

**REQUERIMENTO****IDENTIFICAÇÃO**

Nome: TACIANO AMARAL SORRENTINO		Matricula SIAPE: 1817186
Endereço: C/ RAMON Y CAJAL 44 - LC08		Cidade/Estado: TERRASSA/BARCELONA, ESPANHA
Email: TACIANO@UFERSA.EDU.BR		Telefone(s): 00 34 649897965
Cargo/Emprego/Função: PROFESSOR ASSISTENTE		Código/Nível/Referência: 1
Lotação: DEPARTAMENTO DE CIÊNCIAS EXATAS E NATURAIS		

Tipo de Vínculo com a UFERSA:

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**OBJETIVO DO REQUERIMENTO**

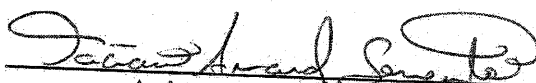
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| <input type="checkbox"/> ALTERAÇÃO/RETIFICAÇÃO DE APOSENTADORIA | <input type="checkbox"/> PROGRESSÃO POR CAPACITAÇÃO |
| <input type="checkbox"/> APOSENTADORIA                          | <input type="checkbox"/> REDISTRIBUIÇÃO             |
| <input type="checkbox"/> AVERBAÇÃO DE TEMPO DE SERVIÇO          | <input type="checkbox"/> REMOÇÃO                    |
| <input type="checkbox"/> EXPEDIÇÃO DE CERTIFICADO               | <input type="checkbox"/> REVISÃO DE APOSENTADORIA   |
| <input type="checkbox"/> INCENTIVO À QUALIFICAÇÃO               | <input type="checkbox"/> OUTRO. ESPECIFIQUE:        |

**DESCRIÇÃO/JUSTIFICATIVA DO REQUERIMENTO**

Venho requerer prorrogação do período de afastamento para doutorado fora do país por mais um ano, de 01/01/2015 a 31/12/2015. O afastamento de um ano solicitado inicialmente expira em 31/12/2014, e, pelas razões expostas por minha orientadora, Dra. Cristina Masoller, na carta em anexo, não será possível a conclusão e defesa da tese nesse período.

Encaminhe-se à Pró-Reitoria de Gestão de Pessoas.

Data: 12/09/2014

  
Assinatura do Servidor/Requerente**PROCEDIMENTOS**

1. Preencher, imprimir e assinar o presente formulário;
2. Anexar documentação comprobatória (se for o caso).



UNIVERSITAT POLITÈCNICA  
DE CATALUNYA  
BARCELONATECH

Terrassa, August 28, 2014

To whom it might concern

As the PhD supervisor of Mr. Taciano Sorrentino, and I pleased to confirm that he has been progressing satisfactorily in his PhD studies. Mr. Sorrentino registered in the PhD program on Computational and Applied Physics ([http://doctorat-fcia.postgrau.upc.edu/?set\\_language=en](http://doctorat-fcia.postgrau.upc.edu/?set_language=en)) of Universitat Politècnica de Catalunya (UPC, [www.upc.edu](http://www.upc.edu)) in the course 2011/2012, and he renewed his registration in the 2012/2013 and 2013/2014 courses. His PhD registration fees, as well as his accommodation expenses during 2014 in the university UPC student residence, have been paid by two EOARD research grants: FA8655-12-1-3075 (course 2011/2012) and FA8655-12-1-2140 (courses 2012/2013 and 2013/2014).

PhD studies in Spain usually take four years and, in spite of the fact that Mr. Sorrentino has done significant progress (see below) he will require another year (course 2014/2015) to complete his PhD thesis. Our research group has funding available to cover his expenses during this final year (for the PhD registration fee, his accommodation at the university student residence, and his participation in conferences and workshops).

I would like to comment on the progress done by Mr. Sorrentino during the last year. He has co-authored two articles in high-impact journal [1, 2] and one article in a conference proceeding [3]. During the last few months he had done extensive experiments and simulations on the influence of external modulation on the LFF regime. He has progressed according to our work plan, but the challenge that represents the precise detection of the spike times in the LFF regime has resulted in a considerable delay in the submission of an article that is under preparation [4]. Nevertheless, he has presented his preliminary results as **oral** presentations in three international conferences [5, 6, 7]. In addition, he participated of the prestigious "Siegmán International School on Lasers 2014", organized by the Optical Society of America (OSA) in Stanford University, USA, where he received an honorary mention for best poster presentation. It is remarkable that this school application process follows strict acceptance criteria and Mr. Sorrentino was not only accepted to participate, but also, he received partial financial support from OSA, that complemented the partial travel support provided by our research group.

[1] Aragoneses, A., Sorrentino, T., Perrone, S., Gauthier, D. J., Torrent, M. C., and Masoller, C., "Experimental and numerical study of the symbolic dynamics of a modulated external-cavity semiconductor laser", *Opt. Express* 22, 4705-4713 (2014).

[2] Aragoneses, A., Perrone, S., Sorrentino, T., Torrent, M. C., and Masoller, C., "Unveiling the complex organization of recurrent patterns in spiking dynamical systems", *Sci. Rep.* 4, 4696 (2014).

[3] Sorrentino, T., Aragoneses, A., Perrone, S., Gauthier, D. J., Torrent, M. C., and Masoller, C., "Experimental study of the complex dynamics of semiconductor lasers with feedback via

symbolic time-series analysis ", Proc. SPIE 9134, Semiconductor Lasers and Laser Dynamics VI, 91340L (May 2, 2014); doi:10.1117/12.2052322; <http://dx.doi.org/10.1117/12.2052322>.

[4] Sorrentino, T., Quintero, C., Aragonese, A., Torrent, M. C., and Masoller, C., "Symbolic dynamics of directly modulated semiconductor lasers with optical feedback", in preparation.

[5] SPIE Photonics Europe 2014, Brussels (Belgium), 14-17 April 2014. Sorrentino, T., Aragonese, A., Perrone, S., Gauthier, D. J., Torrent, M. C., and Masoller, C., "Experimental study of the complex dynamics of semiconductor lasers with feedback via symbolic time-series analysis."

[6] IX Congreso NoLineal 2014, Badajoz (Spain), 4-6 June 2014. Sorrentino, T., Aragonese, A., Perrone, S., Gauthier, D. J., Torrent, M. C., and Masoller, C., "Symbolic dynamics of directly modulated semiconductor lasers with optical feedback."

[7] The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, July 07-11, 2014, Madrid, Spain. T. Sorrentino, A. Aragonese, S. Perrone, C. Quintero, D. J. Gauthier, M. C. Torrent, and C. Masoller, "Ordinal time-series analysis applied to the characterization of a forced excitable system".

I do hope that Mr. Sorrentino can spend the final year of his PhD studies, course 2014/2015, at our lab, which will allow him to conclude ongoing work and to finish his Phd. Please don't hesitate to contact me if further information is needed.

Sincerely,



Cristina Masoller, Profesora Agregada  
Departament de Física i Enginyeria Nuclear,  
Universitat Politècnica de Catalunya.  
Colom 11, Terrassa 08222, Barcelona, Spain  
[cristina.masoller@upc.edu](mailto:cristina.masoller@upc.edu), [cristina.masoller@gmail.com](mailto:cristina.masoller@gmail.com)  
[www.fisica.edu.uy/~cris](http://www.fisica.edu.uy/~cris)