

BETTY Summer School 2016

The Lisbon University Proposal

June 2015



View from Belém © Alexander Savin / Flickr

BETTY Summer School at the University of Lisbon

The Behavioural Types for Reliable Large-Scale Software Systems (**BETTY**) summer school in 2016 will be the second to be sponsored by COST Action IC1201. Our proposal is to conduct the BETTY summer school in **Lisbon, Portugal**. Lisbon is a very vibrant and at the same time affordable city, with a remarkable history and cultural heritage. The city enjoys an excellent climate during the summer. Moreover, it is easy to reach from all over Europe at reasonable flight cost.

The University of Lisbon is recognised as one of the most respected highest education institutions in the country, it is the largest university in Portugal, and can provide

all the relevant facilities and amenities for the summer school. The Department of Informatics in the Faculty of Sciences, which is the proposed host for the venue, offers high quality amphitheatric lecture rooms and various on-site facilities for catering, all at the same campus.



Building C6, Hosting the Venue © Departamento de Informática @ University of Lisbon / Flickr

Facilities on-site The campus at Campo Grande, where the Faculty of Sciences is located, offers a number of comfortable, modern amphitheatres of different sizes, fitted with all necessary audio-visual equipment and blackboards.

The proposal is to make use of one amphitheater (classroom) with capacity of 80 persons, and with the possibility of upgrading to a larger one if needed. The estimated cost for these lecture rooms is around 250 euros per day.

The campus has wifi coverage throughout via the Eduroam network.



The Amphitheater © Departamento de Informática @ University of Lisbon

Catering The lunch and coffee breaks are conveniently located in the ground floor of the building hosting the chosen amphitheater. The location is also very close to alternative lecture rooms with higher capacity. The catering facility is part of a recently renovated restaurant which has served many conferences and workshops, and features both indoor and outdoor space.



The Catering Facilities © Departamento de Informática @ University of Lisbon

Accommodation nearby For students, it will be possible to reserve rooms in the student residences. These are very affordable and are located in the perimeter of the campus, at close walking distance (5 minutes) from the center of the campus and the lecture hall. The cost for a single room is approximately 20 euros per night.

For lecturers and any students that require hotel accommodation, we have been using a number of 3-star hotels near the campus, in Campo Pequeno. These offer a very nice option, and we recommend them because our visitors like them. Current prices can be less than 60 euros per night and at a walking distance of 15 minutes from the campus. The hotels are also reachable by taking the metro for 2 stops from the university.

To aid the participants, we will organize a pre-booking on a selection of the hotels close to the venue. Student residences will be booked once the number of participants is known, and on a first-come first-served basis.

Transportation Lisbon has a transportation system consisting of metro, rail, tram and bus networks. However, for the transportation needs of the school the metro is sufficient. In particular, there is a metro station at the airport, with a journey time of around 30 minutes to the campus and also to the suggested hotels in Campo Pequeno. The city centre is 15 minutes from the venue by metro.

There are in fact two metro stations in the perimeter of the campus, serving many destinations through different lines. One metro ticket currently costs 1.40 euros, and a day travelcard (valid on all public transportation) costs 6 euros.

Visitors would surely enjoy a ride in the city center, on one of the vintage trams that continue to operate.



Cable car in Bairro Alto, 1965 © Volkmar K. Wentzel / National Geographic

Flights to Lisbon Lisbon International Airport operates flights from most destinations. We give an indication of the expected prices when booking in advance (this is required for the summer period in Portugal). A typical price for a return flight from Paris is 180-200 euros, from London 210 euros, from Athens around 250-350 euros, from Berlin 230-240 euros, from Copenhagen 240-260 euros, and from Glasgow 280-320 euros. The airport is also served by low cost airlines such as Easyjet and Germanwings.

Local Organising Team

The proposal for the summer school is to be carried out by members of the **Gloss** team, part of the Large-Scale Informatics Systems Laboratory (**LaSIGE**) of the Department of Informatics. **LaSIGE** has approximately 120 collaborators, 34 of which hold a doctoral degree, 36 are researchers working in their Ph.D. programmes and about 50 are Master students or junior researchers. The **Gloss** team has 7 full members and 11 affiliated students.

The group members have expertise and a number of published results in the core areas of BETTY. We have also developed a number of related tools, including BICA, an extension of the Java language that enables the verification of Java programs against a session type specification, and SePi, a concurrent, message-passing programming language based on the pi-calculus with session types.

The team members responsible for the summer school are Francisco Martins (Assistant Professor, PhD 2006), Dimitris Mostrous (Invited Assistant Professor, PhD

2010), and Eduardo Marques (Invited Assistant Professor, PhD 2011). Francisco Martins, has experience in the successful organisation of similar academic events, including some in the department. He was in the *Discotec 09* organizing committee and served as workshop chair, he was workshop chair of *Concur 07* and general chair of *S-cube 12* in Lisbon. Eduardo Marques recently organised an Erlang programming course. The organising team will benefit from the collaboration of the **Gloss** leader, Prof. Vasco T. Vasconcelos, and the volunteering work of our students.

Cost Estimates

The basic cost per participant is estimated as follows (in euros):

<i>Per Diem</i>	Student	Lecturer
<i>Accommodation</i>	20	55
<i>Catering</i>	18	18
<i>Transportation</i>	6	6
<i>Total</i>	44	79

For the planned excursion, the cost is estimated as follows:

<i>Excursion & Lunch</i>	Person
<i>Excursion ticket & Guided tour</i>	15
<i>Excursion Lunch</i>	20
<i>Total</i>	35

There are some fixed costs, including the amphitheater hire, miscellaneous costs consisting mainly of the participant pack (including badges, note taking material, Lisbon information, printing of the certificates of attendance, etc), extra allowance for the excursion guide, and finally the bus service that will take us to the excursion. These are estimated as follows:

<i>Fixed Costs</i>	
<i>Amphitheater</i>	250 x 5
<i>Bus & Driver hire</i>	450
<i>Miscellaneous (pack, other expenses)</i>	800
<i>Total</i>	2500

To give an indication, for 40 students (including local volunteers) and 16 lecturers the cost estimate is:

<i>Total</i>	Student x 40	Lecturer x 16	
<i>Per Diem</i>	1760	1264	
<i>Excursion</i>	1400	560	
<i>Flight</i>	-	5600 (350 x 16)	Total Cost + 2500
<i>Total</i>	3160	7424	14084

Note that the above includes the cost of air fares for the lecturers, and should be adjusted accordingly for different estimates.

Proposed Dates and Duration

The proposed duration for the summer school is one week. The suggested dates are from Monday, 7th of July until Saturday, 12th of July, inclusive. However, the event can be extended or scheduled for the weeks from 14-19 or 21-26 of the same month. For this period lecturing is over and there is availability of the amphitheater, and there are several alternative lecture rooms for the event of changes in scheduling or other unforeseen circumstances. Lectures and other activities will take place from Monday to Friday, and for the last day (Saturday) we planned an excursion and lunch; this is detailed below.

Format of the Summer School

Overview Our planning for the summer school includes 1 opening talk and 19 lectures of approximately 75 minutes each (allowing time for a practical component, exercises, etc), approximately 3 practical workshop sessions (or presentations) on tools developed in our department and, of course, in other COST sites, and finally a session of short student presentations.

We expect to have 3 or 4 lecturers from the University of Lisbon and from the New University of Lisbon, for which air fare is not counted in the cost estimations.

Programme and Course Planning A possible daily program is outlined below. It will typically commence at 9 with a lecture, followed by coffee break, then another lecture, then lunch, then three more lectures until 18.00.

<i>Day</i>	Theme	Number of Lectures
1	Welcome session, Opening Talk, Session Types	1 + 4
2	Contracts, Subtyping, Algorithms	2 + 2 + 1
3	Exceptions, Security, Progress & Deadlock freedom	1 + 1 + 3
4	Linear Logic, Other Logics, Automata, Synthesis	2 + 1 + 1 + 1
5	Tool Demos/Workshops, Student Talks, Closing	3 + N + 1

We propose to organise the scientific programme, which in any case will be decided with participation of expert BETTY members .

The first slot on the first day will be allocated to an opening talk. Session types were allocated 4 lectures to cover both binary and multi-party developments. On day 5, first there will be tool sessions (including our own tool SePi). The rest of the time will be allocated to a number of short (10 minutes talk & 2 minutes questions) presentations by student participants. This part remains flexible, depending on the number of tools that are to be taught. The school will end with a short closing discussion.

Excursion and Lunch

We planned a daily excursion to Sintra, a town with renowned and well-preserved monuments starting from the Medieval times that has been classified as an UNESCO

World Heritage Site since 1995. The trip to Sintra will take place by a hired bus that will depart at 9.15 from the campus, and includes a guided visit of the Pena National Palace (Palácio Nacional da Pena) at 10.30, lunch, and then a visit to the nearby Castle of the Moors (Castelo dos Mouros).



Pena National Palace (Palácio Nacional da Pena) © Pedro Szekely / Flickr

Sintra is also known for its natural beauty, its landscape and beaches, and also for Portuguese traditional pastry.

***Thank you for considering our proposal!
The Lisbon Crew***