



UNIVERSITÀ DEGLI STUDI DI TORINO

ID

VP16\_DIP\_MAT

## Visiting Professor Program Academic year 2019/2020

**DEPARTMENT OF MATHEMATICS "GIUSEPPE PEANO"**

**TEACHING COMMITMENT: 16 hours**

### **COURSE TITLE**

Biomathematics (part 2)

### **TEACHING PERIOD**

2nd term

### **SCIENTIFIC AREA**

Numerical Analysis

### **LANGUAGE USED TO TEACH**

English

### **COURSE SUMMARY**

The course reviews basic topics, to reinforce basic knowledge but develops also new concepts. Use of papers in the current literature allows the students to improve their reading abilities, also in a foreign language. The course is a first step in building advanced models in biological applications and in tackling research problems. The projects and lab activities stimulate the students' problem solving abilities. At the start of the course some historical facts on this discipline are related. The discrete models presented could be used at the high school level.

### **LEARNING OBJECTIVES**

The student is supposed to further his knowledge, recognize the errors in the model formulation and to correct them. The discussion with the teacher and other students helps in achieving this goal, it is the main reason for which the final projects are given to small teams of students. The students must also consult the current literature in the field, which is a necessary step to start research and new situations.

## **OTHER ACTIVITIES BESIDES THE COURSE**

Seminars for the interested doctoral students in the programs in Mathematics and Complex Systems could also be offered during the visit. Joint research with interested members of the Mathematics department would also be fostered.

## **VISITING PROFESSOR PROFILE**

The successful candidate should have a solid research experience in biomathematics, he/she should be editor of at least two international journals in the field. He/she should have a record of fundings for his/her research, should have written advanced books in the area, be or have been involved in the Board of Societies involving biological mathematics, have been the main organizer of important international conferences and a record of scientific publications of high quality, in particular in the area of dynamical systems and their application in population theory. He/she should be a specialist in the areas of pattern formation, animal movement and dispersal, biological invasions, diffusion-reaction systems applications to ecology.

## **CONTACT PERSON AT THE DEPARTMENT**

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