

# DYMCOM SCHEDULE

## Week 1

### Monday, 4<sup>th</sup> of November 2019

9.00-10.30	Registration and welcome coffee
10:30 to 11.00	Introduction: Institut Pascal and its programs - O Dulieu/D Ullmo
11:00 to 12:00	SEMINAR: Introduction to DYMCOM - L Wiesenfeld
12.00 to 13:00	Free time for interactions/work
13:00 to 14:15	Lunch buffet on first floor
14:15 to 16:00	Free time for interactions/work/collaborations
16:00 to 17:00	SEMINAR: Present day challenges for spectroscopy - J Tennyson
17:00 onwards	Discussions and personal time (No group dinner on the first night)

### Tuesday, 5<sup>th</sup> of November 2019

10:00	SEMINAR: Overview of electron-molecule collisions - I. Schneider
10:30 to 11.00	Coffee break
11:00 to 12:00	SEMINAR: Recent advances in theoretical studies of electron-impact excitation and dissociation of molecules - S. Kokoouline
12.00 to 13:00	Discussions & personal time
13:00 to 14:15	Lunch together in the cafeteria
14:15 to 15:00	Free time for interactions/work/collaborations
15:00 to 16:00	SEMINAR: J. Bloino - Accurate Vibrational Energies and Intensities for a "Bargain": the VPT2 Route
16:00 to 17:00	SEMINAR: ML Senent Spectroscopy of non-rigidorganic species: theory, experiments and application to Astrochemistry
17:00 to 19:00	Discussions and personal time
19:30	Group dinner at restaurant

### Wednesday, 6<sup>th</sup> of November 2019

9:00 10:30	Discussions & personal time
10:30 to 11:00	Possible student seminar
11:30 to 12:30	SEMINAR: Z Mezei, Electron molecular cation collisions in the framework of MQDT
12:45 to 14:15	Lunch in the cafeteria
14:15 to 16:00	Discussions & personal time, coffee
16:00 to 17:00	SEMINAR: A. Bergeat - Inelastic and reactive collisions at low energy in crossed molecular beams
17:00 to 19:00	Discussions & personal time

### Thursday, 7<sup>th</sup> of November 2019

9:00 10:30	Discussions & personal time
10:30 to 11:30	Possible student seminar
11:30 to 12:30	SEMINAR: Å Larson - Dynamics on highly excited states: Theoretical studies of processes such as dissociative recombination and mutual neutralization
12:45 to 14:15	Lunch in the cafeteria
14:15 to 16:00	Discussions & personal time, coffee

16:00 to 17:00	SEMINAR: M Telmini - Uncertainty assessment of Rydberg and doubly excited molecular states ab initio calculations using Quantum Defect Theory scaling laws
17:00 to 19:00	Discussions & personal time

#### **Friday, 8<sup>th</sup> of November 2019**

9:30 to 10:30	SEMINAR: V. Laporta - Electron-molecule dynamics for nonequilibrium plasma
10:00 to 10:30	Coffee break
10:30 11:30	Possible student seminar
11:30 to 12:30	SEMINAR: J. Tennyson - TBA, Electronic collisions
12:45 to 14:15	Lunch
14:15 to 16:00	Discussions & personal time, coffee
16:00 to 17:00	Overall discussion DYMCOM one-week perspective
17:00 to 19:00	Discussions & personal time
19:30	Farewell Dinner (DYMCOM)

### **DYMCOM WEEK 2 SCHEDULE**

#### **Tuesday, 12<sup>th</sup> of November 2019**

10:00 - 10:30	Presentation: Introduction to the Pascal Institute and the program
10:30 - 11:00	Collaboration/Discussion/Free time
11:00 - 12:00	T. Lee: Computing rotational, rovibrational, and vibrational spectra for astronomical observations: high accuracy line lists for high temperatures, limited line lists for biosignature molecules, and PAH emission spectra – Small Amphitheatre
12:00 - 13:00	Collaboration/Discussion/Free time
13:00 - 14:00	Lunch together at the canteen
14:00 - 16:00	Collaboration – Discussion – free time
16:00 - 17:00	J. Loreau: Rotational excitation in CO-H <sub>2</sub> O collisions – Small Amphitheatre
17:00 - 19:00	Collaboration/Discussion/Free time
19:00	Group dinner at a restaurant, courtesy of the Pascal Institute

#### **Wednesday, 13<sup>th</sup> of November 2019**

09:00 - 13:00	Collaboration/Discussion/Free time
13:00 - 14:00	Lunch at the canteen
14:00 - 16:00	Collaboration/Discussion/Free time
16:00 - 17:00	A. Orban: Hyperfine structure calculation and optical shielding in the case of the KCs molecule – Small Amphitheatre
17:00 - 19:00	Collaboration/Discussion/Free time

## Thursday, 14<sup>th</sup> of November 2019

09:00 – 13:00	Collaboration/Discussion/Free time
13:00 – 14:00	Lunch buffet at the institute
14:00 – 19:00	Common afternoon with GDR Thems, Including F. Gatti, S. Ndengué – Big Amphitheatre

## Friday, 15<sup>th</sup> of November 2019

09:00 – 13:00	Collaboration/Discussion/Free time
13:00 – 14:00	Lunch at the canteen
14:00 – 15:00	Collaboration/Discussion/Free time
15:00 – 16:00	Conclusion: Recap of program - Small Amphitheatre
16:00 – 19:00	Collaboration/Discussion/Free time
19:00	Group dinner at a restaurant, courtesy of the Pascal Institute

## DYMCOM Schedule Week 3

### Monday the 18th of November 2019

9:00- 10:00	Welcome coffee at the institute
10:00-11:00	Introduction to the Pascal Institute, DYMCOM and week 3 (Denis Ullmo/LW)
11:00-12:00	Christiane Koch (Kassel Univ.): Quantum effects in cold and controlled molecular dynamics
12:00- 13:00	Free time for discussions/work/collaborations
13:00- 14:00	Lunch buffet at the institute
14:00- 15:00	Free time for discussions/work/collaborations
15:00-16:00	Roland Wester (Innsbruck Univ.): Reactive scattering experiments using crossed beams and ion traps
16:00- 17:00	Free time for discussions/work/collaborations

### Tuesday the 19th of November 2019

10:00-11:00	Daniel W. Savin (Columbia Univ.) Low-energy reactive scattering in astrophysics
11:00-12:00 astrochemistry	Johannes Kästner (University of Stuttgart): Recent developments in instanton theory to simulate tunnelling processes in
12:00- 13:00	Free time for discussions/work/collaborations
13:00- 14:00	Lunch at the canteen
14:00- 15:00	Free time for discussions/work/collaborations

15:00-16:00 Xavier Urbain (UCLouvain): Low energy ion-ion collisions: mutual neutralization, associative ionization and ion-pair states  
16:00- 17:00 Free time for discussions/work/collaborations  
19:00 Group dinner in a restaurant, courtesy of the Pascal Institute

**Wednesday the 20th of November 2019**

11:00-12:00 Holger Kreckel (MPIK Heidelberg): Molecular reaction studies at the cryogenic storage ring  
12:00- 13:00 Free time for discussions/work/collaborations  
13:00- 14:00 Lunch at the canteen  
14:00- 15:00 Free time for discussions/work/collaborations  
15:00-16:00 Edvardas Narevicius (Weizmann Institute): Quantum scattering resonances in cold molecular collisions  
16:00- 17:00 Free time for discussions/work/collaborations

**Thursday the 21st of November 2019**

10:00-10:30 Gustav Eklund (Stockholm Univ.): Short report: The mutual neutralization reaction of Li<sup>+</sup> and H<sup>-</sup> to Li and H  
10:30- 11:00 Free time for discussions/work/collaborations  
11:00-12 :00 Viacheslav Kokoouline (U. Central Florida): Recent advances in theoretical studies of electron-impact excitation and dissociation of molecules  
12:00- 13:00 Free time for discussions/work/collaborations  
13:00- 14:00 Lunch at the canteen  
14:00- 15:00 Free time for discussions/work/collaborations  
15:00-16:00 Andreas Osterwalder (EPF Lausanne) Cold stereodynamics  
16:00- 17:00 Free time for discussions/work/collaborations

**Friday the 22nd of November 2019**

10:00-10:30 Xiao Dong Xing (U. Paris-Saclay): Short report: Modelling spin-orbit coupling in the photodissociation of cold RbBa<sup>+</sup> molecular ion<sup>[1]</sup><sub>SEP</sub>  
11:00-12:00 Henning T Schmidt (Stockholm University): DESIREE - A cryogenic double-ring facility for merged-ion-beam studies  
12:00- 13:00 Free time for discussions/work/collaborations  
13:00- 14:00 Lunch at the canteen  
14:00- 15:00 Free time for discussions/work/collaborations  
15 :00-17:00 Conclusion and summary: Andreas Wolf & Laurent Wiesenfeld  
17:00- 19:00 Free time for discussions/work/collaborations  
19:00 Group dinner in a restaurant, courtesy of the Pascal Institute

# DYMCOM SCHEDULE - WEEK 4

## Monday 25.11.2019

**Special day in honour of Dr Pierre Pillet (8:45-17:00) in the large amphitheatre**

- 13:00-14:00 Lunch buffet provided at the institute
- 15:00-16:00 Introduction to the Pascal Institute and to DYMCOM Room 207 (Speech-I room)

## Tuesday 26.11.2019

**All talks will be in Room 207 (Speech-I room)**

- 10:00-11:00 Eric Herbst (U Virginia) - I Chemistry and Low Mass Star Formation
- 11:00-12:00 Daniel Savin (Columbia U.) - Low-energy reactive scattering in astrophysics
- 12:00- 13:00 Free time for discussions/work/collaborations
- 13:00- 14:00 Lunch at the canteen
- 14:00- 15:00 Free time for discussions/work/collaborations
- 15:00-16:00 Fabien Gatti (U Paris-Saclay) - Reactive collisions and infra-red spectroscopy (*provisional title*)
- 16:00- 19:30 Free time for discussions/work/collaborations
- 19:30 Group dinner at Le Mangata restaurant, 59 Rue Charles de Gaulle, Bures-sur-Yvette

## Wednesday 27.11.2019

**All talks will be in Room 207 (Speech-I room)**

- 10:00-11:00 Cristina Puzzarini (U. Bologna) - The challenge of ions, radicals and unstable species in space: A joint molecular spectroscopy – quantum chemistry approach
- 11:00- 12:00 Nadine Halberstadt (U. Toulouse): Dynamics in doped helium nanodroplets at 0.4K
- 12:00- 13:00 Free time for discussions/work/collaborations
- 13:00- 14:00 Lunch at the canteen
- 14:00- 15:00 Free time for discussions/work/collaborations
- 15:00-16:00 Eric Herbst (U. Virginia) II: Synthesis of Complex Organic Molecules in the Interstellar Medium

## Thursday 28.11.2019

**All talks will be in Room 207 (Speech-I room)**

- 10:00-11:00 Octavio Roncero (CSIC – Madrid) - Quantum Roaming in the complex forming mechanism of the reactions of OH with Formaldehyde and Methanol at low temperature and the effect of pressure
- 11:00-12:00 João Brandão (University of Algarve) - Using a Molecular reactor to study ter-molecular processes
- 12:00- 13:00 Free time for discussions/work/collaborations
- 13:00- 14:00 Lunch at the canteen
- 14:00- 15:00 Free time for discussions/work/collaborations
- 15:00-16:00 Ilya Fabrikant (U. of Nebraska-Lincoln) - Dissociative electron attachment at ultra-low energies

**Friday 29.11.2019**

**All talks will be in Room 207 (Speech-I room)**

10:00-11:00	Nami Sakai (RIKEN - Tokyo) – Title TBA
11:00-12 :00	O. Dulieu (U Paris-Saclay) – Title TBA
12:00- 13:00	Free time for discussions/work/collaborations
13:00- 14:00	Lunch at the canteen
14:00- 15:00	Free time for discussions/work/collaborations
15 :00-17:00	Final discussion and summary, Laurent Wiesenfeld
19:30	Special final Dymcom dinner, with all participants, staff, directors, and accompanying persons welcome Restaurant: Le BURON, 69 Rue Charles de Gaulle, 91440 Bures-sur-Yvette