- You can also indicate if you are vegetarian or have any food intolerance...
- Then, please choose the correct "**category**" (regular, student, invited speaker, exhibitor...).

**The invited speaker category only concerns the list of people listed on the last page of this circular.**

- Finally, you have to choose all the "**extras**" to indicate the rooms and meals you want. Please be **VERY CAREFUL** here !

**Invited speakers should not choose rooms or meals at this stage. We will handle your accommodation and meals separately.**

**Thus, please review carefully your choices before proceeding to the payment page. Your choice here is definitive. We cannot reimburse you in case of an error at this stage.**

- As before, there is the possibility to buy a cold evening meal for Sunday August 25<sup>th</sup> (16.50 €).

- Please note again, in case you stay in a campus room, that there will be no breakfast on the campus on Sunday August 25<sup>th</sup> and on Saturday August 31<sup>st</sup> (room price is reduced to 34 € in this case).
- **VERY IMPORTANT WARNING: No cash payment will be accepted** (only credit card or bank transfer payments are possible).

## Abstracts:

We will use a modified version of the Electronic Abstract Submission (EAS) system developed at the Ohio State University. Detailed instructions will be given in the second circular.

When submitting an abstract, **young researchers** (PhD students and postdocs) **will be strongly encouraged to apply for giving a contributed lecture** (15-minute talk, including questions).

**The abstract electronic submission system will be opened on April 15<sup>th</sup>, 2019.**

**The deadline for submission is June 1<sup>st</sup>, 2019.**

Detailed instructions for electronic submission of abstracts will be soon available on the dedicated Web page:

<http://vesta.u-bourgogne.fr/hrms>

Be careful that before April 15<sup>th</sup>, this address still points to the program of the previous Dijon 2015 meeting. Please read the instructions carefully. Electronic abstract submission is a very simple process. You will only need to write a simple text (ASCII) file formatted in the correct way. Note that there is no need for you to install LaTeX on your computer.

## Amat-Mills Prizes:

As in previous colloquia, two prizes will award the best student talk and the best student poster. Applicants should be either working for a PhD or having completed it within the last 12 months (at the time of the meeting).

The award will consist of a diploma and the recipient will receive a selection of books.

The candidates must present either a regular poster or a contributed talk at the “26<sup>th</sup> Colloquium on High Resolution Molecular Spectroscopy” on their PhD work and assume the sole responsibility for the presentation during the entire session.

Applications are limited to one per research group and must be nominated by the PhD research supervisor who will briefly give the reasons for the nomination (1/2 page). This information, together with the start and expected end dates of the PhD, and a printed copy of the abstract of the poster or talk to be selected for the competition, should be sent to the local organizer before June 1<sup>st</sup>, 2019.

The abstract itself must also be submitted as indicated above before June 1<sup>st</sup>, 2019.

### **Sightseeing tour and banquet:**

On Wednesday, August 28<sup>th</sup>, afternoon, there will be a sightseeing tour in the *Auxois*. In the evening, there will be a conference banquet in the *Château de Marsannay*. More detail will be given in the Third circular.

### **Social program for accompanying persons:**

A social program will be organized for accompanying persons. It will consist of various sightseeing activities. More detail will be given later on the conference's web site.

### **WWW home page:**

The conference has a home page on the World Wide Web to provide up-to-date information:

<http://hrms2019.sciencesconf.org>

### **Acknowledgments:**

We wish to thank the following institutions for their contribution to the success of this conference: *Conseil Régional de Bourgogne Franche-Comté*, *CNRS* and *Université de Bourgogne Franche-Comté*.

## PRELIMINARY PROGRAM OF THE COLLOQUIUM

DATES	Aug. 26, 2019	Aug. 27, 2019	Aug. 28, 2019	Aug. 29, 2019	Aug. 30, 2019
Hours	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	<b>8:30 Welcome</b>		<b>8:30</b>		
9:00	<b>Inv. Speakers A</b>	<b>Contrib. Lect. E</b>	<b>Inv. Speakers I</b>	<b>Inv. Speakers K</b>	<b>Poster session P</b>
10:30	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
11:00	<b>Poster session B</b>	<b>Poster session F</b>	<b>Inv. Speakers J</b>	<b>Poster session L</b>	<b>Inv. Speakers Q</b> <i>(Mol. Phys. Lect.)</i>
12:30 – 14:00	Lunch	Lunch	Lunch – <b>12:00</b>	Lunch	Lunch
14:00	<b>Mini. Symp. C</b>	<b>Mini. Symp. G</b>	<b>13:45 Sightseeing tour</b>	<b>Mini. Symp. M</b>	
16:00	Coffee break	Coffee break		Coffee break	
16:30	<b>Contrib. Lect. D</b>	<b>Poster session H</b>		<b>Poster session N</b>	
19:00 – 20:00	<b>Town Hall reception</b>	Dinner	<b>19:00 Banquet</b>	Dinner	
Evening		<b>50 years special lecture</b>	(with prizes) <b>23:00 Bus to Dijon</b>	<b>Poster session O</b>	

## INVITED SPEAKERS

NB: Titles are still preliminary

### Tuesday evening "50<sup>th</sup> anniversary" talk (45')

M. Herman  
ULB, Brussels, Belgium

Overtone spectroscopy and dynamics

### Plenary speakers (45')

B. Bernhardt  
Experimental Physics, Graz University of  
Technology, Graz, Germany

Dual comb spectroscopy: a novel tool for high resolution  
molecular spectroscopy

H. Fielding  
Department of Chemistry, University  
College London, UK

Liquid-microjet photoelectron spectroscopy of  
biochromophores

B. Jeziorski  
Department of Chemistry, University of  
Warsaw, Poland

Theoretical determination of accurate atomic and  
molecular properties for an optical pressure standard

T. Giesen  
Experimentalphysik V Labor-astrophysik,  
Universität Kassel, Kassel, Germany

Laboratory infrared spectroscopy and its application for  
astronomical observations

Y.-P. Lee  
Applied Chemistry, National Chiao Tung  
University, Hsinchu, Taiwan & Institute of  
Atomic and Molecular Sciences,  
Academia Sinica, Taipei, Taiwan

Infrared spectra of free radicals and protonated species  
isolated in solid para-hydrogen

K. Lehmann  
University of Virginia's Department of  
Chemistry, Charlottesville, USA

Mid-IR near-IR double resonance spectroscopy of CH<sub>4</sub> and  
CH<sub>3</sub>D

D. Neumark (Mol. Phys. Lecture)  
College of Chemistry, University of  
California, Berkeley, USA

High resolution photoelectron spectroscopy of negative ions

L. Nguyen  
LISA, Université Paris 12 / CNRS, Créteil,  
France

Understanding (coupled) large amplitude motions - The  
interplay of microwave spectroscopy, spectral modeling,  
and quantum chemistry

T. Suzuki  
Department of Chemistry, Graduate School  
of Science, Kyoto University, Japan

Ultrafast VUV photoelectron spectroscopy of dynamics in  
the gas and condensed phases

K. Vodopyanov  
College of Optics and Photonics, University  
of Central Florida, Orlando, USA

Massively parallel sensing of trace molecules and  
isotopologues with subharmonic mid-IR frequency combs

### Mini-symposia

#### • MS1: Theoretical predictions of molecular spectra

M. Rey (40')  
GSMA, CNRS / Université de Reims  
Champagne-Ardenne, Reims, France

Toward completeness and high accuracy from advanced  
computational methods: a review

O. Polyansky (40')  
Dept. of Physics and Astronomy, University  
College London, UK

Extra high accuracy line positions and intensities of three  
and four atomic molecules from variational calculations

A. Yachmenev (20')  
Center for Free-Electron Laser Science  
(CFEL), Deutsches Elektronen-Synchrotron  
DESY, Hamburg, Germany

Creating, imaging and controlling chiral molecules with  
electric fields

C. Sousa-Silva (20')  
Dept. of Earth, Atmospheric and Planetary  
Sciences, MIT, Cambridge, USA

Advances in the simulation of molecular spectra

• **MS2: Environmental far- & mid-IR spectroscopy**

B. Drouin (30')  
JPL, Pasadena, USA

The PREFIRE (Polar Radiant Energy in the Far-InfraRed Experiment) project

A. Cuisset (30')  
LPCA, Université du Littoral, Dunkerque,  
France

High-resolution rovibrational spectroscopy of molecules with environmental interest using electronic, optoelectronic and synchrotron terahertz sources

R. Motiyenko (30')  
PhLAM, Université de Lille / CNRS, Lille,  
France

Spectroscopy of atmospherically relevant molecules: the contribution from the terahertz domain

R. Hargreaves (30')  
Harvard-Smithsonian Center for  
Astrophysics, Harvard, USA

Spectroscopy of gases at high temperature with application to HITEMP

• **MS3: Cold molecules for spectroscopy and dynamics**

P. Scheier (40')  
University of Innsbruck, Innsbruck, Austria

Spectroscopy of cold molecular ions from doped helium nanodroplets

B. Van de Meerakker (40')  
Radboud University, Nijmegen, The  
Netherlands

High resolution scattering experiments using velocity controlled molecular beams

H. Williams (20')  
Imperial College, London, UK

Laser cooled molecules for tests of fundamental physics

V. Di Sarno (20')  
CNR-Istituto Nazionale di Ottica, Naples,  
Italy

Lamb-dip spectroscopy of buffer-gas-cooled stable molecules