

## PERSONAL DATA

## Zoe Rizou

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Scopus <https://www.scopus.com/authid/detail.uri?authorId=37102731200>

## EDUCATION

- 02/2013 – 02/2020 **Ph.D. in Electrical & Computer Engineering**  
Democritus University of Thrace, Department of Electrical & Computer Engineering, Xanthi (Greece)  
**PhD Thesis:** “Microring resonator design with application to performance improvement of optically and electrically modulated semiconductor optical amplifier”.
- 10/2010 – 01/2013 **M.Sc. in Electrical & Computer Engineering**  
Democritus University of Thrace, Department of Electrical & Computer Engineering, Xanthi (Greece)  
Specialization field: System Technologies and Satellite Telecommunications  
Research field: Optical Telecommunications  
**MSc Thesis:** “Semiconductor optical amplifier pattern effect suppression with notch filters”.
- 09/2004 – 09/2010 **Diploma in Electrical & Computer Engineering**  
Democritus University of Thrace, Department of Electrical & Computer Engineering, Xanthi (Greece)

## TEACHING EXPERIENCE

- 04/2020 – Present **Fellow Faculty – PD 407/80**  
University of Western Macedonia, Department of Informatics, Kastoria (Greece)
- 02/2021– Present **Fellow Faculty**  
International Hellenic University, Department of Surveying and Geoinformatics Engineering, Serres (Greece)

- 10/2021 – 06/2022 **Teaching Assistant**  
University of Western Macedonia, Department of Electrical & Computer Engineering, Kozani (Greece)
- 09/2013 – 12/2019 **Teaching Assistant**  
Democritus University of Thrace, Department of Electrical & Computer Engineering, Xanthi (Greece)
- Laboratory courses: in “Optical Communications”, “Principles of Telecommunication Link Systems” and “Communication Networks”. (2013-2019)
  - Classroom courses: in “Ordinary Differential Equations” and “Complex Function Analysis and Transformations”. (2014-2018)
  - Classroom courses: “Describe Mathematics”. (2013-2014)

## RESEARCH EXPERIENCE

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- 04/2021 – Present **Post-Doc Researcher**  
University of Western Macedonia, Department of Electrical & Computer Engineering, Kozani (Greece)
- Research field:** Vehicular network technologies for innovative services
- 05/2019 – 07/2019 **Research Assistant**  
Brest National School of Engineering (ENIB), Laboratoire des Sciences et Technologies de l'Information, de la Communication et de la Connaissance (Lab-STICC), Brest Area (France)
- Research stay
  - **Research field:** Experimental measurements on a directly modulated Reflective Semiconductor Optical Amplifier (RSOA) and its enhancement performance with the use of a Birefringent Fiber Loop (BFL).
- 07/2012 – 06/2015 **Research Assistant**  
Technological Education Institution (TEI) of Chalkida, Psachna Euboea (Greece)
- This research work is supported in part by national research project Massive co-financed by the European Union (European Social Fund – ESF) and Greek national funds through the Operational Program “Education and Lifelong Learning” of the National Strategic Reference Framework (NSRF)-Research Funding Program: ARCHIMEDES III. Investing in knowledge society through the European Social Fund.
  - **Research field:** Communication channel modeling for Unmanned Aerial Vehicles (UAVs) using Free Space Optical (FSO) communication systems.

**02/2015 – 03/2015    Research Assistant**

Brest National School of Engineering (ENIB), Laboratoire des Sciences et Technologies de l'Information, de la Communication et de la Connaissance (Lab-STICC), Brest Area (France)

- Research stay
  
- **Research field:** Theoretical and simulation analysis on directly modulated Semiconductor Optical Amplifier (SOA) and its enhancement performance with the use of filters.

**RELEVANT SKILLS**

**LANGUAGES**    English: C2 Level.

French: B2 Level.

- Member of Technical Chamber of Greece (2011 - present).
  
- Member of Institute of Electrical and Electronics Engineers (IEEE).
  
- Reviewer for international journals.

**PUBLICATIONS**

- **International peer reviewed journals**
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- [1] N. Avgenos, K.E. Zoiros and **Z.V. Rizou**, “On Optically Modulated Reflective Semiconductor Optical Amplifier Pattern-Dependent Overshoot Mitigation Using a Birefringent Fiber Loop,” Photonics, vol. 9, no. 4, art. no. 248, Apr. 2022.
  
  - [2] F.N. Karadimoglou, K.E. Zoiros, **Z.V. Rizou** and A. Hatziefremidis, “On Directly Modulated Reflective Semiconductor Optical Amplifier with Assistance of Birefringent Fiber Loop,” Photonics, vol. 9, no. 3, art. no. 147, Mar. 2022.
  
  - [3] **Z.V. Rizou**, K.E. Zoiros, T. Rampone and A. Sharaiha, “Reflective semiconductor optical amplifier direct modulation capability enhancement using birefringent fiber loop,” Applied Sciences, vol. 10, no. 15, art. no. 5328, Aug. 2020.
  
  - [4] **Z.V. Rizou** and K.E. Zoiros, “Theoretical analysis of directly modulated reflective semiconductor optical amplifier performance enhancement by microring resonator-based notch filtering,” Applied Sciences, vol. 8, no. 2, art. no. 223, Feb. 2018.
  
  - [5] **Z.V. Rizou**, K.E. Zoiros, and A. Hatziefremidis, “Comparison of basic notch filters for semiconductor optical amplifier pattern effect mitigation,” Applied Sciences, vol. 7, no. 8, art. no. 783, Aug. 2017.
  
  - [6] **Z.V. Rizou** and K.E. Zoiros, “Performance analysis and improvement of semiconductor optical amplifier direct modulation with assistance of microring resonator notch filter,” Optical and Quantum Electronics, vol. 49, no. 3, art. no. 119, Mar. 2017.

- [7] T. Engel, **Z.V. Rizou**, K.E. Zoiros, and P. Morel, “Semiconductor optical amplifier direct modulation with double-stage birefringent fiber loop,” *Applied Physics B: Lasers & Optics*, vol. 122, no. 6, art. no. 158, Jun. 2016.
- [8] **Z.V. Rizou**, K.E. Zoiros, A. Hatziefremidis, and M.J. Connelly, “Performance tolerance analysis of birefringent fiber loop for semiconductor optical amplifier pattern effect suppression,” *Applied Physics B: Lasers & Optics*, vol. 119, no. 2, pp. 247–257, May 2015.
- [9] **Z.V. Rizou**, K.E. Zoiros, and A. Hatziefremidis, “Semiconductor optical amplifier pattern effect suppression with passive single microring resonator-based notch filter,” *Optics Communications*, vol. 329, pp. 206–213, Oct. 2014.
- [10] **Z.V. Rizou**, K.E. Zoiros, A. Hatziefremidis and M.J. Connelly, “Design analysis and performance optimization of a Lyot filter for semiconductor optical amplifier pattern effect suppression,” *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 19, no. 5, art. no. 6472012, Mar. 2013.
- [11] K.E. Zoiros, **Z.V. Rizou** and M.J. Connelly, “On the compensation of chirp induced from semiconductor optical amplifier on RZ data using optical delay interferometer,” *Optics Communications*, vol. 284, no. 14, pp. 3539–3547, Jul. 2011.

- **Book chapters**

- [1] **Z.V. Rizou** and K.E. Zoiros, “Semiconductor optical amplifier dynamics and pattern effects,” in *Handbook of Optoelectronic Device Modeling and Simulation: Fundamentals, Materials, Nanostructures, LEDs, and Amplifiers*, J. Piprek, vol. 1, Boca Raton: CRC Press, 2017, pp. 771–796

- **International peer reviewed conference proceedings**

- [1] G. Stathi, **Z.V. Rizou**, and K.E. Zoiros, “Simulation of directly modulated RSOA,” in *Proc. of 17th International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD)*, Denmark, Copenhagen, 2017, pp.145–146.
- [2] **Z.V. Rizou** and K.E. Zoiros, “FSO signal equalization using directly modulated SOA and dual MRR filtering,” in *Proc. of International Conference on Transparent Optical Networks (ICTON)*, vol. 2017, 2017, art. no. 8024826.
- [3] **Z.V. Rizou**, K.E. Zoiros, and P. Morel, “Improving SOA direct modulation capability with optical filtering,” in *Proc. of International Conference on Transparent Optical Networks (ICTON)*, vol. 2016-August, 2016, art. no. 7550362.
- [4] **Z.V. Rizou**, K.E. Zoiros, and T. Houbavlis, “Operating speed extension of SOA external modulator using microring resonator,” in *Proc. of Progress in Electromagnetics Research Symposium (PIERS)*, vol. 2015-January, 2015, pp. 2399–2402.
- [5] **Z.V. Rizou**, K.E. Zoiros, and A. Hatziefremidis, “Simulation of SOA-MRR-based equalization technique for FSO signals,” in *Proc. of 14th International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD)*, Palma de Mallorca, Spain, 2014, pp. 69–70.
- [6] **Z.V. Rizou**, K.E. Zoiros and A. Hatziefremidis, “Signal amplitude and phase equalization technique for free space optical communications,” in *Proc. of 15th International Conference on Transparent Optical Networks (ICTON)*, Cartagena, Spain, 2013, pp. 1–4.

[7] **Z.V. Rizou**, K.E. Zoiros and M.J. Connelly, “Modelling of semiconductor optical amplifier chirp compensation using optical delay interferometer,” in Proc. of 11th International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD), Rome, Italy, 2011, pp. 89–90.

- **Conferences and Workshops**

[1] **Z.V. Rizou** and K.E. Zoiros, “Microring Resonator-Enabled Semiconductor Optical Amplifier Direct Amplification and Modulation,” in 19th International Conference on Nanosciences & Nanotechnologies (NN22), Thessaloniki, Greece, 2022.

[2] **Z.V. Rizou** and K.E. Zoiros, “Microring resonator design with application to performance improvement of optically or electrically modulated semiconductor optical amplifiers,” in Proc. of Panhellenic Conference on Electronics and Telecommunications (PACET), vol. 2018-January, 2017, pp. 1–3.

[3] **Z.V. Rizou** and K.E. Zoiros, “Microring resonator-assisted SOA direct amplification and modulation,” 8th Mediterranean Conference on Nano-Photonics (MediNano-8), Athens, Greece, 2016.

[4] **Z.V. Rizou** and K.E. Zoiros, “Improving SOA direct modulation capability with optical filtering,” 1st Greek Workshop on Photonics, Athens, Greece, 2016. (συμμετοχή με poster)

[5] K.E. Zoiros, **Z.V. Rizou**, and M.J. Connelly, “Semiconductor optical amplifier pattern effect suppression using optical notch filtering,” Panhellenic Conference on Electronics and Telecommunications (PACET), Ioannina, Greece, 2015.

Republished:

K.E. Zoiros, **Z.V. Rizou**, and M.J. Connelly, “Semiconductor optical amplifier pattern effect suppression using optical notch filtering,” Journal of Engineering Science and Technology Review, vol. 9, no. 4, pp. 198–201, Jan. 2016. [Online]. Available: <http://www.jestr.org/downloads/Volume9Issue4/fulltext28942016.pdf>

[6] T. Engel, **Z.V. Rizou**, P. Morel, and K.E. Zoiros, “Analyse de la modulation directe à travers un amplificateur optique à semi-conducteurs en présence d'un filtrage optique adapté,” 35èmes Journées Nationales d'Optique Guidée (JNOG), Rennes, France, 2015.