

# Conor Leahy

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## Education

Ph.D. (Physics), National University of Ireland, Galway, 2010.

Thesis: "Temporal Dynamics and Statistical Characteristics of the Microfluctuations of Ocular Aberrations and Accommodation."

Supervisor: Prof. Chris Dainty

B.E. (First-class Honors), Electrical and Electronic Engineering, University College Cork (Ireland), 2005.

## Research Experience

**Postdoctoral Research Scholar, University of California, Davis, U.S.A. (April 2013-present)**

Neurophotonics Laboratory, Department of Biomedical Engineering. Advisor: Prof. Vivek Srinivasan.

**Postdoctoral Researcher, NUI Galway, Ireland. (March 2010-October 2012)**

Applied Optics Group, School of Physics. Advisor: Prof. Chris Dainty.

Development of an imaging system to assess objectively the optical density of the human macular pigment *in vivo*.

## Honors

Irish Research Council "Embark" scholarship for postgraduate study (2005-2009).

"College Scholar" award, University College Cork (2002,2003,2004,2005).

## Publications

### *Refereed Journals*

A. O'Brien, C. Leahy, and C. Dainty, "An imaging system to assess objectively the optical density of the macular pigment *in vivo*," *Appl. Opt.* (in press).

C. Leahy, A. O'Brien, and C. Dainty, "Illumination correction of retinal images using Laplace interpolation," *Appl. Opt.* 51(35), 8383-8389 (2012).

C. Leahy and C. Dainty, "A non-stationary model for simulating the dynamics of ocular aberrations." *Opt. Express* 18, 21386-21396 (2010).

C. Leahy, C. Leroux, C. Dainty, and L. Diaz-Santana, "Temporal dynamics and statistical characteristics of the microfluctuations of accommodation: Dependence on the mean accommodative effort." *Opt. Express* 18, 2668-2681 (2010).

## Patents

(Submitted) A. O'Brien and C. Leahy. "Systems and methods for imaging the fundus of the eye". European Patent 12170121.3 - 2319, filed May 30, 2012.

## Conference Presentations

A. O'Brien, C. Leahy, C. Dainty. "Investigation of a new device to measure the Macular Pigment Optical Density", *Photonics Ireland 2011*, September 7-9, 2011.

C. Leahy, C. Dainty, "A non-stationary model for simulating the dynamics of ocular aberrations", *5th European Meeting in Visual and Physiological Optics*, Stockholm, Sweden, August 22-24, 2010.

C. Leahy, C. Leroux, C. Dainty, and L. Diaz-Santana, "A statistical study of the microfluctuations of the accommodative response of the human eye", *Photonics Ireland 2009*, Kinsale, Ireland, September 14-16, 2009.

C. Leahy, C. Leroux, C. Dainty, and L. Diaz-Santana. "Temporal Dynamics and Statistical Characteristics of the Microfluctuations of Ocular Wavefront Aberrations". *Invest. Ophthalmol. Vis. Sci.* 50: ARVO E-Abstract 1562, 2009.

C. Leroux, C. Leahy, and C. Dainty, "Modeling of Non-Stationary Dynamic Ocular Aberrations", *4th European Meeting in Visual and Physiological Optics*, Heraklion, Greece, August 31 - September 2, 2008.

C. Leahy, C. Leroux, and J. C. Dainty. "Modeling of Dynamic Ocular Aberrations". *Invest. Ophthalmol. Vis. Sci.* 49: ARVO E-Abstract 980, 2008.

C.M. Leahy and J.C. Dainty. "Modelling of nonstationary dynamic ocular aberrations." *Proceedings of Adaptive Optics for Industry and Medicine VI*, pp. 342-347, 2007.

C. Leahy and G. Lightbody. "Sliding mode control of a wind energy conversion system with a doubly fed induction generator." *Proceedings of UPEC*, pp. 1063-1067, 2005.

## References

### Prof. Chris Dainty

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