

Curriculum Vitae

Personals

Name Toadere Florin
Gender Male
Age 32
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Education

- 1990-1995 Electrical High School of Cluj Napoca
Graduated
- 1995-2000 Faculty of Electronics, Telecommunications and Information Technology of the
Technical University of Cluj Napoca
Graduated: diplomat engineer
Thesis: "Study About Modal Dispersion at Radiation Propagation Through Optical
Active and Passive Devices"
- 1999-2000 I studied English at Britannia Foreign Language School
10 modules of 30 hours each, from beginner to advanced levels
- 2006-2007 Faculty of Electronics, Telecommunications and Information Technology of the
Technical University of Cluj Napoca
Graduated: Advanced studies
Thesis: "Far and Near Field Diffraction Grating Analysis"
- 2003-2007 PhD student at the Technical University of Cluj Napoca
Thesis: "Contributions to the Processing of the Signals Received from the Optical
Sensors"

IT Skills

I work in Windows and Office
I work in Matlab, CorelDraw, Photoshop, Zemax, Labview, IMAQvision

Work

From 01-11-2003 until 01-11-2007 I have been a PhD student at the Technical University of Cluj
Napoca.
My coordinator has been Professor Corneliu Rusu.
My research project: "Contributions to the Processing of the Signals Received from the Optical
Sensors"

Publications

1. Toadere Florin, Popescu Ștefan: "Optical signal processing", 12th *National Conference of the Romanian Physical Society*, Târgu Mureș, September 26-28, 2002.

2. Toadere Florin, Popescu Ștefan: "Radiation propagation at separation surface between two optical systems", 12th *National Conference of the Romanian Physical Society*, Târgu Mureș, September 26-28, 2002.
3. Popescu Ștefan, Popeneciu Gabriel, Toadere Florin: "The high pressure command electronic systems for liquid chromatography", 12th *National Conference of the Romanian Physical Society*, Târgu Mureș, September 26-28, 2002.
4. Toadere Florin: "An example of optical signal processing using optical Fourier transform", *Central and Est European Conference in Business Information Systems*, Cluj-Napoca, May 20-22, 2004.
5. Toadere Florin: "Cartesian coordinate optical filters frequency analyses", *ECT 2004 Buletinul Universității Politehnica Timișoara, Seria Electronică și Telecomunicații, Tom 49(63), Fascicula 1-2*, 2004.
6. Toadere Florin: "Space and frequency analyses of a LSI system with different input signals", *ECT 2004 Buletinul Universității Politehnica Timișoara, Seria Electronică și Telecomunicații, Tom 49(63), Fascicula 1-2*, 2004.
7. Toadere Florin: "Cartesian coordinate optical coherent and incoherent systems frequency analyses" *ECT 2004 Buletinul Universității Politehnica Timișoara, Seria Electronică și Telecomunicații, Tom 49(63), Fascicula 1-2*, 2004.
8. Toadere Florin: "Polar coordinate optical filters frequency analyses", *The 7th Symposium Of Optoelectronics SIOEL2004*, București, Octombrie 28-29, 2004.
9. Toadere Florin: "Space and frequency diffraction analyses of a periodic array of rectangular slits", *The 7th Symposium Of Optoelectronics SIOEL2004*, București, Octombrie 28-29, 2004.
10. Toadere Florin: "Polar coordinate optical coherent and incoherent system frequency analyses", *The 7th Symposium Of Optoelectronics SIOEL2004*, București, Octombrie 28-29, 2004.
11. Toadere Florin: "Aplicație a corelației la recunoașterea de caractere", *Genomics Workshop*, Cluj-Napoca, May 26-27, 2005.
12. Toadere Florin: "Amplitude filters optical image processing", *The impact of European integration on the National Economy*, October 28-29, 2005, Cluj-Napoca, Romania.
13. Toadere Florin: "Simple image acquisition system optoelectronic analysis", *2006 IEEE-TTTC International Conference on Automation, Quality&Testing Robotics AQTR 2006*, Cluj-Napoca, May 25-28, 2006.
14. Toadere Florin: "Image scanning and correction optoelectronic aspects", *The 6th IEEE International conference*, Bucharest, June 08-10, 2006.
15. Toadere Florin: "Rotating raster removal", *Romanian Journal of Optoelectronics*, nr. 1/2006, vol. 14.

16. Toadere Florin: "A global study about optical 4 f image processing filters", *ATOM-N 2006 The 3rd of the international conference advanced topics in optoelectronics, microelectronics and nanotechnologies*, 24-26 November 2006, Bucharest, Romania.
17. Toadere Florin: "Simple LSI image acquisition system analysis", *ATOM-N2006 The 3rd of the international conference advanced topics in optoelectronics, microelectronics and nanotechnologies*, 24-26 November 2006, Bucharest, Romania.
18. Toadere Florin: "Simulation of an image acquisition system", *ISSE 2007 30th International Spring Seminar on Electronics Technologies*, May 9-13 Cluj Napoca, Romania.
19. Toadere Florin: "Simulation of a digital camera pipeline", *ISSCS 2007, International Symposium on Signals Circuits and Systems*, July 12-13, Iași, Romania.
20. Toadere Florin: "Functional parameters enhancement in a digital camera pipeline image simulation", *NSIP 2007, International workshop on nonlinear signals and image processing*, September 10-12, Bucharest, Romania.
21. Toadere Florin: "Optical Fourier analysis of a simple optical system", *Embedded system design and application*, September 17-22, Baia Mare, Romania.
22. Toadere Florin, Ervin Szopos: "A method to enhance colors in a digital image", *2008 IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics AQTR 2008*, Cluj-Napoca, May 22-25, 2008.
23. Toadere Florin: "Simulation the optical part of an image capture system", *ATOM-N 2008 The 4th of the international conference advanced topics in optoelectronics, microelectronics and nanotechnologies*, 29-31 August, Constanța, Romania.
24. Toadere Florin: "Conversion from a spectral image to a HDR image", *ATOM-N 2008 The 4th of the international conference advanced topics in optoelectronics, microelectronics and nanotechnologies*, 29-31 August, Constanța, Romania.
25. Toadere Florin: "Color processing in a digital camera pipeline", *ATOM-N 2008 The 4th of the international conference advanced topics in optoelectronics, microelectronics and nanotechnologies*, 29-31 August, Constanța, Romania.

2007 Workshop on Recent Trends in Signal Processing, Cluj Napoca, July 9-10, I participated in the local organizing committee.

I have knowledge of optical, numerical and colors image analysis and processing.

I understand and work with the optical radiation properties at propagation to different mediums and situations of illumination, the spectral images and the HDR images. The object properties: absorption and reflection. The optical sensors type like photographic objectives and scanners. The CCD, CMOS image sensors: properties, the optical part, the noises and the acquisition electronics. Then we have to correct color image following an algorithm such as defining spatial and color calibration information, then making gamma correction, white point color correction, RGB to XYZ conversion and other calculus in conformity with CIE standards.

I am interested in optical design (Optics, Fourier Optics, and Optical Design) using: ZEMAX, OSLO or CODE V professional optical design programs. I have studied: lenses aberration, lenses surface optimization and PSF and MTF computing for different optical devices.

From 1-05-2001 until 1-11-2003 I have worked in the INCDTIM Cluj Napoca (Physical Research Institute) as an engineer.

I work in: analogical and optical signal processing. I also understand analog to digital conversion, and some digital applications. I worked with: oscilloscopes, optical sensors for chromatographs, analog, digital and conversion circuits.

I have good mathematical and physical knowledge particularly in frequency analysis.

In that period I worked at:

a project: "Design and Construction of a New Liquid Chromatograph"

2 grants: "Adaptive Filters with Variable Structure"

"New Modalities of Improving Organizations' Management Using Multimedia Applications"

From 1-11-2007 I work at INCDTIM Cluj Napoca as an engineer.

Also I worked as an intern in plastic industry and printing industry.

From 1-5-2003 until 1-11-2003 I worked at ConnexionGroup.srl in Cluj Napoca.

We used to install cables and optical fiber networks. I worked as a scientific coordinator. I had to check workers, to supervised technical activities in firm. I have knowledge in optical fiber communications and afferent devices. I worked with OTDR, Attenuators, Power meter and Slice. I made afferent documentation for materials.

I studied, worked and I am interested in WDM and DWDM optical fiber communications system. I understand DFB laser diode as resonant cavity and the generated transversal and longitudinal output radiation modes. In DFB laser the radiation passes through a set of lenses. Then at the laser output the light is coupled to an electro optic Mach Zehnder intensity modulator. I studied losses and group velocity at radiation propagation through: single mode fiber, EDFA, compensating fiber, variable attenuators. We use for analysis: an oscilloscope, a BERT data analyzer and an OTDR.

I know to simulate different pulses which propagate to different optical fibers. I am particularly interested in finding solution for modal dispersion problem in optical MMF fiber. Also I am interested in fibers with different index, solitons, fiber with Bragg diffraction gratings, ring resonators, optical fiber sensor and particularly in image vision sensors with photonic crystal fiber. I have knowledge in transmissions like: PCM, PDH, and SDH.

I mention that I participated at numerous (at least 20) technical conferences, symposiums and expositions.

I worked 5 years as a voluntary in a nonprofit foundation.