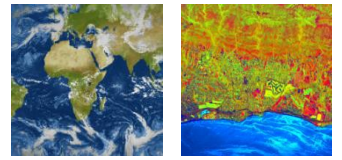**Université de Paris, Sorbonne Université**
Institut de Physique du Globe de Paris
Université Paris-Saclay
Ecole Normale Supérieure, Ecole Polytechnique
ENSTA ParisTech, École des Ponts ParisTech

http://teledetection.ipgp.fr/mpt

M2 *Fundamentals of Remote Sensing*
Last update: Wednesday, March 06, 2019

Module « Practical Work, Seminars and Internship»

Heads: S. Jacquemoud (jacquemoud@ipgp.fr) & L. Picon (picon@lmd.jussieu.fr)
Other teachers: Nicolas Delbart, Rodolphe Marion, Giovanni Occhipinti, Benoit Poussot, Yao-Veng Te, Ha Tran and Irène Xueref-Rémy
Credits: 27 ECTS

PW in Radar Communication

Teacher: Benoit Poussot (benoit.poussot@univ-mlv.fr)
Summary:
Organization: 3h practical work at ESYCOM in Marne-la-Vallée.

Benoit Poussot is an assistant professor at the university Université Paris-Est Marne-la-Vallée and researcher at the laboratory "Electronique, systèmes de communication et microsystèmes" (ESYCOM). His research focuses on...

PW in molecular spectroscopy

Teacher: Yao-Veng Te (yao-veng.te@upmc.fr) and Ha Tran (hatran@lisa.u-pec.fr)
Summary: this practical work consists in recording an atmospheric spectrum using the observation platform located in Jussieu and then in interpreting it using dedicated tools and spectroscopic databases.
Organization: 2×3h practical work.

Yao-Veng Te is an assistant professor at the university Sorbonne Université and a researcher at the laboratory "Laboratoire d'études du rayonnement et de la matière en astrophysique et atmosphères" (LERMA). His research focuses on the remote sensing of air pollutant and greenhouse gas concentrations, Fourier transform spectrometry and atmospheric spectrum modeling.
Ha Tran is a CNRS researcher at the laboratory Laboratoire de Météorologie Dynamique. Her research focuses on the spectroscopy of atmospheric molecules, the study of line profiles in the infrared domain and the analysis of atmospheric spectra.

PW in Image Processing

Teacher: Rodolphe Marion (rodolphe.marion@cea.fr)
Summary:
Organization: 4h computer tutorials.

Rodolphe Marion is a researcher at the Commissariat à l'énergie atomique et aux énergies alternatives. His research focuses on...

PW in Ground Penetration Radar

Teacher: Giovanni Occhipinti (ninto@ipgp.fr)
Summary:
Organization: 2×3h practical work.

Giovanni Occhipinti an assistant professor at the university Université de Paris and a researcher at the "Institut de Physique du Globe de Paris" (IPGP) in the team "Planétologie et sciences spatiales". His research focuses on...

Introductory Course on Observation Methods

Teacher: Irène Xueref-Rémy (irene.remy-xueref@univ-amu.fr)

Summary: the "Institut Pierre Simon Laplace", "Sorbonne Université", "Université de Paris" and "Université Paris Saclay" organize a four day training program for students at the "Observatoire de Haute-Provence". Several instruments sounding the atmosphere and dedicated to astronomy are presented in small groups. The students have the opportunity to use some of them, learn about their operation, ask questions to the operators and scientists, and thus see the applications of the theoretical knowledge they will receive during the academic year. These visits are complemented by a series of lectures on experimental devices and measurement methods in both astronomy and atmospheric physics.

Organization: four days at "Observatoire de Haute Provence" in mid-October.

Outline
- Mesures Lidar aérosols / température / ozone
- Observations avec les télescopes 80 cm et 120 cm
- Utilisation des bases de données
- Outils informatiques en géophysique et en astronomie
- Mesures avec les spectromètres UV-visibles / Dobson / SAOZ
- Observatoire virtuel
- Traitement des observations

Irène Xueref-Remy is a CNAP assistant physicist at Institut Pytheas. Her research focuses on the variability of atmospheric CO_2 in the troposphere and the stratosphere, and the quantification of CO_2 exchanges between the soil and the atmosphere. She is an expert in airborne measurements of atmospheric CO_2 and is involved in several European projects (CARBOEUROPE-IP, CARIBIC). She is involved in the implementation of the European Integrated Carbon Observing System (ICOS), the aim of which is to homogenize the European greenhouse gas monitoring network.

Seminars

Teachers: Nicolas Delbart (nicolas.delbart@univ-paris-diderot.fr) and Stéphane Jacquemoud (jacquemoud@ipgp.fr)

Summary: these seminars, which are common with the training "Télédétection et géomatique appliquées à l'environnement" (TGAE), involve specialists in the field of remote sensing in the broad sense, who come from both academia and industry. They cover many fields of research and application.

Organisation : 10×2h seminars.

Research Internship

Teachers: Stéphane Jacquemoud (jacquemoud@ipgp.fr) and Laurence Picon (picon@lmd.polytecnique.fr)

Summary:

Organisation : 4 months minimum between March and June.