

INVITED LECTURERS

ALEXEI MAILYBAEV
IMPA, Rio de Janeiro, Brazil

ALOIS STEINDL
TU Wien, Vienna, Austria

ANDREI METRIKINE
TU Delft, Delft, The Netherlands

CARLOS MAZZILLI
EPUSP, São Paulo, Brazil

CELSO PESCE
EPUSP, São Paulo, Brazil

GUILHERME FRANZINI
EPUSP, São Paulo, Brazil

JOSÉ ROBERTO PIQUEIRA
EPUSP, São Paulo, Brazil

LIVIJA CVETICANIN
UNS, Novi Sad, Serbia

LUIS ANTONIO AGUIRRE
UFMG, Belo Horizonte, Brazil

MARCELO SAVI
UFRJ, Rio de Janeiro, Brazil

PAULO GONÇALVES
PUC-Rio, Rio de Janeiro, Brazil

ROBERTO CAMASSA
UNC, Chapel Hill, USA

STEFANO LENCI
UnivPM, Ancona, Italy

ADMISSION AND FINANCIAL SUPPORT

Applicants must apply **from February 11th, 2019 to June 28th, 2019**, through the Advanced School website <http://www.usp.br/spnl>.

There are up to 60 vacancies for Brazilian and up to 60 for foreigner candidates. They should be graduate students undergoing research in the field of nonlinear dynamics. Post-docs and undergraduate students may be considered, provided they are enrolled in related research programmes. For application requirements, please consult the website.

The selected candidates will be informed **from late February to mid June**, according to the **first come first serve basis**. Selected candidates, provided they are not yet recipients of FAPESP scholarships, **including those from abroad**, will receive **financial support for their travel and accommodation expenses** during the Advanced School. Participants are expected to present their on-going research in poster sessions and interact with the lecturers.

All lectures will be in English. Lecture notes can be downloaded from the website. Instructions will be timely sent to participants.

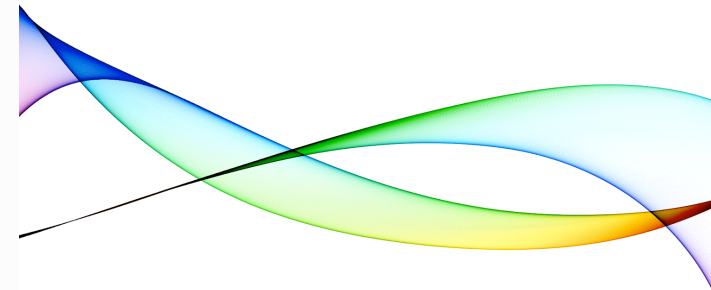
FOR FURTHER INFORMATION, PLEASE CONTACT:

asnld@usp.br.

São Paulo, July 29th - August 9th, 2019



SÃO PAULO SCHOOL OF ADVANCED SCIENCES ON
NONLINEAR DYNAMICS



ORGANISERS

JRC Piqueira
GR Franzini
CP Pesce
CEN Mazzilli



NONLINEAR DYNAMICS

The course is formatted in 31 modules of theoretical lectures, four modules for the participants' poster presentations and technical visits.

The subject is addressed in a transdisciplinary way, to encompass applications in engineering mechanics (civil, mechanical, mechatronics, naval, offshore) and electrical engineering, from fundamental topics to mathematical modelling.

Participants will be exposed to state-of-art knowledge in the areas of the lecturers' expertise. Participantes will also get acquainted with the research infrastructure and opportunities for graduate studies at Escola Politécnica, University of São Paulo.

The course can also be assessed through the transmission of the Escola Politecnica **Youtube channel**.

The following topics will be addressed: fundamentals of dynamics; stability theory; nonlinear oscillators, asymptotic methods; bifurcation theory; dynamical integrity; structural reliability; nonlinear vibration modes; reduced-order models; nonlinear system identification, nonlinear control, nonlinear fluid dynamics; applications.

WEEK 1

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:00-10:00	Opening	Module 4 Lenci	Students' posters	Module 10 Mailybaev	Module 13 Steindl
10:00-10:15	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:15-12:15	Module 1 Cveticanin	Module 5 Cveticanin	Students' posters	Module 11 Mailybaev	Module 14 Steindl
12:15-13:45	Lunch	Lunch	Lunch	Lunch	Lunch
13:45-15:45	Module 2 Lenci	Module 6 Cveticanin	Module 8 Aguirre	Module 12 Mailybaev	Module 15 Steindl
15:45-16:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
16:00-18:00	Module 3 Lenci	Module 7 Aguirre	Module 9 Aguirre	Lab visits	Module 16 Gonçalves

WEEK 2

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:00-10:00	Bloco 17 Gonçalves	Bloco 21 Savi	Students' posters	Bloco 27 Metrikine	Bloco 29 Franzini
10:00-10:15	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:15-12:15	Bloco 18 Gonçalves	Bloco 22 Camassa	Students' posters	Bloco 28 Pesce	Bloco 30 Mazzilli
12:15-13:45	Almoço	Almoço	Almoço	Almoço	Almoço
13:45-15:45	Bloco 19 Savi	Bloco 23 Camassa	Bloco 25 Metrikine	Technical visit	Bloco 31 Piqueira
15:45-16:00	Coffee Break	Coffee Break	Coffee Break		Coffee Break
16:00-18:00	Bloco 20 Savi	Bloco 24 Camassa	Bloco 26 Metrikine		Closing