UPMC Master-1 internships in a foreign country

The internship duration is **3 months from May to July**. As much as possible, financial and practical aspects will be taken care of by the International Relations office of UPMC. The defense or **"soutenance" occurs during the first week of September** in correspondence with the second sessions for the defenses of the other master students (those who did the internship in France).

I. RESPONSABLE

Alice Sinatra
Laboratoire Kastler Brossel
tél : 01 44 32 25 72
courriél : alice.sinatra@lkb.ens.fr
bureau à l'IFRAF :
4ème étage bâtiment Rataud
Ecole Normale Supérieure
45 rue d'Ulm, 75005 Paris.

II. WHO CAN APPLY

To be eligible for an internship in a foreign country a **score of at least 10/20 in each course** is requested at the end of the first semester of M1.

III. FIRST CONTACT (NOVEMBER)

If you wish to do your internship in a foreign country you should contact Alice Sinatra. In your contact e-mail, please include

1. A one-page CV in English (pdf format)
2. The exams and the scores obtained in L3
3. The list of the courses you are currently following with the relative ECTS weights
4. A short motivation letter in English explaining why you want to do the internship in a foreign country and in which domain you would like to do it (pdf format).

After this step, Alice Sinatra will receive you and help you to **choose an internship** and find a UPMC correspondent. More details on this step are given in section VIII of this document.

IV. AGREEMENT WITH THE HOST GROUP AND INVITATION LETTER (JANUARY)

After you have the results of your first semester (you should have at lest 10/20 in all subjects), Alice Sinatra or your UPMC correspondent **contacts the group** you have chosen. If the group accepts you, your internship is chosen. As soon as this is done, you ask your internship supervisor to send you an **invitation letter**. You will need this letter to obtain a scholarship. The letter should mention

– The approximate dates for the internship (for example : from May 1st to July 31st).
– Weather or not the internship is financed by the host institution. (In general this is not the case for M1 internships, but it might depend on the host country, the laboratory and the institution).

V. ASKING FOR A SCHOLARSHIP (FEBRUARY)

– With your invitation letter, you should go to Madame Bruston of the **International Relations of UPMC** to make a **"dossier"** to ask for a scholarship. In the end of the month all the "dossiers" are examined and some scholarships are given. The dossier should be deposed as soon as you have the invitation letter and anyway **before February 15**. Informations about the scholarships are given in section IX of this document.

- The Physics Master can give **additional financial help** to the students who apply for it. For the students who obtain it, the help is such to guarantee to the student **700 euros/month** for his internship. In the beginning of March a commission attributes the complementary financial help. To apply, **before February 15** you should :
  - Have a dossier at the international relations of UPMC. We need to know weather or not you obtained a scholarship from the international relations, and if yes of how much.
  - Send your invitation letter to alice.sinatra@lkb.ens.fr
  - Write a note mentioning the subject or the field of the internship (1/2 page in pdf format) and send it to alice.sinatra@lkb.ens.fr

Special scholarships are available for internships in condensed matter physics (Nanomat partners)

NEW : Special scholarships are available for internships in plasma physics (informations below XI C)

NEW : Special scholarships are available for condensed matter physics in Japan and South America (informations below XI B)

VI. REPORT (JULY)

During your internship you should write a report (10 pages maximum in English or French) where you describe what you did during the internship. You should send the report in pdf format to Alice Sinatra and Patricia Selles **within one week after the end of your internship**.

VII. ORAL PRESENTATION (SEPTEMBER)

The defense will be during the first week of September. You should prepare a short presentation of 15 minutes (5 to 10 slides, according to your style). The presentation will be in English or in French. A projector will be at your disposal. Please send the file of your presentation in pdf format to Alice Sinatra **before August 31**.

VIII. CHOICE OF THE INTERNSHIP AND UPMC CONTACT

A list of possible destinations is given in section XI. The represented fields are : Atomic and quantum physics XI A, Condensed matter XI B, Plasma XI C, Education XI D, Astronomy Relativity and Statistical Physics and Complex Systems XI E. The list is continuously updated.

In case a student is interested in joining one group of the list, the UPMC contact is marked below each destination.

The **UPMC contact** is a teacher or researcher working in the field. His role is to contact the group in order to
- Introduce the student
- Know whether or not a local researcher is available to supervise the student
- Agree on a small project for the internship.

The UPMC contact will also collect the appreciation about the student, read the student's report and attend the defence, that is a short talk in which the student tells us about his/her activity during the internship.

In case a student would like to perform the internship in a group or in a field that is not in the list, he can
- Either contact directly the group he is interested in. In this case, once he is accepted, we will will help him to find a UPMC contact.
- Or find a UPMC contact first, and then find the internship with his help.

In any case Alice Sinatra should be informed about the internship.

IX. SCHOLARSHIP FROM UPMC INTERNATIONAL RELATIONS

To ask for a scholarship of the International Relations of UPMC you can proceed as follows.

First check **wether or not there exists an ERASMUS agreement** between the UPMC and the host institution of your internship. A list of of the erasmus agreements is given in

http ://www.upmc.fr/fr/international/mobilite_etudiante.html

– **If yes**
  1. Go to Mme LEVISALLES to get a "dossier ERASMUS"
  2. In the "learning agreement" mark "INTERNSHIP" 12 ECTS
  3. Then you need the signature of A.SINATRA (signature for the department coordinator)
  4. Then you should go back to Mme LEVISALLES (signature for the institutional coordinator)
  5. Each end of the month the International Relations of UPMC examines all the "dossiers" and attributes the scholarships.

– **If no**
  1. You should go to Mme BRUSTON with the invitation letter and create a "dossier".
  2. Each end of the month the International Relations of UPMC examines all the "dossiers" (even if they are not complete -i.e. even if the "convention de stage" is still to come) and attributes the scholarships.

More information concerning the financial helps is available in the documents
http ://www.phys.ens.fr/∼sinatra/Aides_financieres_stage_2011_2012.pdf
http ://www.phys.ens.fr/∼sinatra/Aides_financieres_PE_2011_2012.pdf

See also the UMPC web site :
http ://www.upmc.fr/fr/international/mobilite_etudiante/aides_financieres_possibles.html

The document "avis d'imposition" will be necessary to know which kind of scholarship or financial support are possible for the student.

A. International Relations contacts

– ERASMUS :
Isabelle LEVISALLES
Relations Internationales
2ème étage tour Zamansky
isabelle.levisalles@upmc.fr
tel : 01.44.27.26.99

– NON ERASMUS (USA et BOURSES ILE DE FRANCE) :
Isabelle BRUSTON
Relations Internationales
2ème étage tour Zamansky
isabelle.bruston@upmc.fr
tel : 01.44.27.73.49

B. Internship office contact

– Conventions de stage :
Lydia VERIN PISTOL
Direction de la Vie Etudiante
Service des Conventions de stages
1èr étage, bureau 102
lydia.verin_pistol@upmc.fr
tel : 01.44.27.33.12

X. INTERNSHIP AGREEMENT OR "CONVENTION DE STAGE"

Before leaving for the internship you need a "Convention de stage" that you can find in Master 1 Secretary Office. It must be signed by :

1) "Representant UPMC" Denis COTE (last signature)

2) Receiving Laboratory

3) Internship director (including his/her coordinates)

4) UPMC contact : Alice Sinatra to other UPMC teacher (first signature)

Once signed, the "Convention de stage" should come back to both the Physics Master Secretary office and the international relations office.

XI. LIST OF POSSIBLE DESTINATIONS

A. Atomic physics, quantum physics, quantum optics, quantum information manybody theory

– **EUROPE**

Prof. Nicolas Gisin
Dr. Mikael Afzelius (contact)
Group of Applied Physics
University of Geneva, Switzerland

1. Applied Physics - Optics Group (GAP-Optique)
http ://www.gap-optique.unige.ch/wiki/
EXP quantum optics, quantum information and communication (quantum cryptography, etc...)
UPMC contact : alice.sinatra@lkb.ens.fr

2. A/Prof. Philipp Treutlein
Quantum Atom Optics Lab
University of Basel
http ://atom.physik.unibas.ch/people/philipptreutlein.php
EXP Ultracold atoms on atomchips, quantum technologies, entanglement
UPMC contact : alice.sinatra@lkb.ens.fr

3. Prof. Helmut Ritch
Institute for Theoretical Physics
University of Innsbruck
http ://homepage.uibk.ac.at/ c70571/
TH Optical Lattices, Trapped Ions, Polar Molecules, Cavity QED
UPMC contact : alice.sinatra@lkb.ens.fr

4. A/Prof. Francesca Ferlaino (contact)
Prof. Hans-Christoph Nagerl
Dr. Florian Schreck
University of Innnsbruck and Austrian Academy of Sciences
http ://www.uibk.ac.at/exphys/ultracold/
EXP molecular quantum gases, many-body and few-body physics with cold gases
UPMC contact : alice.sinatra@lkb.ens.fr

5. Professor Immanuel Bloch
Dr. Christian Gross
Max Planck Institute of Quantum Optics
85748 Garching, Germany
http ://www.quantum-munich.de/research/
EXP Ultracold atoms in lattices, single site addressing, quantum simulators
UPMC contact : alice.sinatra@lkb.ens.fr

6. Prof. Markus Obarthaler
Kirchhoff Institute for Physics
University of Heidelberg
http ://www.kip.uni-heidelberg.de/matterwaveoptics/
EXP Bose and Fermi ultracold atoms, quantum technologies
UPMC contact : alice.sinatra@lkb.ens.fr

7. Prof. Jurgen Eschner
Université des Saarlandes, Saarbrücken
http ://www.uni-saarland.de/en/campus/faculties/...
EXP Quantum photonics
UPMC contact : alice.sinatra@lkb.ens.fr

8. Prof. Sandro Stringari
Dr. Gabriele Ferrari
Prof. Stefano Giorgini
BEC Center Trento Italy
http ://bec.science.unitn.it/infm-bec/research/research.html
TH / EXP Bose-Einstein condensates, Fermi gases, quantum Monte Carlo
UPMC contact : alice.sinatra@lkb.ens.fr

9. Prof. Giovanni Modugno
Prof. Augusto Smerzi
Dr. Marco Fattori
Europen Laboratory for non-linear spectroscopy
LENS, Florence
http ://www.lens.unifi.it/index.php ?nl=pplsearch&pplwords1=30
EXP / TH quantum degenerate gases, and atom optics, interferometry
UPMC contact : alice.sinatra@lkb.ens.fr

10. Prof. Giancarlo Strinati
Dipartimento di Fisica
Universita di Camerino, Italy
http ://bcsbec.df.unicam.it/ ?q=node/6
TH ultracold atomic Fermi gases, many body physics
UPMC contact : alice.sinatra@lkb.ens.fr

11. Prof. Anna Sampera
UAB Universitat Autonoma de Barcellona
Theoretical Physics Group
http ://th.ifae.es/
TH cold atoms, quantum gases, quantum information
UPMC contact : alice.sinatra@lkb.ens.fr

12. Prof. Dr. Humberto Michinel
Optics Lab. University of Vigo
Facultade de Ciencias de Ourense
As Lagoas s/n. Ourense, 32004. Spain
http ://optics.uvigo.es/research.html
TH cold atoms, nonlinear and quantum optics
UPMC contact : alice.sinatra@lkb.ens.fr

13. Prof. Michele Modugno
Dpto. de Fisica Teorica e Historia de la Ciencia
Universidad del Pais Vasco, UPV/EHU
Apdo. 644, 48080 Bilbao, Spain
http ://tp.lc.ehu.es/michele
TH Atomic condensates, Cold atoms in disordered potentials
UPMC contact : alice.sinatra@lkb.ens.fr

14. Prof. Georg Bruun
Department of Physics and Astronomy
Aarhus, Denmark
http ://users-phys.au.dk/bruungmb/Site/Welcome.html
TH Superfluidity, strong interactions, quantum transport
UPMC contact : alice.sinatra@lkb.ens.fr

15. Prof. Païvi Torma
Department of Applied Physics
Aalto University School of Science and Technology
Finland
http ://tfy.tkk.fi/qd/
TH quantum coherent dynamics in nanosystems and ultracold gases
UPMC contact : alice.sinatra@lkb.ens.fr

16. Prof. Jan Mostowski
Dr. Mariusz Gajda
Dr. Emilia Witkowska
Dr. Piotr Deuar
Quantum Optics group
Institut of Physics Polish Academy of Sciences
Warsaw, Poland
http ://www.ifpan.edu.pl/ON-2/on26/members.html
TH Quantum optics, cold gases, dynamics, classical fileds
UPMC contact : alice.sinatra@lkb.ens.fr

17. Professor Stefan Kuhr
University of Strathclyde
Department of Physics
Glasgow, U.K.
http ://phys.strath.ac.uk/information/acadstaff/stefan.kuhr.php
EXP single-atom resolved manipulation and detection
UPMC contact : alice.sinatra@lkb.ens.fr

18. Dr Donatella Cassettari
SUPA, School of Physics and Astronomy
University of St Andrews
North Haugh, St Andrews, U.K.
http ://st-andrews.ac.uk/coldatoms
EXP optics and cold atoms, olographic optical traps, to trap BECs
UPMC contact : alice.sinatra@lkb.ens.fr

19. Dr. Zoran Hadzibabic
Cambridge University's Cavendish Laboratory
http ://www.amop.phy.cam.ac.uk/amop-zh/
EXP Superfluidity and cold gases in 2 dimensions
UPMC contact : alice.sinatra@lkb.ens.fr

20. Prof. Janne Ruostekoski
Theoretical Condensed Matter Physics
Lancaster University
http ://www.lancaster.ac.uk/physics/about-us/people/janne-ruostekoski
TH Cold degenerate gases, Nanostructured Photonic Metamaterials, Quantum Tecnologies
UPMC contact : alice.sinatra@lkb.ens.fr

21. Dr. Carlos Lobo
School of Mathematics
University of Southampton
http ://www.soton.ac.uk/maths/about/staff/cl2u07.page
TH Bose condensates and Fermi gases, polarons
UPMC contact : alice.sinatra@lkb.ens.fr

22. Dr. Simon Gardiner
Durham Atomic and Molecular Physics
http ://massey.dur.ac.uk/sag/
TH Dynamics of quantum-degenerate gases, quantum chaotic dynamics
UPMC contact : alice.sinatra@lkb.ens.fr

– **MOYEN ORIENT**

Prof. Nir Davidson
Dept. of Physics of Complex Systems
Weizmann Institute of Science
1. Rehovot 76100 Israel
http ://www.weizmann.ac.il/home/davidson/
EXP Cold gases, Bose condensates, Chaos
UPMC contact : alice.sinatra@lkb.ens.fr

– **ASIE**

Prof. Weiping Zhang
Quantum Optics Group
1. State Key Laboratory of Precision Spectroscopy
TH Quantum optics, cold degenerate gases
UPMC contact : alice.sinatra@lkb.ens.fr

– **AMERIQUE**

Kirk W. Madison, Ph.D, P.Eng.
Assistant Professor, Department of Physics and Astronomy
University of British Columbia
6224 Agricultural Road
Vancouver, B.C. V6T 1Z1, Canada
1. voice : (604)-822-6356 lab
fax : (604)-822-5324
email : madison@physics.ubc.ca
http ://www.phas.ubc.ca/ qdg/
EXP laser cooling and trapping, strongly correlated quantum systems
UPMC contact : alice.sinatra@lkb.ens.fr

Lincoln D. Carr, Ph.D.
Associate Professor, Physics Department
Colorado School of Mines, Golden, CO 80401
2. E-mail : lcarr@mines.edu
http ://inside.mines.edu/ lcarr
TH Quantum Phase Transitions, ultracold molecules, graphene nanoengineering
UPMC contact : alice.sinatra@lkb.ens.fr

Prof. Luiz Davidovich
Instituto de Fisica - Universidade Federal do Rio de Janeiro
Rio de Janeiro - RJ - BRAZIL
3. *http ://omnis.if.ufrj.br/ ldavid/eng/index.php*
TH Quantum optics, quantum information, decoherence
UPMC contact : alice.sinatra@lkb.ens.fr

– **OCEANIE**

A/Prof David Hutchinson
Director, Jack Dodd Centre for Quantum Technology
Department of Physics,
University of Otago,
1. Dunedin
New Zealand
http ://www.physics.otago.ac.nz/nx/people/david-hutchinson
TH Bose-Einstein condensates, superfluidity, non-equilibrium dynamics
UPMC contact : alice.sinatra@lkb.ens.fr

Joachim Brand
Centre of Theoretical Chemistry and Physics
Institute of Fundamental Sciences
2. North Shore MSC, Auckland, NEW ZEALAND
http ://www.mpipks-dresden.mpg.de/ joachim/
TH Bose-Einstein condensates, dynamics, vortices, solitons
UPMC contact : alice.sinatra@lkb.ens.fr

A/Prof. Matthew Davis
University of Queensland, Australia
3. *http ://www.uq.edu.au/uqresearchers/researcher/davismj.html*
TH Bose-Einstein condensates, classical field, non-equilibrium dynamics
UPMC contact : alice.sinatra@lkb.ens.fr

Prof. Peter Drummond
Theoretical Physics
Swinburne University of Technology
4. *http ://www.swinburne.edu.au/engineering/staff/Peter-Drummond-127*
peter_drummond.html
TH/EXP Strongly interacting Fermi gases, Atom lasers, Quantum Information
UPMC contact : alice.sinatra@lkb.ens.fr

B. Condensed Matter and nanoscience

– **EUROPE**

Internships proposed with Nanomat partners :
Uppsala (Sweden), Antwerp (Belgium), Rome (Italy)
1. *http ://www.nanomat-master.eu/job/job_en.htm*
UPMC contact : marangolo@insp.jussieu.fr
Additional grants to Antwerp are available

Prof. Giovanni Carlotti
Experimental Physics
Università di Perugia (Italy)
2. *http ://ghost.fisica.unipg.it*
EXP magnetisme, nanoscience, thin films
UPMC contact : marangolo@insp.jussieu.fr

Prof. Enrico Campari
Experimental Physics
Università di Bologna (Italy)
3. *http ://www.unibo.it/docenti/enrico.campari*
EXP materials, applications, thin films
UPMC contact : marangolo@insp.jussieu.fr

– **JAPON**

Prof. Ashida
Institute for NanoScience Design, Osaka, Japon
http ://www.insd.osaka-u.ac.jp/index_e.html
1. *(1)Molectronics, (2)Nano-photonics, (3)Nano-electronics,(4)Nano-spintronics,*
(5)Fabrication of nano-structures, (6)Optical properties of nano-materials
(7)Nano-devices.
UPMC contact : marangolo@insp.jussieu.fr
Possibility of grants from Osaka university

Several internships in Okayama Unversity, Japan - (rent-free lodging)
2. **Full list here :**
(1)Material Science, (2)Bio interfaces, (3)Medical biology and chemistry, (4) Water and Environement
UPMC contact : marangolo@insp.jussieu.fr

Prof. Iwao Matsuda
Université de Tokyo, Japon
3. *http ://imatsuda.issp.u-tokyo.ac.jp/*
rayonnement synchrotron, laser, dynamique de spin et de porteurs ultra-rapides
UPMC contact : dangelo@insp.jussieu.fr

Several internships as Okinawa Institute of Science and Technology, Japan
(rent-free lodging if accepted as a "Research Intern")

4. *http ://www.oist.jp/research-units*
Theoretical Physics, Theory of condensed Matter, Theory of Cold Atoms, Biophysics, Microfluidics
UPMC contact : alice.sinatra@lkb.ens.fr
Contact étudiant : maxime.garnier@ens-cachan.fr

– **AMERIQUE LATINE**

Dr. Julian Milano
Centre atomique de Bariloche (Argentina)

1. *http ://www.cab.cnea.gov.ar/index.php/oferta-tecnologica/equipamiento/laboratorio-de-nanociencia-y-nanotecnologia*
EXP solid state physics and nanomaterials
Two scholarships "Sorbonne Université" are available covering both the trip and living expenses.
UPMC contact : massimiliano.marangolo@insp.jussieu.fr

C. Plasma Physics

Two scholarships are available in plasma physics for the subjects 1, 2 and 3 hereafter :

Professor Nikolay Aleksandrov (e-mail : nick_aleksandrov@mail.ru)
MIPT, Moscow Institute of Physics and Technology (www.mipt.ru)

1. *http ://www.mipt.ru*
EXP : Ignition of combustible mixtures by nanosecond discharge, non-equilibrium plasmas, fast emission spectroscopy tech
UPMC contact : Svetlana Starikovskaia, svetlana.starikovskaya@lpp.polytechnique.fr

Professor Rafael Rodriguez Perez (e-mail : rafael.rodriguezperez@ulpgc.es)

2. IRMA, Physics Department, University of Las Palmas de Gran Canaria Spain
TH : Radiative properties of plasmas for astrophysics and laboratory astrophysics, numerical simulations.
UPMC Contact : Chantal Stehlé, Chantal.stehle@obspm.fr

Professor Stefan Weber (e-mail : Stefan.Weber@eli-beams.eu)

3. ELI Beamlines (Extreme Light Infrastructure), Prague, Czech Republic
TH : Kinetic simulations of laboratory astrophysical phenomena, numerical simulations.
UPMC Contact : Caterina Riconda, Caterina.Riconda@upmc.fr

The detailed internship proposals can be fond on the Plas@Par Labex web site :
http ://www.plasapar.com/en/master-m1-first-year

Salvatore Orlando
INAF National Astrophysical Institut, Palermo, (Italie)

4. Osservatorio Astronomico di Palermo,
http ://www.astropa.unipa.it/progetti_ricerca/HPC/index.html
TH : Modeling mass accretion of young stars. Radiative properties of plasma, radiative transfer, spectra.
UPMC contacts : Chantal.stehle@obspm.fr, emily.lamour@insp.jussieu.fr

Fabio Reale
Physics Department, University of Palermo (Italie)

5. Osservatorio Astronomico di Palermo
http ://portale.unipa.it/dipartimenti/dipartimentofisicaechimica.html
TH : Magnetized plasmas in astrophysical objects. Accretion process on stellar surfaces. Hydrodynamic simulations.
UPMC contacts : Chantal.stehle@obspm.fr, emily.lamour@insp.jussieu.fr

D. Physics Education

– **EUROPE**

1. Prof. Barbara Pecori
Università di Bologna (Italy)
Physics education, didactics Group
http ://www.cis.unibo.it/sth/faculty/...
Didactics
UPMC contact : marangolo@insp.jussieu.fr

2. Prof. Anna De Ambrosis
Università di Pavia (Italy)
Physics education, didactics Group
http ://fisicavolta.unipv.it/didattica/people.html
didatics
UPMC contact : marangolo@insp.jussieu.fr

E. Astronomy, Relativity, Statistical Physics, Statistical Physics and Complex Systems

– **EUROPE**

1. Prof. Riccardo Zecchina
Prof. Alessandro Pelizzola (contact)
Politecnico di Torino, Italy
http ://www.polito.it/cmp
Statistical physics and interdisciplinary applications
International Master "Physics of Complex Systems" S2 M1 in Italy and M2 in France
UPMC contact : alice.sinatra@lkb.ens.fr

2. Prof. Jerzy Kijowski
Center for Theoretical Physics Polish Academy of Sciences
http ://www.cft.edu.pl/p_view/p_view.php ?login=kijowski
TH Hamiltonian structure of general relativity,
discrete approximations of Einstein equations
UPMC contact : alice.sinatra@lkb.ens.fr

3. Prof. Bodo Ziegler
Department of Astronomy, Vienna University
http ://homepage.univie.ac.at/bodo.ziegler/
Galaxy formation and evolution
UPMC contact : alice.sinatra@lkb.ens.fr

4. Prof. Prashant Valluri
Institute for Materials and Processes, University of Edinburgh
http ://www.see.ed.ac.uk/research/IMP/multiphase_flows_complex_fluids.html
Multi-phase flows and complex fluids, Microfluidics
UPMC contact : alice.sinatra@lkb.ens.fr

– **AMERIQUE**

1. Berkeley National Laboratories, California, USA
Subject : Particle physics, Cosmology
UPMC contact : hardin@in2p3.fr

2. Prof. Mario Molina, Dr. Julien Armijo
Non-linear optics group
Université du Chili (Santiago)
http ://fisica.ciencias.uchile.cl/nonopt/NLOG.html
TH/EXP Light waves in periodic and disordered media
UPMC contact : alice.sinatra@lkb.ens.fr

3. Julio Herrera-Velazquezr
Instituto de Ciencias Nucleares
Universidad Nacional Autonoma de mexico
http ://www.nuclecu.unam.mx/icn2/...
Plasma physics, Matter-radiation interaction
UPMC contact : alice.sinatra@lkb.ens.fr

4. Dr. Richard Scott
Northwest Research Associates,
University of Saint Andrews, Seattle, USA
http ://www.nwra.com/people.php
TH Atmospheric Sciences, Fundamental Fluid Mechanics, Modelling
UPMC contact : alice.sinatra@lkb.ens.fr