

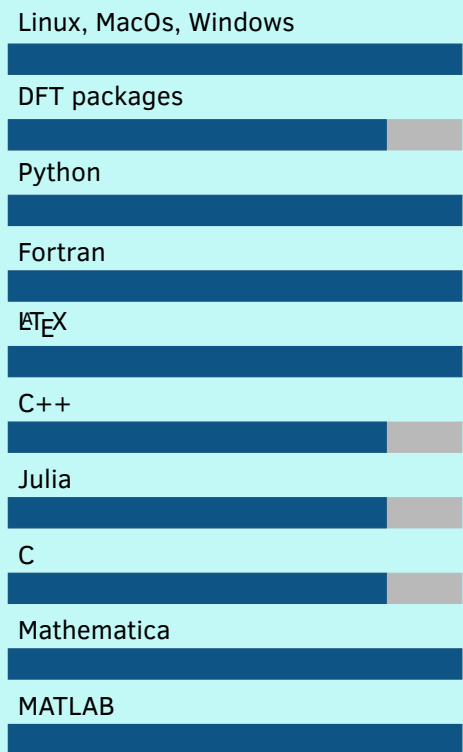


# Oscar Ruiz Cigarrillo

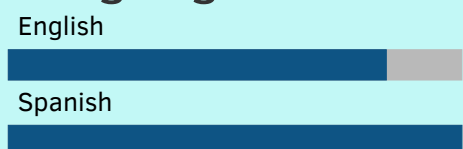
PhD. in Applied Sciences

- July 13th 1993
- San Luis Potosí, México
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## Skills



## Languages



## Education

- 2017-2021 PhD in Applied Science (Photonics-Experimental Physics)  
Universidad Autónoma de San Luis Potosí, México  
*"Optical anisotropy study in coupled quantum wells, a novel source of undisturbed systems"*
- 2015-2017 Master degree in Applied Science (Photonics)  
Universidad Autónoma de San Luis Potosí, México  
*"Growth and Characterization of Semiconductor Optical Microcavities"*
- 2011-2015 Bachelor degree in physics engineering  
Universidad Autónoma de San Luis Potosí, México  
Grade: 9.2/10

## Publications

- 2017 ["Optical detection of graphene nanoribbons synthesized on stepped SiC surfaces"](#)  
L.F. Lastras-Martínez, J. Almendarez-Rodríguez, G. Flores-Rangel, N.A. Ulloa-Castillo, O. Ruiz-Cigarrillo, C.A. Ibarra-Becerra, R. Castro-García, R.E. Balderas-Navarro, M.H. Oliveira Jr and J.M.J. Lopes, *Journal of Applied Physics* 122(3), 035701, (2017)
- 2017 ["Microscopic optical anisotropy of exciton-polaritons in a GaAs-based semiconductor microcavity"](#)  
L.F. Lastras-Martínez, E. Cerda-Méndez, N.A. Ulloa-Castillo, R. Herrera-Jasso, L. E. Rodríguez-Tapia, O. Ruiz-Cigarrillo, R. Castro-García, K. Biermann, P. V. Santos. *Physical Review B*, 2017, vol. 96, no 23, p. 235306
- 2019 ["Differential reflectance contrast technique in near field limit: Application to graphene"](#)  
L.F. Lastras-Martínez, D. Medina-Escobedo, G. Flores-Rangel, R.E. Balderas-Navarro, O. Ruiz-Cigarrillo, R. Castro-García, M. del P. Morales-Morelos, J. Ortega-Gallegos, M. Losurdo. *AIP Advances*, 2019, vol. 9, no 4, p. 045309
- 2021 ["Optical contrast in the near-field limit for structural characterization of graphene nanoribbons"](#)  
G. Flores-Rangel, L.F. Lastras-Martínez, R. Castro-García, O. Ruiz-Cigarrillo, R.E. Balderas-Navarro, L.D. Espinosa-Cuellar, A. Lastras-Martínez, J.M.J. Lopes. *AIP Advances*, Volume 536, 15 January 2021, 147710
- 2021 ["Optical anisotropies of asymmetric double GaAs \(001\) quantum wells"](#)  
O. Ruiz-Cigarrillo, L. F. Lastras-Martínez, E. A. Cerda-Méndez, et al. *Physical Review B*, 2021, vol. 103, no 3, p. 035309.
- 2022 ["Photoluminescence of double quantum wells: asymmetry and excitation laser wavelength effects"](#)  
C. A. Bravo-Velázquez, L. F. Lastras-Martínez, O. Ruiz-Cigarrillo, et al. *physica status solidi (b)*, 2022, vol. 259, issue 4.

## Awards

- 2017 Third place, Research level in the poster competition Teaching and Research 2017 "Fis. Candelario Pérez Rosales", XVII Week
- 2018 Third place, Research level in the poster competition Teaching and Research 2018 "Fis. Candelario Pérez Rosales", XVIII Semana.



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## Skills

Linux, MacOS, Windows

DFT packages

Python

Fortran

L<sup>A</sup>T<sub>E</sub>X

C++

Julia

C

Mathematica

MATLAB

## Languages

English

Spanish

## Experience

- 2017 Complex Variable, Electromagnetism  
UASLP  
Assistant Professor
- 2017 Creating and Editing Scientific Documents in LaTeX: Basic Course  
Complex Variable, Electromagnetism  
Course UASLP
- 2017 Physics  
Secondary level  
Professor
- 2019-present Calculus (Difference and Integral), Physics I, Physics II, Probability and Statistics, Mathematics I (Algebra), Mathematics III (Analytic Geometry)  
High School level  
Professor
- 2019-present Programming, Numerical Methods, Operating Systems, Calculus (Differential and Integral), Physics I, Physics II, Probability and Statistics, Advanced Algebra  
University level  
Professor

## Participation National Conferences

- 2016 National Physics Congress  
Growth and Characterization of Optical Microcavities of (Al,Ga)As.  
Poster
- 2017 X Annual Meeting of the Quantum Information Division  
Advances in III-V microcavity growth for solid-state quantum condensates  
Poster
- 2017 National Physics Congress  
In-situ and real-time optical growth and characterization of (Al,Ga)As microcavities.  
National Physics Congress  
Talk
- 2018 Solid State Division Annual Meeting  
Detection of Indirect Excitons in Coupled Quantum Wells Using Photoreflectance  
Talk
- 2019 Solid State Division Annual Meeting  
Study of Indirect Excitons and Trions in coupled asymmetric quantum wells  
Poster

## Interests

My main interest is learning physics. In my PhD project I focused on the development of experimental solid state physics specifically in the field of optical spectroscopy and decided to take it in hand with computational physics, developing my own codes and learning from existing codes. I consider numerical calculations in experimental physics are a powerful tool to understand the complexity in solid state and condensed matter physics. I consider myself an enthusiast of open-source code and software, and I am very committed to teaching my knowledge about it.