

**Dr. OLGA LAVROVA**  
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**Department of Electrical and Computer Engineering**  
**University of New Mexico**  
**Albuquerque, NM, 87131**

## **EDUCATION**

### **Ph.D., University of California at Santa Barbara, 1997- 2001**

Major: Electrical Engineering, Area: Optoelectronic and Semiconductor Lasers,  
Thesis Topic: "Widely Tunable Multisection Lasers for Dense WDM applications"  
Graduate advisor: Prof. Daniel Blumenthal  
GPA: 3.83.

### **M.Sc, A.F. Ioffe Physics Technical Institute, Russia and University College London, UK, 1994-1997**

Major: Electrical Engineering  
Thesis Topic: "Fiber Bragg Grating External Cavity Laser (ECL) for WDM applications  
Graduate Advisors: Dr. Sergei Gurevich (Ioffe Institute), Prof. Polina Bayvel (UCL)

### **B.Sc (Summa Cum Laude), St. Petersburg Electrical Technical University, Russia 1992-1994**

Major: Physics

## **EMPLOYMENT HISTORY (Academic):**

August 2011 – present *Assistant Professor, ECE Department, UNM*

- Chair: Power and Energy research track
- Member of the Center of Emerging Energy Technologies
- Research areas include photovoltaics and renewable energy technologies, distributed energy generation (DER) and storage, intelligent energy transmission and distribution, Smart Grids, nano-scale semiconductor structures and their applications to photovoltaics and storage.
- Faculty advisor to Solar Decathlon and Solar Car student teams

August 2007 – August 2011 *Adjunct Professor, Lecturer, ECE Department, UNM*

- Duties include teaching undergraduate and graduate-level classes in electrical engineering (specifically, photovoltaics and renewable energies), mentoring and advising graduate and undergraduate students in their research and class-related projects, overseeing Capstone (Senior) Design Projects, and participating in university committees.
- Initiated several extra-curriculum programs, such as Solar Car project, Solar/Smart House design contest, outdoors PV lab.
- Courses taught: Photovoltaic systems, Photovoltaic materials and device, Power Electronics, Future Energy Systems, Senior (Capstone) Design, Probabilistic Methods in Engineering, Integrated Software Systems, Operating systems, Software Engineering, Intermediate Programming, Introduction to Programming, Introduction to Instrumentation
  - Average Instructor Rating 4.36 out of 5.0
- Course and Curriculum Development:
  - Developed 3 novel classes for the Power and Energy track (Photovoltaics, Power Electronics and Future Energy Systems)
  - Average Course Evaluation 4.4 out of 5.0:
- Student Awards:
  - IEEE R6 SWA 2010 Paper Contest winners – Ryan Clark and Andrew Hollowell. (Region 6 covers the western United States)
  - IEEE 2009 Student Mini-Grant award, Alan Sontag, Steve Wood, Travis Helling
  - NMSEA/PNM Solar House design Contest, 1<sup>st</sup> place winner – Andrew Johnson
  - STEM New Mexico Science and Engineering Research Challenge, Computer Science Category, 3<sup>rd</sup> place – Melissa Fang, 11<sup>th</sup> grade, La Cueva High School

Summer 2008, 2009 - *Adjunct Faculty, Southwestern Indian Polytechnical Institute (SIPI)*

- Duties include teaching two classes in renewable energy and developing a curriculum for a certificate program in Renewable Energy.

Sept 1999-May 2000 *Lecturer, Computer Science Department, Santa Barbara City College.*

- Classes taught: CS101: Introduction to Computer Concepts

### **EMPLOYMENT HISTORY (Industry):**

June 2003 – August 2007 *Staff Scientist /Program Manager , EMCORE Corp, Albuquerque, NM*

- new product development for Emcore Fiber Optics and Emcore Solar Power division
- duties included various module design projects (X2, XFP, SFP, SFP+), III-V multi-junction solar cells optimization for satellite and terrestrial concentrator applications
- direct supervision of several reporting R&D engineers

Jan 2002 - Jan 2003 *Senior Technical Officer, TSUNAMI PHOTONICS, Dublin, Ireland*

- Defining and overseeing R&D activities related to fixed-wavelength and tunable semiconductor lasers, photonic integrated circuits, and planar lightwave circuits and waveguides
- Overseeing performance and lead a multi-disciplinary team of R&D engineers

June 2000 - Dec 2001 *Consultant, CALIENT NETWORKS, Santa Barbara, CA*

- Optimization of MEMs array performance for multi-channel amplification OOO (optical-optical-optical) cards incorporating both MEMs and semiconductor lasers, dynamic characterization for optical multi-port add/drop

### **PROFESSIONAL MEMBERSHIPS:**

1998-current IEEE member, Power and Energy Society

2007-20012 New Mexico Solar Energy Association, Albuquerque Chapter leader

2002-2003 Principal member of Optical Internetworking Forum (OIF)

### **COMMITTEES SERVED ON:**

- Undergraduate committee, Dept. of ECE, UNM
- ABET Accreditation committee, Dept of ECE, UNM

### **OUTREACH/COMMUNITY ACTIVITIES:**

- Organization and participation in educational and recruitment activities – such as “Zoom into Engineering” (recruitment of high school talent for UNM’s School of Engineering), “Solar Fiesta”, summer engineering camps for high- and middle-school students sponsored by American Indian Science and Engineering Society (AISES);
- Consulting on energy and power exhibits for Durango Children’s museum
- Albuquerque Chapter leader for the New Mexico Solar Power association

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