ROBERTO
ROBLEDO FAVA
Age: 26 years

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PROFESSIONAL OVERVIEW

I was born in Mexico in 1990. I obtained the Physics degree at the Universidad Autónoma de Nuevo León, México in 2013. In the same university, I obtained the master degree in Industrial Engineering Physics, in 2015.

Nowadays, I am a PhD student in applied mathematics at the Universidad Politécnica de Valencia (UPV); I work developing the thermic and energy study of buildings, aiming to contribute reducing the energy consumption and unnecessary expenses. My research interests include the area of numerical simulation of variables related with the energy expense in different constructions. I have also worked and have interest in the field of Optical Physics, especially in developing fiber optic sensors.

CORE QUALIFICATIONS

Creative element	Committed
Participative	Excellent oral expression
Very active	Passion for science and teaching

ACCOMPLISHMENTS

- Publication in peer-reviewed journals.
- 2 publications in extenso - 2 international conferences.
- President of SPIE Student Chapters at "Universidad Autónoma de Nuevo León".
- Chair on OSA & SPIE Student Chapters activity for European prestigious researchers.
- Organizer of different events like: Semana de la Luz, Optic´s Day, Workshops and visits to KEMET Electronics Company.
- Organizer of the Simposio de Óptica Aplicada Sustentabilidad y Energía 2014.
- Research visit in the Universidad Politécnica de Valencia, Valencia, Spain.

EDUCATION

Present

PhD in Mathematics – Universidad Politécnica de Valencia (UPV) – Valencia, Spain.
- **Currently enrolled**

2015 **Master Degree in Industrial Engineering Physics – Facultad de Ciencias Físico Matemáticas, UANL -** San Nicolás de los Garza, Nuevo León, Mexico.
Scholastic Average: 98.07 out of 100
- **Dissertation Thesis: July 13, 2015**

2013 **Certificate of English Studies - Centro de Idiomas UANL**
San Nicolás de los Garza, Nuevo León, Mexico.

2013 **Physics Degree - Facultad de Ciencias Físico Matemáticas, UANL**
San Nicolás de los Garza, Nuevo León, Mexico.
Scholastic Average: 89.44 out of 100

2008 **High School Diploma: Electronics Technician**
Centro de Bachillerato Técnico Industrial y de Servicios (CBTis) #20
Sabinas, Coahuila, Mexico.

THESIS/DISSERTATION

"Sintonización de Fibra Óptica Láser Basado en Interferometría de Tipo Mach-Zehnder"

The implementation of three tunable optical fiber lasers was performed by three different methods:

- Tunable fiber laser by temperature, based on tapers.
- Tunable fiber laser by torsion, using a Mach-Zehnder interferometer, designed to splice SMF-PCF-SMF.
- Tunable fiber laser by polarization, in which an interferometric filter, designed by a novel photonic crystal fiber was used.

EXPERIENCE

Jan/2013 to May/2013 **School teacher in University INSUCO**
Courses: Physics and Mathematics
San Nicolás de los Garza, Nuevo León, Mexico.

Sept/2013 to Feb/2013 **Stay visit in the ENERGESIS GROUP, S.L. and the Universidad Politécnica de Valencia (UPV), Valencia, Spain**

OTHER ACTIVITIES

2012 to 2013	**Social service in the Instituto Nacional para la Educación de los Adultos (INEA).**
2012 to 2013	**Academic advice in physics and mathematics.**
2011 to 2013	**Computer maintenance and repair.**

CONGRESS ATENDANCE

- **SPIE Optics&Photonics 2014:** San Diego, California US – **Conference**. *2014, R. Selvas-Aguilar, A. Martínez-Rios, G. Anzueto-Sánchez, A. Castillo-Guzmán, M.C. Hernández-Luna,* ***R. Robledo-Fava****, "Temperature-tuned erbium-doped fiber ring laser with Mach-Zehnder interferometer based on two quasi-abrupt tapered fiber sections" N° 14.*

- **IEEE SENSORS 2014**: Valencia, ES – **Conference**. *2014,* ***R. Robledo-Fava****, A. Castillo-Guzman, R. Selvas-Aguilar, J. M. Sierra-Hernández, J.M. Estudillo-Ayala, D. Jauregui-Vazquez, R. Rojas-Laguna, E. Vargas-Rodriguez, E. Gallegos-Arellano. "Torsion Sensor with an Yb-doped Photonic Crystal Fiber Based on a Mach-Zehnder Interferometer".*

- **5to. SOASE (2016)**: San Nicolás de los Garza, Nuevo León MX – **Conference.** *"Contribución a la Eficiencia Energética de Edificios en México Mediante Modelizado Matemático".*

- **Photon Congress 2016**: San Pedro Garza García, Nuevo León MX – **Conference.** *"El Ahorro de la Energía en los Hogares: Tiremos del Enchufe".*

- **III Encuentro de Estudiantes de Doctorado de la UPV (2016):** Valencia, ES – **Poster session**.

- **SOASE-FOCUS 2015**: San Nicolás de los Garza, Nuevo León MX – **Poster session**.

- **5to Foro de Divulgación Científica CICFIM (2015):** San Nicolás de los Garza, Nuevo León MX – **Poster session**.

PUBLICATIONS

Articles in peer-reviewed journals.

R Selvas-Aguilar, A Martínez-Rios, G Anzueto-Sánchez, A. Castillo-Guzman, MC Hernández-Luna, R Robledo-Fava, ***"Tuning of an erbium-doped fiber ring laser based on heating a tapered fiber filter"****. Optical Fiber Technology 20 (4), 391-394, August 2014. EDITORIAL: ELSEVIER. Impact factor: 1.188. ISSN: 1068-5200. DOI: 10.1016/j.yofte.2014.04.007, http://www.sciencedirect.com/science/article/pii/S1068520014000583. (Citations: 3).*

Publications in extenso

R Selvas-Aguilar, A Martinez-Rios, G Anzueto-Sanchez, A. Castillo-Guzman, MC Hernández-Luna, R Robledo-Fava. ***"Temperature-tuned erbium-doped fiber ring laser with Mach-Zehnder interferometer based on two quasi-abrupt tapered fiber sections"****. Proc. SPIE Optical Engineering+ Applications, Vol. 9220, pp. 92200G1-6. August 2014. International Society for Optics and Photonics. DOI:10.1117/12.2061110.*

J.M Sierra Hernández, J.M. Estudillo-Ayala, D. Jauregui-Vazquez, R. Rojas-Laguna, R. Robledo-Fava, A. Castillo-Guzman, R. Selvas-Aguilar, E. Vargas-Rodriguez, E. Gallegos-Arellano. ***"Torsion sensor with an Yb-doped photonic cristal fiber based on a Mach-Zehnder interferometer"****. Proc. IEEE Sensors 2014, pp.1523-1526 November 2014. Institute of Electrical and Electronics Engineers. ISBN: 978-1-4799-0161-6. DOI: 10.1109/ICSENS.2014.6985305.*

PRESENTATIONS

"Aplicación de la Óptica en el Mundo Real"
Semana de la Luz - The International Year of Light 2015 Conferences.
Facultad de Ciencias Físico Matemáticas, UANL

"Capítulo SPIE" - ***The International Year of Light 2015 Conferences.***
Facultad de Ciencias Físico Matemáticas, UANL

MEMBERSHIPS/SCHOLARLY SOCIETIES

2013 to 2015 Optical Society (**OSA**).
2013 to 2015 Society of Photo-Optical Instrumentation Engineers (**SPIE**).