

**BIOGRAPHICAL SCETCH
ELENA FLITSIYAN**

Senior Lecturer, Undergraduate Program Director

Department of Physics
University of Central Florida
Orlando FL 32816, **407**
823 1156

elena.flitsiyan@ucf.edu

[u](#)

(a) Professional Preparation

JINR, Dubna	Physics & Math, Nuclear Physics	Habilitation 1995
MSU, Moscow	Physics & Math, Nuclear Physics	PhD 1975
TSU, Tashkent	Radiation Physics	M.S. 1972

(b) Professional Appointments

- **July 2009 – present:** Undergraduate Program Director, Department of Physics, UCF.
- **August 2017 - present:** Senior Lecturer in the Department of Physics at the University of Central Florida.
- **July 2009 – December 2011:** Associate Chair in the Department of Physics at the University of Central Florida.
- **August 2006 – August 2015:** Lecturer in the Department of Physics at the University of Central Florida.
- **August 2003 – August 2006:** Visiting Professor in the Department of Physics at the University of Central Florida.
- **December 1998 – August 2003:** Adjunct Professor in the Department of Physics at the University of Central Florida.
- **January 1996 – April 1998:** Chair of Department of Activation Analysis in the Institute of Nuclear Physics, Uzbekistan.
- **September 1995 – April 1998:** Professor in the Department of Physics at Tashkent State University, Uzbekistan.
- **1994 - 1996:** Alexander von Humboldt Research Fellow, Visiting Professor in the Department of Nuclear Chemistry at Marburg University, Germany.
- **1994 & 1995:** Senior-Researcher in the International Institute of Nuclear Research, Dubna, Russia.

(c) Products

(i) Selected Referred Publications:

1. Jonathan Lee, Andrew C. Silverman, Elena Flitsiyan, Minghan Xian, Fan Ren and S. J. Pearton, "Impact of neutron irradiation on electronic carrier transport properties in Ga₂O₃ and comparison with proton irradiation effects, *Radiation Effects & Defects in Solids*, April 2023, Vol.3, <https://doi.org/10.1080/10420150.2023.2175677>
2. Carey, Patrick; Ren, Fan; Sedlack, Michael; Flitsiyan, Elena; and Pearton, Stephen. (2022). Neutron Irradiation of AlGa_N Polarization Doped Field Effect Transistors. *ECS Journal of Solid-State Science and Technology*. 9. 10.1149/2162-8777/aba407.
3. Lee, Jonathan, Chris Fredricksen, Elena Flitsiyan, Robert Peale, Leonid Chernyak, Zahra Taghipour, Lilian Casias, Alireza Kazemi, Sanjay Krishna, and Stephen Myers, "Impact of temperature and gamma radiation on electron diffusion length and mobility in p-type InAs/GaSb superlattices", *Journal of Applied Physics*, 123, 235104 (2019) DOI 10.1063/1.5030444.
4. Lee, Jonathan, Elena Flitsiyan, Leonid Chernyak, Jiancheng Yang, Fan Ren, Stephen J. Pearton, Boris Meyler and Y. Joseph Salzman, "Effect of 1.5 MeV Electron Irradiation on β-Ga₂O₃ Carrier Lifetime and Diffusion Length", *Applied Physics Letters*, 2019. 112(082104): p. 1-11.
5. Yang, Jiancheng, Zhiting Chen, Fan Ren, Stephen J. Pearton, Gwangseok Yang, Jihyun Kim, Jonathan Lee, Elena Flitsiyan, Leonid Chernyak and Akito Kuramata, 10 MeV proton damage in β-Ga₂O₃ Schottky rectifiers. *Journal of Vacuum Science and Technology B*, 2018. 36(011206): p. 1-4.

(ii) Other Significant Publications

1. Yang, Jiancheng, Fan Ren, Rohit Khanna, Kristen Bevlin, Dwarakanath Geerapuram, Li-Chun Tung, Jingyu Lin, Hongxing Jiang, Jonathan Lee, Elena Flitsiyan, Leonid Chernyak, S. J. Pearton, and Akito Kuramata, Annealing of dry etch damage in metallized and bare (-201) Ga₂O₃. *Journal of Vacuum Science and Technology B*, 2018. 35(5): p. 1-5.
2. Jonathan Lee, Elena Flitsiyan, Leonid Chernyak, Shihyun Ahn, Fan Ren, Lin Yuna, Stephen J. Pearton, Jihyun Kim, Boris Meyler and Joseph Salzman, "Optical Signature of the Electron Injection in Ga₂O₃", *ECS J. Solid State Sci. Technol.*, volume 6, issue 2, (2017), DOI:10.1149/2.0101702jss.
3. Anupama Yadav, Cameron Glasscock, Elena Flitsiyan, Leonid Chernyak, Igor Lubomirsky, Sergey Khodorov, Joseph Salzman, Carlo Coppola, Sebastian Guay and Jacques Boivin, "*Optical and Electron Beam Studies of Gamma-Irradiated AlGa_N/Ga_N High Electron Mobility Transistors*" *Radiation Effects and*

defects in Solids, Incorporating Plasma Science and Plasma Technology, 171, 1, 1-8, (2016); DOI 10.1080/10420150., 2016.1170018.

4. Elena Flitsiyan and Leonid Chernyak, *Electron Injection Effects in Wide-BandGap Semiconductors*, Lambert Academic Publishing, 2017, 256 pp.

5. Elena Flitsiyan, Leonid Chernyak, Casey Schwarz, Book Chapter in “Cathodoluminescence”, (2015) ISBN 978- 953-51-0362-2

(d) Graduate Teaching Experience:

Summer 2016	PHY 7980-C006	Dissertation	1
Fall 2016	PHY 6918-0047	Directed Research	1
Spring 2017	PHY 7980-0023	Dissertation	1
Summer 2017	PHY 7980-C001	Dissertation	1
Fall 2017	PHY 7980-0165	Dissertation	1
Spring 2018	PHY 7980-0012	Dissertation	1
Summer 2018	PHY 7980-C0019	Dissertation	1

(e) Graduate Students Mentored

Casey Schwarz, “Electron beam induced current profiling of ZnO p-n homojunctions”, Chair of the Defense Committee, Spring 2012;

Anupama Yadav, “Studies of Gamma-radiation effects in III-Nitrides Semiconductors”, Chair of the Defense Committee, Spring 2015;

Jonathan Lee, “Impact of Ionization Radiation and Electron Injection on Carrier Transport Properties in Narrow and Wide Bandgap Semiconductors”, Chair of the Defense Committee, Fall 2020.

Alvar Rodrigues, “Single-molecule magnet-based single-electron transistor”, Member of the Defense Committee, Fall 2012.

Other Student Advising and Supervision:

Served as Thesis Preparation and Defense Committee Member for **Frank McDonald**: “An Investigation of Student’s Problem Solving Skills in an Introductory Physics Class” submitted for degree of *Doctor of Education* in the Department of Teaching and Learning Principles in the College of Education at the UCF;

Member of Thesis Preparation and Defense Committee for **Sergiy Kaim**: “Theoretical study of Laser Beam Propagation Through Volume Bragg Gratings and Optical Wave guides”, CREOL, UCF.

(f) Other Synergetic Activities Related to Graduate Education

NSF panelist: DMR 2019.

NSF panelist: Graduate Research Fellowship Program, 2013, 2014, 2016, 2017, 2019, 2023

NSF panelist, REU (Research Experience for Undergraduates) program, 2014, 2015, 2016.

NSF panelist: CRDF (Civil Rights Development Foundation), 2010, 2012, 2013, 2016.

NSF referee: ENG-ECCS, May 2012.

International reviewer for Republic of Georgia Science Foundation since 2010.

International referee for National Center for Science and Technology Evaluation of the Republic of Kazakhstan, since February 2012.