Francisco Javier Gonzalez

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SUMMARY

Francisco Javier Gonzalez is an Optical Engineering Staff Member at Lockheed Martin MFC and holds a Courtesy Appointment as Full Professor at the Physics Department of the University of Central Florida. His areas of expertise are optics and electronics, areas in which he has contributed with over 130 journal publications and has 7 patents granted or pending in the US, Mexico and Spain.

EDUCATION AND TRAINING

2000-2003: PhD in Electrical Engineering (CREOL, University of Central Florida (UCF), Orlando, FL), Dissertation: Antenna-coupled Infrared Focal Plane Array, Advisor: Prof. Glenn Boreman.
1998-2000: MS in Electrical Engineering (CREOL, University of Central Florida (UCF), Orlando, FL), Nanofabrication of Antenna-coupled detectors using Electron-Beam Lithography, Advisor: Prof. Glenn Boreman.
1991-1996: BS in Electronics Engineering (ITESO, Guadalajara, Jalisco, Mexico), Thesis: Design with Analog Hardware Description Languages, Advisor: Prof. Ernesto Rayas-Sanchez, Dr. Juan Martín Santana-Corte.

PROFESSIONAL APPOINTMENTS

2022-present: Optical Engineering Staff at Lockheed Martin MFC.
2019-present: Courtesy Professor at the Physics Department of the University of Central Florida.
2018-2022: Scientist at Truventic LLC
2004-2018: Professor at UASLP (Autonomous University of San Luis Potosi, San Luis Potosi, Mexico), Faculty of Sciences.
2003-2004: Research Scientist, Infrared Systems Lab, CREOL, University of Central Florida (UCF), Orlando, FL.
1998-2003: Research Assistant, Infrared Systems Lab, CREOL, University of Central Florida (UCF), Orlando, FL.

PATENTS AND PUBLICATIONS

130 journal publications (Google Scholar: 3200+ Citations, h-index: 31), 3 Book Chapters, over 100 papers presented at conferences, 3 US patents granted along with 1 patent granted in Spain and 3 patent pending in Mexico, all of the patents are related to the use of nanoantennas in the detection of electromagnetic radiation, energy harvesting and biophotonics.

RECENT PUBLICATIONS

1. J.C. Torres-Galván, E. Guevara, E.S. Kolosovas-Machuca, A. Oceguera-Villanueva, J.L. Flores and **F. J. González,** "Deep convolutional neural networks for classifying breast cancer using infrared thermography," *Quantitative InfraRed Thermography Journal,* (2021).
2. G. Donjuán-Loredo, R. Espinosa-Tanguma, F. León-Bejarano, J. A. Ramírez-Elías, R. Salgado-Delgado, **F. J. González**, E. Guevara, M. G. Ramírez-Elías, "Raman Spectroscopy for Adipose Tissue Assessment in Rat Models of Obesity and Type 1 Diabetes," *Applied Spectroscopy*, (2021).
3. J. M. Núñez-Leyva, E. S. Kolosovas-Machuca, J. Sánchez, E. Guevara, A. Cuadrado, J. Alda, **F. J. González**, "Computational and Experimental Analysis of Gold Nanorods in Terms of Their Morphology: Spectral Absorption and Local Field Enhancement," *Nanomaterials*, 11(7),1696, (2021).
4. J. E. Sanchez, S. A. Jaramillo, E. Settles, J. J. Velazquez Salazar, A. Lehr, **J. Gonzalez**, C. Rodríguez Aranda, H. R. Navarro-Contreras, M. O. Raniere, M. Harvey, D. M. Wagner, A. Koppisch, R. Kellar, P. Keim, and M, Jose Yacaman, "Detection of SARS-CoV-2 and its S and N proteins using Surface Enhanced Raman Spectroscopy," *RSC Advances*, Accepted.
5. A. Loyola-Leyva, L. E.Alcántara-Quintana, Y. Terán-Figueroa, F. J. González, "In vitro effect of high glucose concentrations on erythrocyte morphology assessed by scanning electron microscopy," Micron, (in press).

For a complete list of publications:

https://scholar.google.com/citations?user=FoYp9qAAAAAJ&hl=en
https://publons.com/researcher/1331060/javier-gonzalez/

BOOK CHAPTERS

1. F. J. González, **"Noninvasive Detection of Filaggrin Molecules by Raman Spectroscopy**," Chapter 10 in *Filaggrin*, J. P. Thyssen and H. Maibach (eds.), Springer-Verlag Berlin Heidelberg, pp. 93-101, (2014).
2. F. J. González, **"Optical Antennas**," *Wiley Enciclopedia of Electrical and Electronics Engineering*, J. Webster (ed.), Wiley, pp. 1-5, (2015).
3. Miguel Ghebré Ramírez-Elías and Francisco Javier González, **"Raman Spectroscopy for In Vivo Medical Diagnosis"**, Chapter 14 in *Raman Spectroscopy,* Gustavo Morari Do Nascimento (ed.), IntechOpen, pp. 293-311, (2018).

PATENTS

1. G.D. Boreman, **F.J. González**, I. Codreanu, M.A. Gritz, C. Fumeaux, AREA RECEIVER WITH ANTENNA COUPLED INFRARED SENSOR**,** *US Patent No. US 6,459,084 B1 (Oct. 1, 2002).*
2. G. D. Boreman, **F. J. González,** J. L. Porter, MULTISPECTRAL MULTIPOLARIZATION ANTENNA-COUPLED INFRARED FOCAL PLANE ARRAY, *US Patent No. US 7,095,027 B1 (Aug. 22, 2006).*
3. John Sanchez, **F. J. González**, Arturo Ponce, Miguel Jose Yacaman, SELF-ASSEMBLED NANOSTRUCTURE BOLOMETERS AND METHODS OF USE THEREOF, *US Patent No. US 10,060,799 B2 (Aug. 28, 2018).*