

XXVIIIth Seminar of the Francophone Society for Theoretical Biology

From biological and clinical experimentation to modelling

In memory of Gilbert Chauvet

Saint-Flour (Cantal, France) : 8 - 11 June 2008
7 rue des Planchettes, La Maison des Planchettes, F-15100 Saint-Flour
<http://www.sfbt.org>

The study of living systems integrates numerous multidisciplinary exchanges between biologists, clinicians, informaticians or mathematicians. The long term objective is to « get closer to the reality ». In this framework, mathematical models give the means to test hypotheses about processes identified in a biological system and likely to explain its functioning. This seminar will deal with

- links between disciplines,
- difficulties to fit different approaches from the conception of a mathematical model to its computer implementation, and
- the necessity of comparing (or not) model hypotheses with experimental reality.

These ideas could be developed on the following subjects :

- biorhythms (circadian clock, complex rhythms in neuro-endocrinology, etc) and their pathology: circadian rhythms and chronotherapy, evolution of the GnRH and its receptors, etc ...
- models for hypertension, granulopoiesis, etc ...
- aggregation methods in ecology models,
- emergence of organized spatial structures and morphogenesis,
- breaks and regime changes in spatial or temporal series.

The seminar is organized in 5 half-day sessions. During 4 sessions, these themes will be approached with the presentation of **experimental** or **theoretical** studies in disciplines such as **ecology, biology, physiology**, etc. Talks on epistemology will put a specific emphasis on the philosophical aspects of these themes. A half-day will be devoted to free subjects independent of the central themes. The Delattre Prize (750 euros) will be awarded to the best oral presentation by a young researcher preparing a thesis.

References

G. Chauvet « *Sur le rôle de la théorie en biologie* » dans « *modèles, simulations, systèmes* » Matière première n°3, JJ Kupiec, G. Lecointre, M. Silberstein & F. Varenne (dir.), Syllepse, Paris (2008) pp. 201-225.

A. Goldbeter *Biochemical oscillations and cellular rhythms, the molecular bases of periodic and chaotic behaviour*. Cambridge University Press (1996) Cambridge UK.

F. Varenne *Du modèle à la simulation informatique*, Paris Vrin (2007).

Keywords

Aggregation, bifurcation, chaos, evolution, multiscale, non-stationarity, threshold phenomenon, transitory regime, complex rhythms. Mathematical model, computer simulation, system theory.

Contact

SFBT Site : <http://www.sfbt.org>

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Important dates

March 1, 2008 – First announcement, call for communications and registration

May 1, 2008 – Closing date for submitting communication summaries

May 20, 2008 – Closing date for registration and final programme

Seminar proceedings

As in previous years, the Seminar proceedings will be published after peer review. The closing date for submitting articles is *September 30, 2008*.

Registration fees

The following fees cover the Seminar registration, accommodations and meals from evening, Sunday June 8 to Wednesday, June 11 after lunch, i.e., 3 nights + full board. Accommodations and meals are provided in the seminar building. Information on the Seminar location and access is available on <http://maison-des-planchettes.com/>.

Registration fees for the SFBT Seminar			
<i>Student</i>			
SFBT member :	135 €	Non SFBT member :	170 €
<i>Other participant</i>			
SFBT member :	250 €	Non SFBT member :	300 €
SFBT membership			
Student :	15 €	Other member :	25 €

Instructions to authors / Available equipment

Oral communication or poster summaries should be sent to david.nerini@univmed.fr before *Mai 1, 2008*. They should include a title (max. 120 letters, in Arial 12 bold), the names of authors (the name of the presenter should be underlined) and a summary of 250 words (Arial 10 normal). The file format could be text, *.doc, *.rtf (Word file) or LaTeX. The conference room is equipped with a video projector, an overhead projector and a whiteboard. A computer is available for presentations stored on DVD, CD or USB keys.

The Delattre Prize

The Delattre Prize (750 €) is awarded to the best presentation by a young researcher preparing a thesis. This Prize is awarded after deliberation by an expert committee designated at the beginning of the Seminar by the SFBT board.

REGISTRATION FORM FOR THE XXVIIIth SEMINAR OF THE SFBT
Saint-Flour, June 8 (evening) - June 11 (after lunch)

GENERAL INFORMATION	
<input type="checkbox"/> Student <input type="checkbox"/> I do not wish to compete for the Delattre Prize	<input type="checkbox"/> Other Title:
LAST NAME:	FIRST NAME:
ORGANIZATION and ADDRESS:	Tel: E-Mail: Fax:
COMMUNICATION	
<input type="checkbox"/> I wish to make a presentation	<input type="checkbox"/> Oral <input type="checkbox"/> Poster
RESEARCH DOMAIN (Medicine, Ecology, ...)	PRESENTATION TITLE (max. 120 letters):
NB: A summary of the presentation (250 words) should be sent at the latest on <i>Thursday May 1, 2008</i> to david.nerini@univmed.fr . Oral communications will be accepted within available places. See the <i>instructions to authors</i> section for more details.	
<input type="checkbox"/> I wish to submit an article to the Seminar proceedings.	
ACCOMODATIONS	
The Seminar fees cover accommodations and meals from the evening of Sunday June 8 to Wednesday June 11 after lunch (3 nights + full board).	
Arrival date:	Arrival hour:
Departure date:	Departure hour:
<input type="checkbox"/> I will be accompanied and I wish a double room	
Name of the accompanying guest:	
PAYMENT	
Enclosed my payment:	
<input type="checkbox"/> 135 € (SFBT member student) <input type="checkbox"/> 250 € (SFBT member)	<input type="checkbox"/> 170 € (student) <input type="checkbox"/> 300 € (other participant)
Payment form:	
<input type="checkbox"/> Cheque made out to the SFBT <input type="checkbox"/> <i>Bon de commande</i> made out to: Association SFBT (LMGEM UMR CNRS 6117, Centre d'Océanologie de Marseille, Campus de Luminy, Case 901, F-13288 MARSEILLE Cedex 09)	
<input type="checkbox"/> I wish to receive a receipt	
<input type="checkbox"/> I also send my SFBT membership form	

This form and the cheque or *bon de commande* should be sent at the latest on **May 20, 2008** to:
 David Nerini, Laboratoire de Microbiologie, Géochimie et Ecologie Marines, UMR CNRS 6117,
 Centre d'Océanologie de Marseille, Campus de Luminy - Case 901, F-13288 Marseille Cedex 09,
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