



SUMMER SCHOOLS

UNIVERSITY OF
ANGERS - FRANCE

*Share your knowledge with international researchers
and students from different countries and cultures.*

■ ***Bioinformatics***

27th June to 8th July 2016

The other schools :

Research

Vascular

Plant science

Enfance et bien-être

www.summerschools.univ-angers.fr

ANGERS

SUMMER SCHOOLS ANGERS 2016

- Angers is a **beautiful medieval city** located in western France, in the Loire Valley, which is a UNESCO World Heritage Site, famous for its wines and castles. Angers has a unique 12th century fortress and the world's largest medieval tapestry.

Regularly acknowledged in the national press as one of the leading cities in France for its quality of life and respect for the environment, Angers has now received the first award as "the greenest city in France".

With more than 30,000 students every year, in an urban area of 250,000, Angers offers a very dynamic lifestyle with frequent cultural events and festivals all year round.

The famous "Tour de France" will pass through Angers during the Summer Schools. Participants will have the chance to enjoy this unique event !

Our Summer Schools

The program of our Summer Schools brings together innovative teaching and research excellence to allow participating students to experience first hand the methods and practice of research in a variety of fields.

The two week (60h) or one week (30h) programs include lectures by international researchers (max. one hour) followed by questions and discussion, workshops with small groups of students, visits to research institutions and for some students, oral presentations on selected topics.



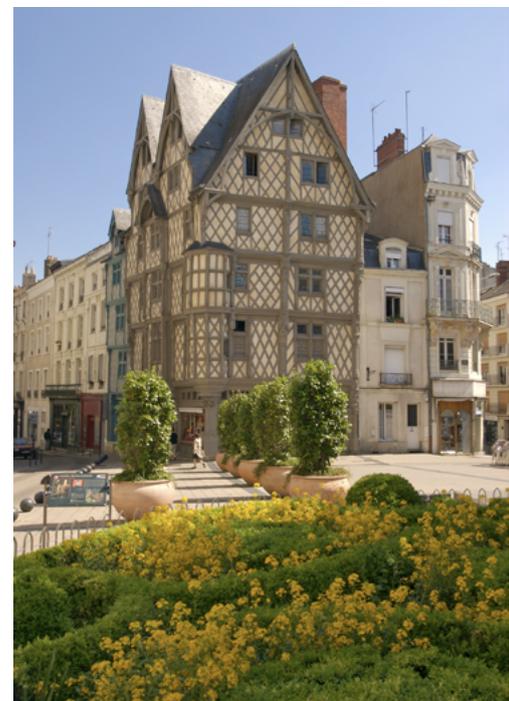
The University of Angers

The University of Angers, which dates back to the Middle Ages, is known for the quality of its research and the success of its students, both in their studies and in their careers.

As a public, comprehensive university, a broad spectrum of fields is covered, but several have become internationally acclaimed, such as plant science and health sciences.

"I gained a lot of insight into areas I am unfamiliar."

Brandon Binnie, University of Melbourne, Australia, 20 y.o, RSSA.



BIOINFORMATICS

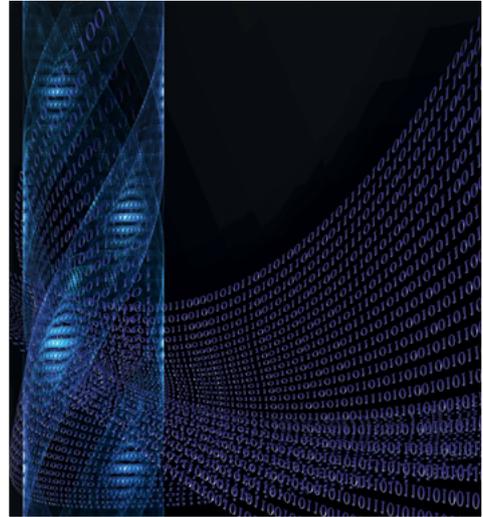
SUMMER SCHOOLS ANGERS 2016

2nd Edition

27th June – 8th July 2016

Faculty of Sciences

University of Angers



Presentation

Bioinformatics is an exciting new area of interdisciplinary science. The future of many biological and medical studies promotes smart use of computational tools as an essential knowledge in scientists background. The program developed in this Summer School aims at bringing students the ability to conduct ambitious biological studies from big data analysis to extract relevant biomarkers to large scale models engineering in order to enhance biological production. Topics to be covered include different fields of bioinformatics: data processing of genomic data, optimization methods in systems biology, statistics and classification for biomarker extraction, meta-genomics and a few more. Focus is also made on valorization concerns and technology transfer.

Workshops

The program relies **on interactive classes and hands-on activities**. Several workshops are organized, among them :

- Case study and guided exercises on "Computer modeling of living systems",
- From the raw sequences to the non-synonymous variants : a short exome analysis,
- Analysis of proteomics data.

Visits

- Biopolymers core facility in Nantes
- Genomics and bioinformatics core facility in Nantes

Invited speakers

- J. CHIQUET, Paris, FR
- A. BOCKMAYR, Berlin, DE
- L. MAIGNIEN, Western Brittany, FR
- B. GENIN, Integragen, FR

Sessions

Plenary conference by a renowned professor

- Warm up session: Informatics for beginners (R and Python)
- **Statistics** and classification on genomic data
- Introduction to **metabolic networks**
- Acquisition and analysis of **proteomics** data
- Next generation sequencing (**NGS**) in genetics and genomics
- **Environmental Genomics**
- Ontologies and biology databases
- Bioinformatics and Business companies
- Association mapping and **system genetics** : from GWAs to function
- **Optimization methods** for bioinformatics

Criteria

This program is ideal for those wishing to develop advanced skills in bioinformatics. Prior experience in computer science and computer programming is not required. This Summer School is aimed at undergraduate students from 3rd year and graduate students (M. or Ph.D) in biological sciences / medicine / pharmacy / informatics / engineering or other scientific background.

A certificate of attendance and 6 ECTS will be delivered at the end of the courses.

PRACTICAL INFORMATION

SUMMER SCHOOLS ANGERS 2016

Admission criteria

The selection of students will be made based on motivation, level of English and previous scientific experience, if any.

Application procedure

There is a specific application form for each school.
It is available on the page of the concerned school.
The number of places is limited to 35 participants for each school.

Deadline to apply : 15th April 2016

Fees

Research, Vascular, Bioinformatics, Plant Science :

€650 until the 13th of March

€750 after this date

Well-being of children :

€400 until the 13th of March

€500 after this date

Specific fees for professionals :

€500 for professionals from Angers

€800 for others

Fees include : tuition, accommodation, lunches, scheduled excursions and extracurricular activities during the course.

Fees don't include : costs of passport, visa, health insurance, travel to and from Angers

Social activities

Our Summer Schools not only offer you a fine selection of interesting courses and scientific visits, they also aim at giving their participants an unforgettable stay in France.

Therefore we offer all of our participants an attractive social program, including excursions, sport, social gathering and festivities...The perfect setting for you to get to know one another ! A few examples of activities : welcome barbecue, kayak session, day trip on the Atlantic coast...

These activities are mainly free, or cost no more than 5 euros.

Housing, catering and transport

Fully furnished single rooms with bathrooms and showers.

There are several kitchens on each floor that you will share with other students.

You will get a bike and a tramway/bus pass for the length of your stay for free.

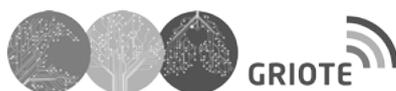
By bike, the student residence is about 5 minutes from the city centre and 15 minutes from the University.

A group of students will be in charge of taking care of you during your whole stay and organize some great activities.





Further information :
summerschools@univ-angers.fr



www.summerschools.univ-angers.fr

