

CALL FOR AWARDING GRANTS AND PROJECTS UNDER R & D INSTITUTIONS

Título: (Identificação da tipologia de bolsa oferecida e número de vagas)

One “Bolsa de iniciação à Investigação” is open at the **Fundação da Faculdade de Ciências da Universidade de Lisboa**, at the project/instituição de I&D “Condução da Luz em guias de onda não lineares com interações ressonantes, PTDC/FIS/112624/2009, financed by national funds by FCT / MCTES (PIDDAC) under the “programa em todos os domínios científicos”, under the following conditions:

1. **Scientific Area:** Physics
2. **Requirements for admission:** Applicants must be college (university) students and are expected to have at least three completed years at the University level (1º ciclo completo ou equivalente) in the area of Physics or Applied Mathematics. Preference will be given to the candidates specializing in the subjects related to nonlinear waves (dynamical systems, optics, electrodynamics) and having experience in numerical simulations of ordinary and partial differential equations.
3. **Work plan:** The aim of the project is to investigate mutual interactions between nonlinear lasing clusters build in a common optical waveguiding cavity. It is supposed to consider the case when the distance between the clusters is large and the lasers can interact through the common radiation field only. It is planned to investigate mutual synchronization of the clusters and to consider the formation of active discrete solitons (localised structures) and compactons (localized structures with compact support). This activity is interesting from the fundamental point of view and can also be important for the understanding of the dynamics of active meta-materials. Within the framework of the project the successful applicant will be involved in the theoretical analysis of the nonlinear optical systems and in the execution of relevant numerical simulations.
4. **Legislation framework:** Portuguese Law Nr. 202/2012, from 27 August (Research Grant Holder Statute); Regulation of Advanced Training and Qualification of Human Resources 2012.
5. **Place of work:** The work will be developed at Centro de Física Teórica e Computacional da Universidade da Faculdade de Ciências da Universidade de Lisboa under the scientific guidance of Dr. Alexey Yulin.
6. **Fellowship duration:** This position is open for 6 months and will begin on 1 of November 2012. The grant contract may be renewed to more 7 months, until one total duration the 13 months.
7. **Monthly allowance:** The amount of the scholarship amounts to € 385, according to table values of the scholarships awarded directly by the FCT, IP in the country (<http://www.fct.pt/apoios/bolsas/valores>). (grants awarded to projects financed by FCT).
The Fellows will have a personal accident insurance and, if not covered by any social protection scheme can ensure the right to social security through adherence to voluntary social insurance scheme, pursuant to Código dos Regimes Contributivos do Sistema Previdencial de Segurança Social.
The scholarships will be paid monthly by bank transfer
8. **Selection method:** Candidates will be assessed by the quality of their CV and the results of the interview.
9. **Selection Committee:** Alex Yulin (presidente do Júri), Vladimir Konotop e Dmitry Zezyulin (vogais efectivos), Paulo Ivo Teixeira (suplente, to be confirmed)

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10. **Publication/notification of results:** The final results of the evaluation will become public, through an ordered list which will be posted at the entrance hall of the **Fundação da Faculdade de Ciências da Universidade de Lisboa**, located at the Faculdade de Ciências da Universidade de Lisboa, C1 bldg – 3rd floor, Campo Grande, 1749-016 Lisboa, and the selected candidate will be notified by e-mail.
11. **Deadlines:** This call for applications is open from 9 of October 2012 to 22 of October 2012.
12. **Application:** Applications may be filed via e-mail ayulin@cii.fc.ul.pt, attaching the following documents: *Curriculum Vitae*, *informação sobre cadeiras do 1º ciclo completadas com indicação das notas atribuídas, e certificado de habilitações*.
Applications may also be sent by mail to Dr. A. Yulin, Instituto Interdisciplinar, Av. Prof. Gama Pinto 2, Lisboa 1649-003.