



École des sciences avancées de Luchon **School for advanced sciences of Luchon**

Dynamics and chaos in astronomy and physics Session Workshop IV (W4), September 17 - 24, 2016

Workshop Organizers:

[Jose Lages \(UTINAM Besancon\)](#), [Dima Shepelyansky \(CNRS Toulouse\)](#), [Ivan Shevchenko \(Pulkovo Observatory Saint Petersburg\)](#)

Secretary: [Malika Bentour](#)

Scope: Recent developments in dynamical systems in astronomy and physics will be presented. Special accents will be on the Solar system dynamical evolution, three-body problem, dynamics of asteroids and comets, formation and dynamical evolution of planetary systems, space debris, dynamics of dark matter in the Solar System and Galaxy. Manifestations of dynamical chaos in various systems will be analyzed. The main objective of this workshop is to bring together leading experts and young researchers working in the area of dynamical systems, astronomy and physics to exchange ideas and discuss ongoing developments and open issues.

Topics: Dynamical systems, resonances, chaos, three-body problem, dynamics of planets and minor bodies, dark matter, space debris, exoplanets, satellite dynamics and control, dynamical evolution of planetary systems, dynamical processes in galactic nuclei.

List of invited speakers (confirmed): P.Cincotta (FCAG/UNLP La Plata), N.Emelyanenko (I Astronomy RAS), V.Emelyanenko (I Astronomy RAS), M.Fouchard (U Lille), T.Gallardo (U Uruguay), B.Georgeot (CNRS Toulouse), D.Heggie (U Edinburgh), Z.Knezevic (AObs Belgrade), J.Lages (UTINAM Besancon), G.Li (Harvard U), J.Lissauer (NASA), R.Mardling (MONASH U), A.Milani (U Pisa), D.Nesvorny (SRI Boulder), D.Shepelyansky (CNRS Toulouse), I.Shevchenko (Pulkovo Obs), F.Spotto (Obs Nice), B.Steves (Glasgow Caledonian U), K.Tanikawa (NA Obs Japan), G.Valsecchi (IAPS Rome).

Contributed oral presentations: Tatiana Demidova (Pulkovo Obs), Guillaume Rollin (UTINAM Besancon), Melaine Saillenfest (U Lille), Evgeny Smirnov (Pulkovo Obs)

Registration fee: All workshop participants are expected to pay a registration fee which will cover lodging for 7 nights (Saturday-Saturday) at [Les Jardins de Ramel](#), coffee breaks and lunches on working days (Monday - Friday), social dinner, excursions to mountains and lakes, and visits to thermal baths of Luchon. There is no admission fee.

The registration options are as follows: A) 250 euro/person, double occupancy in a furnished apartment with 3 rooms (two bedrooms); B) 350 euro/person, single occupancy in a furnished

apartment with 2 rooms (one bedroom); Speakers who chose option B) can share their apartments with an accompanying person at no extra cost. However, accompanying persons who would like to participate in workshop social activities are requested to pay a registration fee of C) 140 euro/person which includes five lunches, social dinner, excursions, and thermal baths; D) 450 euro for a large apartment of option A) for one participant with a family. Please note that since only a very limited number of apartments with 2 rooms are available, registration option B) will be processed on a first come, first served basis. We also expect to be able to accommodate a limited number of students at a reduced registration fee of 200 euro (3-4 persons per apartment).

Due to restricted funds there is no travel support

Registration and payment: To guarantee participation, payments of the registration fees must be made by **April 22, 2016** via a credit card at the [CNRS web page](#) (go to registration line of DCAP 2016-W4). The receipt for your payment will be send to you by email (NOTE: this site does not allow to pay twice to the same person, so use other email and family name for accompanying person payment, slight name modification will work).

Bus transfer Toulouse-Luchon: There will be a large bus FARRUS from Toulouse airport to Luchon on September 17 at 16h45 (departure from airport ground level, exit porte D; 2 hours 20 mins trip); this bus will pass via "gare routiere" at 17h15 to pick up participants from the Toulouse railway station ("gare routiere" CD31 [link](#)) is located 50 meters to the right from the main exit of the railway station nearby to the stop of Navette bus to airport which is the meeting point).

Bus transfer Luchon-Toulouse airport: Return bus will be from Luchon to Toulouse airport (direct) on September 24 at 9:30, departure from Ramel, estimated arrival time at airport is 11:10 - 11:30 depending on traffic (in case when several participants will need to catch an early flight the departure of bus can be shifted at 9:00).

To reach airport from Toulouse railway station: take metro line A to metro Les Arenes, change there to tramway line T2 direct to airport (same metro ticket, ride duration about 25mins) or take direct Navette bus to airport (stops at bus station 50meters left of front railway station, runs each 20mins, ride duration approx 25 mins); same way in opposite direction from airport to railway station. Public transportation options to Luchon can be found [here](#).

LATE ARRIVALS: [SEE LATER INFO HERE](#)

Information: [Location](#), [Travel](#), [Recommendations](#), [Program + slides](#), [Photos + views](#), [Poster](#)

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Web page: <http://www.quantware.ups-tlse.fr/ecoledeluchon/sessionw4/>

