

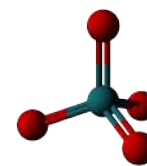
THE TWENTY-EIGHTH COLLOQUIUM ON HIGH RESOLUTION MOLECULAR SPECTROSCOPY



DIJON 2023

28 August – 1 September, 2023

<https://blog.u-bourgogne.fr/hrms2023/>



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Third Circular: July 2023

The Colloquium will be held at the "Faculté des Sciences Mirande" of the "Université de Bourgogne", 9 avenue Alain 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 secretaries of the local organizing committee:

Mme Coralie FÈVRE / Mme Ibtissam EL BAKKOUCHI

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Scientific Program:

There will be **10 invited lectures** and **3 mini-symposia**. Parallel sessions will be dedicated to **72 contributed lectures given by PhD students, postdocs and young researchers**. There will be **5 poster sessions**. 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.

GENERAL INFORMATION

Acknowledgments

We wish to thank the following institutions for their contribution to the success of this conference: Conseil Régional de Bourgogne Franche-Comté, Université de Bourgogne, CNRS, Taylor & Francis Group, Molecular Physics, Wiley, ppqSense, MenloSystems, Excelitas Technologies and mirSense.

Colloquium's home page

The colloquium has a home page with URL:

<https://blog.u-bourgogne.fr/hrms2023/>

This page provides up-to-date information.

Plenary sessions

The plenary (invited lectures and mini-symposia) sessions will be held in the **Recoura lecture hall**, in the « **Faculté des Sciences Mirande** » building (see attached map on the last page of this document).

Duration for invited lectures is 45 minutes, including questions.

Duration for mini-symposia lectures is (including questions) has been specified to the speakers.

Parallel sessions

Parallel sessions (contributed talks) will be held in the **Recoura, Paris and Bernard lecture halls**, in the « **Faculté des Sciences Mirande** » building. **Each contributed talk duration is 15 minutes including questions.** We will be extremely strict on timing!

Uploading your presentation

We very strongly suggest that you **upload you presentation** before the session. This is especially **mandatory for contributed talks** for which we ask you to upload it **before midnight the day preceding the session**.

Please name your file as: Sx-A.BBB.pptx or Sx-A.BBB.pdf

- S is the session letter.
- x is the talk number in this session.
- A is the speaker's initial.
- BBB. is the speaker's last name.

Example: ER2-P.Hardy.pptx

Only pptx and pdf format are accepted.

Upload link: <https://filesender.renater.fr/?s=upload&vid=3098b57b-92c9-4b2b-9207-cacdf9be5998>

Note for slide preparation: A long sequence of slides with white background is very tiring for partially sighted people and even for many people. Instead, a background in egg shell or light grey is much less tiring. We know this could be some constraints but please just take this point into consideration within your possibilities when you prepare your slides.

Poster sessions

The poster sessions will take place in the Hall of the « **Faculté des Sciences Mirande** » (see attached map on the last page of this document). A white board (**1.5 m wide and 1 m high / "landscape" orientation**) will be available for each participant wishing to present his/her work.

Amat-Mills Prizes & Jon Hougen Travel Award

Two **Amat-Mills prizes** will award the **best student talk and the best student poster**. Applicants are 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 assume the sole responsibility for the presentation during the entire session.

Talks of Amat-Mills applicants will be presented during **sessions D (Monday), E (Tuesday) and J (Wednesday)**.

Posters of Amat-Mills applicants will be displayed during **sessions B (Monday), F and H (Tuesday)**.

The prizes will be awarded on August 31st, at 8:30, just before session K

A special **“Jon Hougen” travel award** will also be given to two students. This one will be awarded at the conference's dinner on August 30th, in the evening.

Exhibitors

The companies listed below will present their products during the colloquium (room near the poster sessions), please **do not forget to visit them!**

- *ppqSense*
- *MenloSystems*
- *Excelitas Technologies*
- *mirSense*

On Tuesday afternoon, during poster session H, each exhibitor will deliver a short talk (15 minutes including questions) presenting their activities and products in the **Recoura lecture hall**.

Sightseeing tour and banquet

On Wednesday, August 30th, afternoon, there will be a **sightseeing tour** (*Alésia* Museum, *Alesia* archaeological site, *Bussy-Rabutin* castle). In the evening, there will be a **conference dinner in the Domaine de Pont-de-Pany**. See also the “Practical information” section below.

Social program for accompanying persons

A social program will be organized for accompanying persons. It will consist of various sightseeing tours. More details are given on the conference's website.

PROGRAM OF THE COLLOQUIUM

Room/location is indicated in green

| DATES | Aug. 28, 2023 | Aug. 29, 2023 | Aug. 30, 2023 | Aug. 31, 2023 | Sept. 1, 2023 |
|---------------|---|--|--|---|---|
| Hours | Monday | Tuesday | Wednesday | Thursday | Friday |
| 8:30 | 8:30 Welcome | | 8:30 | 8:30 | |
| 9:00 | Inv. Speakers A Recoura Chair: F. MERKT A. L'HUILLIER* T. IDEGUCHI | Contrib. Lect. E Recoura/Paris/Bernard** Chairs: H. TRAN / O. ASVANY / M.-A. MARTIN | Inv. Speakers I Recoura Chair: J. VANDER AUWERA I. VENTRILLARD N. MOAZZEN-AHMADI | Inv. Speakers K*** Recoura Chair: T. HUET M. E. SANZ C. LAUZIN | Poster session P Hall |
| 10:30 | Coffee break | Coffee break | 10:00 Coffee break | Coffee break | Coffee break |
| 11:00 | Poster session B Hall | Poster session F Hall | 10:30 Contrib. Lect. J Recoura/Paris/Bernard** Chairs: R. GAMACHE / C. RICHARD / I. GULACZYK | Inv. Speakers L Recoura Chair: J.-U. GRABOW B. CHANGALA C. PUZZARINI | Inv. Speakers Q Recoura Chair: S. SCHLEMMER C. LENZ CESAR J. RICHARDSON |
| 12:30 – 14:00 | Lunch | Lunch | 12:00 – Lunch | Lunch | Lunch |
| 14:00 | Mini. Symp. C Recoura Ions in traps Chair: S. WILLITSCH O. DOPFER M. BEYER P. SCHMID R. WESTER | Mini. Symp. G Recoura Quantum Technologies Chair: P. DE NATALE G. ROATI S. OSPELKAUS L. ANDEREGG M. TOMZA | 13:45 Sightseeing tour Discover Alésia and Bussy-Rabutin! | Mini. Symp. M Recoura JWST Chair: H. LINNARTZ M. McCLURE O. BERNÉ S. MILAM | |
| 16:00 | Coffee break | Coffee break | | Coffee break | |
| 16:30 | Contrib. Lect. D Recoura/Paris/Bernard** Chairs: R. HARGREAVES / J. BULDYREVA / F. CHAUSSARD | Poster session H Hall Exhibitors' talks Recoura Chair: L. NGUYEN | | Contrib. Lect. N Recoura/Paris/Bernard** Chairs: G. GUILLON / S. YURCHENKO / A. CUISSET | |
| 19:00 – 20:00 | Town Hall reception | Dinner | 19:00 Banquet (with Jon Hougen prize) | Dinner | |
| Evening | Free | Public event | 23:00 Bus to Dijon | Poster session O Hall Regional products tasting | |

* Molecular Physics Lecture

** Contributed lectures are given each time in three parallel sessions in the Recoura, Paris and Bernard lecture halls.

*** Including Amat-Mills Award and dedication to I. M. Mills

INVITED SPEAKERS

Plenary Speakers

- **Anne L'Huillier**
(Lunds Universitet, Sweden)
"Attosecond light pulses for studying ultrafast electron dynamics"
- **Takuro Ideguchi**
(University of Tokyo, Japan)
"High-speed vibrational spectroscopy with time-stretch technology"
- **Irène Ventrillard**
(Université Grenoble Alpes, France)
"A walk through the world of cavity enhanced laser spectroscopy: in the land of optical feedback"
- **Nasser Moazzen-Ahmadi**
(University of Calgary, Canada)
"Weakly-bound clusters of atmospheric molecules: Theory and experiment"
- **Maria Eugenia Sanz**
(King's College London, United Kingdom)
"New insights on odorants and their complexes by rotational spectroscopy"
- **Clément Lauzin**
(Université Catholique de Louvain, Belgique)
"The challenge and the beauty of molecular complexity"
- **Bryan Changala**
(Harvard-Smithsonian Center for Astrophysics, USA)
"Theoretical tools for molecular discovery in the laboratory and space"
- **Cristina Puzzarini**
(Università di Bologna, Italy)
"Astrochemical challenges: the role of rotational spectroscopy"
- **Claudio Lenz Cesar**
(Instituto de Física - UFRJ; ALPHA Collaboration - CERN)
"Laser spectroscopy of hydrogen and antihydrogen: towards a direct CPT test beyond 14 significant figures"
- **Jeremy Richardson**
(ETH Zürich, Switzerland)
"Quantum tunnelling in molecules and clusters"

Minisymposium I (Organizers: Stefan Willitsch, Stephan Schlemmer)

Spectroscopy of ions in traps

- **Otto Dopfer**
(Technische Universität Berlin, Germany)
"Spectroscopy of diamondoid cations"

- **Maximilian Beyer**
(Vrije Universiteit Amsterdam, Netherlands)
"Towards a hydrogen molecular ion clock"
- **Philipp Schmid**
(Universität zu Köln, Germany)
"Leak-out spectroscopy: a new tool for high-resolution spectroscopy"
- **Roland Wester**
(Universität Innsbruck, Austria)
"Bound-bound and bound-free spectroscopy of cold trapped negative ions"

Minisymposium II (Organizer: Paolo De Natale)

Spectroscopy for quantum technologies

- **Giacomo Roati**
(Istituto Nazionale di Ottica, CNR-INO, Italy)
"Engineering vortex matter in strongly-correlated superfluids"
- **Silke Ospelkaus**
(Leibnitz Universität Hannover, Germany)
"Quantum gases of ultracold molecules"
- **Loïc Anderegg**
(Harvard University, Cambridge MA, USA)
"Laser Cooling Molecules for Fundamental Physics and Quantum Science"
- **Michał Tomza**
(Uniwersytet Warszawski, Poland)
"Accurate ab initio molecular calculations for ultracold physics experiments"

Minisymposium III (Organizers: Jean Vander Auwera, Stephan Schlemmer, Harold Linnartz)

Spectroscopy in the era of JWST

- **Melissa McClure**
(Universiteit Leiden, Netherlands)
"A new ice age: tracing frozen molecular chemistry from clouds to exoplanets with JWST"
- **Olivier Berné**
(IRAP Toulouse, France)
"First results from JWST observations of the Orion Nebula"
- **Stefanie Milam**
(NASA Goddard Space Flight Center)
"Revealing the composition and history of the Solar System with JWST's infrared eyes"

PRACTICAL INFORMATION

Please refer to the attached maps (last page)

• HOW TO REACH DIJON

A visa may be required; please ask your travel agency.

Plane:

- Nearest airports are PARIS (Orly and Roissy-Charles-de-Gaulle), LYON (Saint-Exupéry), GENEVA (Cointrin) and BASEL-MULHOUSE.

Train:

- From/to Dijon, numerous non-stop and daily connections with PARIS (Gare de Lyon), LYON (to MARSEILLE / NICE / ITALY / NIMES / MONTPELLIER / SPAIN / TOULOUSE / GRENOBLE), NANCY – METZ (to LUXEMBOURG / GERMANY), BESANCON (to STRASBOURG / GERMANY), LAUSANNE, NEUCHÂTEL, BERNE (Switzerland).
- **WARNING!**
 - o Reservation is required (with possible additional fees) for TGV trains (tickets may be purchased at automatic machines, or online, see address below, or at the station desk).
 - o Before getting to the station platform, don't forget to validate your ticket (and reservation if any) at one of the "yellow machines" (except for e-Tickets).
- From Dijon-Ville Station, you can reach the University Campus either by **tramway line T1** (in front of the station, recommended), and leave at "**Université**" or by taxi cabs (from the main station),
- All information concerning trains in France (time-tables, ...) can be found on the SNCF (French Railway Company) Web server:

<https://www.sncf.com/en>

Car:

- From Paris (A6/A38): do not cross Dijon center. Follow direction "TROYES" by continuing on the "LINO" highway that goes around Dijon and exit at "DIJON-UNIVERSITE".
- From Nancy (A31): exit "ARC SUR TILLE" (around 15 km away from Dijon) and follow the "ARC" road to "DIJON" for arriving on expressway "G. Pompidou" and exit at "DIJON-UNIVERSITE".
- From Lyon (A6): exit "DIJON-CENTRE"; then take Express Way "G. Pompidou" and "DIJON-CENTRE" then leave at exit "DIJON-UNIVERSITE".
- Parking places are limited on the Campus. See attached maps (last page).

• WHEN ARRIVING

- We recommend you to go directly to the Colloquium' registration desk, central hall of the "**Faculté des Sciences Mirande**", **9 Avenue Alain Savary** (mark "Main building" on the campus map), which will stay open from 16:00 till 23:00 on Sunday, August 27 (but please, try to arrive before 22:00!). You will be able to collect the Colloquium material, your tickets for the Restaurant (if any), and all required information to reach - either the University Dorms – or your hotel.
- If you plan to arrive when the Colloquium Office is closed, you may go directly to the University dorms (ask for the caretaker) or to your hotel.
- A Sunday evening cold meal will be available for people who bought one when they registered. This will take place at building's Cafeteria, from 19:00 to 23:00.

• THE COLLOQUIUM

Location: in the "Sciences Mirande" (mark "Registration desk" on the map). Room details are given above.

Office-registration desk: in central hall ("Salle du Conseil"); opening hours:

- Sunday: 16:00 till 23:00.
- Monday: 08:00 to 12:00 and 14:00 to 18:00.
- Tuesday and Thursday 09:00 to 11:00 and 15:00 to 17:00 (closed on Wednesday).
- Friday 09:00 to 11:00.

University restaurant: "Montmuzard" (marked "Restaurant" on the campus map), for breakfast and meals. Opening hours are as follows:

- **Breakfast:** from 07:30 till 08:15.
- **Lunch:** from 12:30 till 13:15 (closed at 14:00). At 12:00 on Wednesday (before sightseeing tour).
- **Dinner:** from 18:30 till 19:30.

University dorms: “Sully” building (marked “Dormitories (“studettes”)” on the campus map). It consists in single furnished rooms (bed sheets, towels, soap) with a bathroom (WC, basin and shower)

Reception: “Apéritif” offered to all participants by the City of Dijon, on Monday August 28 (around 19:00), at the Town Hall (“Palais des Ducs de Bourgogne” in “Salle de Flore”).

Wednesday session, sightseeing tour and banquet: on Wednesday August 30th.

Departure from Dijon at 13:45 by special buses

• VERY IMPORTANT!

- The tour and banquet cost are included in the registration fees.
- Payment by Credit Card only will be available, **in a limited way**, at the Colloquium Office for late registration and meals only. **NO CASH PAYMENT WILL BE ACCEPTED.**
- WiFi accounts will be provided to each participant. However, we **STRONGLY RECOMMEND TO USE THE “EDUROAM”** network. This international academic WiFi access is very convenient and exists in most universities around the world. You can ask for access certificates at your local computing resource center.

• MISCELLANEOUS

Tramway:

The Campus is connected to Downtown and the Railway Station by **tramway line T1**:

- Weekdays service: 06:00 to midnight, with a 7 to 8 minutes frequency.
- Sunday: 07:00 to midnight, with a 15 to 20 minutes frequency.
- Tickets (reusable support, do not throw it away!) may be purchased from machines at each station. It is also possible to pay inside the tram using a contactless credit card.

Post office – Bank / Change

- Several bank offices are available around the campus.
- Cash machines (CB/VISA/MASTERCARD).
- Mansart Post Office: 08:00 to 19:00 (Saturday: 08:00-12:00).
- For your information, the present official exchange rate (French banks, mid-July, 2023) is:

1 € ≈ 1.12 US\$ ≈ 155.6 ¥

Others

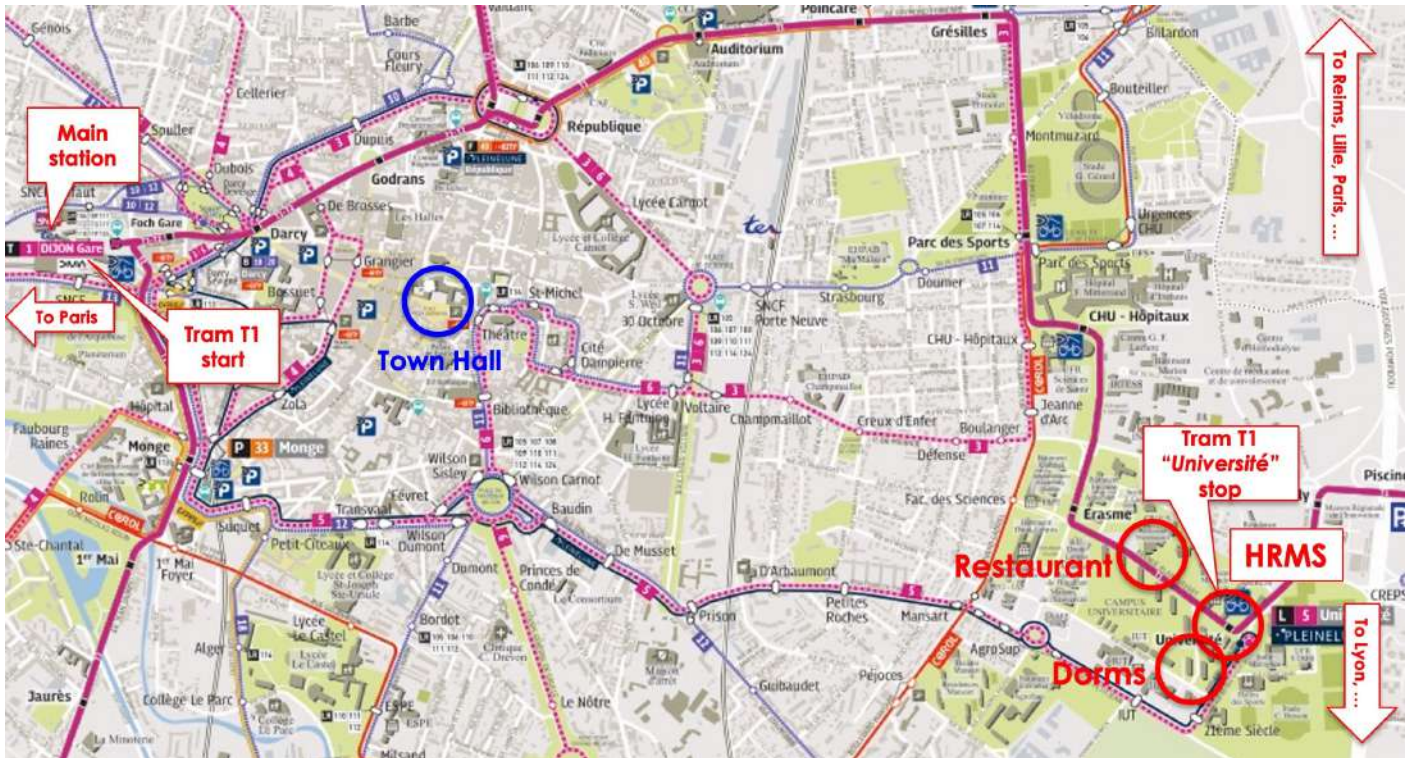
The Colloquium Office will keep at your disposal:

- computers and WiFi access (see above) to the Internet,
- detailed maps of Dijon and the bus network,
- tourist information (maps, guides) about Dijon and Burgundy,
- addresses of restaurants, wine-cellars, wine growers,
- information on City movies, theaters, concerts ...

... wishing to make your stay in Dijon as pleasant as possible!

MAPS

1) Dijon and Campus Situation



2) Campus Map

