

Curriculum Vitae

**Petar Matavulj**

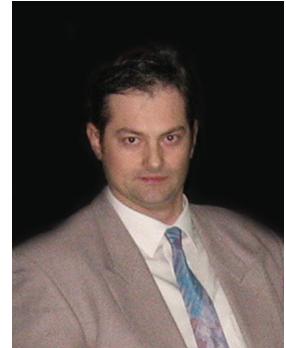
Professor

**Dr. PETAR MATAVULJ, Ph.D. E. Eng.**

Full Professor

Department of Microelectronics and Technical Physics  
School of Electrical Engineering (ETF)  
University of Belgrade

Room 87  
Bulevar kralja Aleksandra 73  
P. O. Box 35-54  
11120 Belgrade  
Serbia



Url: [http://nobel.etf.bg.ac.rs/zaposleni/?p=matavulj\\_petar&lang=en](http://nobel.etf.bg.ac.rs/zaposleni/?p=matavulj_petar&lang=en)

Emails: [matavulj@etf.bg.ac.rs](mailto:matavulj@etf.bg.ac.rs) ; [p.matavulj@ieee.org](mailto:p.matavulj@ieee.org)

Skype: p.matavulj

Phone: +381-11-3218-330

Fax: +381-11-3248-681

Date of Birth: 22<sup>nd</sup> May 1971.

Place of Birth: Bosanska Gradiška, Srpska Republic, Bosnia and Herzegovina

---

## BRIEF BIOS

---

**Dr. Petar Matavulj** is Professor of Physical Electronics at School of Electrical Engineering, University of Belgrade, Belgrade, Serbia. From 1994 to 2002, he was a Teaching and Research Assistant, from 2002 to 2008, an Assistant Professor, from 2008 to 2013, an Associate Professor and from 2013, a Full Professor, at the School of Electrical Engineering, University of Belgrade.

He teaches students, on all level of studies, in various photonics fields, particularly Optoelectronics, Optoelectronic and laser measurement systems and Optical networks. He has introduced three new courses at School of Electrical Engineering: Optical networks, Silicon photonics and Organic optoelectronics. He has been guided more PhD and MSc students, from which are some professors and leading researchers, now.

Petar Matavulj is author of more than 130 papers published in journals and conference proceedings and one international monograph, cited more than 400 times.

He reviewed many papers for well-known IEEE, OSA, etc. journals and conferences.

He was participated in many research and industry project, and was industrial consultant in field of access network, especially certification of government and industry LAN installations. Seven projects were long range projects sponsored by Serbian/Yugoslav Ministry of Education, Science and Technological Development.

He has been president or member of many faculty and government commissions, like leads faculty PhD study program almost 5 years, member of RATEL advising committee, member of Institute for Standardization of Serbia Commission N004, etc.

His research interests are modeling, simulation and characterization of diverse optoelectronic devices, integrated photonics and optical communications and networks.

Dr. Matavulj is a member of the IEEE Photonics Society (PS), Electron Device Society (EDS), and Communications Society (ComSoc), OSA (Optical Society of America) and ODS (Optičko Društvo Srbije - Optical Society of Serbia).

---

## EDUCATION

---

**2002. Ph.D.** in Electrical Engineering, School of Electrical Engineering, University of Belgrade

**1997. M.Sc.** in Optoelectronic and Laser Technique, School of Electrical Engineering, University of Belgrade

**1994. B.Sc.** in Electrical Engineering, School of Electrical Engineering, University of Belgrade  
*Specialization:* Technical Physics

**1989. Secondary School**, Bosanska Gradiška, Srpska Republic, Bosnia and Herzegovina  
*Specialization:* Mathematics, Physics and Computing

**1985. Primary School**, Bosanska Gradiška, Srpska Republic, Bosnia and Herzegovina

---

## TEACHING

---

**About 26 years of teaching experience on all level of faculty studies.**

**Undergraduate Studies:**

Optoelectronics, Optoelectronic and Laser Measurement Systems, Optical Networks.

**Graduate/Master Studies:**

DWDM (Dense Wavelength Division Multiplexing Networks), Silicon Photonics, Organic Optoelectronics.

**Ph.D. Studies:**

Modern Photonic Components and Systems, Nonlinear Optics.

---

## MENTORSHIP

---

**5** PhD Theses completed, 3 currently supervise

**19** MSc Theses

**53** BSc Theses

---

## RESEARCH

---

**About 26 years of research experience in field of physical electronics, especially in optoelectronics and laser technique.**

More than **130** papers published in journals and presented at conferences. See bibliography in last decade below.

Current research interest includes modeling, simulation and characterization of diverse

optoelectronic devices, integrated photonics and optical communications and networks.  
Reviewer of many reputed high impact journals. (IEEE, OSA, IOP, Springer, etc.). See list below.

---

## PROJECTS

---

1997.-2000.

Project sponsored by Serbian Ministry of Science, Technology and Development

*Microelectronics, optoelectronics and microsystems technologies.*

Subprojectst: *Modeling of electronics processes and components.*

1998.-2000.

Project sponsored by Yugoslav Ministry of Science

*Theoretical and experimental research of semiconductive microsystems.*

1998.-2000.

Technological project sponsored by Serbian Ministry of Science, Technology and Development

*Development of new technology for production and designing of microelectronic components and systems.*

1998.-

Long term project sponsored by School of Electrical Engineering, University of Belgrade

*Measurement and characterization of the copper and optical computer networks.*

2002.-2006.

Project sponsored by Serbian Ministry of Science, Technology and Development

*Theoretical analysis of electronic and optical characteristics of nanostructures.*

2004.-2005.

Commercial project

*Designing optical bacbone for information and comuniction network of The Institute for Manufacturing Banknotes and Coins, National Bank of Serbia.*

4 subproject for designing 4 independent LAN.

2006.-2008.

Project sponsored by Serbian Ministry of Science, Technology and Development

*Nanostructures and nanocomponents in physical electronics.*

2006.-2008.

The UK Royal Society International Joint Project:

*Compact silicon photonic device for filtering, modulation and sensing.*

2008.-2010.

Project sponsored by Serbian Ministry of Science and Technological Development

*Photonic communications*

2011.-2019.

Project sponsored by Serbian Ministry of Education, Science and Technological Development

*Photonic components and systems.*

---

## **MEMBERSHIP OF PROFESIONAL ORGANIZATION**

---

Member IEEE (PS, EDS, CS), #40202718

Member OSA, #999341

Member ODS, #006

---

## **FACULTY AND PROFESIONAL ACTIVITIES**

---

Member of ETF Advising Committee (2004-2006 and 2007-2009)

Vice Head of Department of Microelectronics and Technical Physics (2004-2006 and 2007-2009 and 2012-2015)

Head of PhD Studies – Program Nanoelectronics and Photonics (2012-2018)

President of PhD Commission – All programs (2014-2018)

Member of Personnel/Recruitment ETF Commission (2018- )

Member of Financial ETF Commission (2004-2006)

Member of RATEL (Serbian Regulatory Agency for Electronic Communications and Postal Services) Advising Committee (2011-2017)

Member of Serbian Chamber of Engineers Commission for introduction of new licenses 335 and 435

Member of ISS (Institute for Standardization of Serbia) Commission 004 - Hydraulic Turbines

---

## **BIBLIOGRAPHY (After 2010; chronologically arranged)**

---

2010.

Mirjana Radivojević and Petar Matavulj. Novel wavelength and bandwidth allocation algorithms for WDM EPON with QoS support. *Photonic Network Communications*, pp. 173-182, vol. 20, no. 2, 2010. (ISSN 1387-974X)

<http://www.springerlink.com/content/82q5hq2782928t7x/>

<doi:10.1007/s11107-010-0257-z>

M. Radivojević and P. Matavulj. Algorithm for Implementation of the Wavelength Division Multiplexing in EPON. *TELFOR Journal*, pp.38-42, vol.2, no.1, 2010. (ISSN 1821-3251)

[http://journal.telfor.rs/Published/Vol2No1/Vol2No1\\_A8.pdf](http://journal.telfor.rs/Published/Vol2No1/Vol2No1_A8.pdf)

Tatjana Keča, Petar Matavulj, William Headley, and Goran Mashanovich. Modelling of Silicon Racetrack Resonator. *MediNANO3 - 3rd Mediterranean Conference on Nanophotonics*, paper B.1, p. 74, October 18-19, Belgrade, Serbia, 2010. (ISBN 978-86-82441-28-1)

<http://www.medinano3.ipb.ac.rs/>

Jovana Petrović, Petar Matavulj, Leon Pinto, Sandra Živanović. The interplay of device structure and intrinsic polymer photophysics and its effects on the ITO/PEDOT:PSS/MEH-PPV/Al photocurrent spectra. *MediNANO3 - 3rd Mediterranean Conference on Nanophotonics*, paper B.8, p. 81, October 18-19, Belgrade, Serbia, 2010. (ISBN 978-86-82441-28-1)

<http://www.medinano3.ipb.ac.rs/>

Mirjana Radivojević, Petar Matavulj. Kvalitet servisa u Eternet pasivnim optičkim mrežama sledeće generacije. *Telekomunikacije*, godina III, broj 5, str. 25-39, jul 2010. (ISSN 1820-7782)

[http://www.telekomunikacije.rs/arhiva\\_brojeva/peti\\_broj/mr\\_mirjana\\_radivojevic,\\_prof\\_dr\\_petar\\_matavulj:\\_kvalitet\\_servisa\\_u\\_ernet\\_pasivnim\\_optickim\\_mredjama\\_sledece\\_generacije.306.html](http://www.telekomunikacije.rs/arhiva_brojeva/peti_broj/mr_mirjana_radivojevic,_prof_dr_petar_matavulj:_kvalitet_servisa_u_ernet_pasivnim_optickim_mredjama_sledece_generacije.306.html)

Mirjana R. Radivojević, Petar S. Matavulj. Dinamička alokacija talasnih dužina i propusnog opsega u WDM EPON mreži. *Elektronski zbornik XVIII telekomunikacionog foruma TELFOR 2010*, rad 6-1, str. 746-749, Beograd, Srbija, 23-25. novembar 2010. (ISBN 978-86-7466-392-9)  
<http://2010.telfor.rs/>

Marija D. Mraković, Petar S. Matavulj. Analiza koegzistencije NG-PON1 (10G-PON) mreža sa postojećim GPON mrežama. *Elektronski zbornik XVIII telekomunikacionog foruma TELFOR 2010*, rad 6-3, str. 754-757, Beograd, Srbija, 23-25. novembar 2010. (ISBN 978-86-7466-392-9)  
<http://2010.telfor.rs/>

Petar Matavulj, Marija Mraković. Tehnoekonomsko poređenje mogućih rešenja za prelazak sa GPON na NG-PON mreže. *Zbornik XXVIII simpozijuma o novim tehnologijama u poštanskom i telekomunikacionom saobraćaju PostTel 2010*, str. 229-238, Beograd, Srbija, 14-15. decembar 2010. (ISBN 978-86-7395-274-1)

2011

Mirjana Radivojević and Petar Matavulj. Advanced scheduling algorithm for quality of service support in WDM EPON. *Optics Express*, pp. B587-B593, vol. 19, 2011. (ISSN 1094-4087)  
<http://www.opticsinfobase.org/oe/abstract.cfm?URI=oe-19-26-B587>  
<doi:10.1364/OE.19.00B587>

Jovana P. Petrović, Petar S. Matavulj, Leon R. Pinto and Sandra R. Živanović. Interplay of device structure and intrinsic polymer photophysics and its effects on the ITO/PEDOT:PSS/MEH-PPV/Al photocurrent spectra. *Journal of Nanophotonics*, pp. 051808-051829, vol. 5, 2011. (ISSN 1934-2608)  
[http://spiedigitallibrary.org/jnp/resource/1/jnoacq/v5/i1/p051808\\_s1?isAuthorized=no](http://spiedigitallibrary.org/jnp/resource/1/jnoacq/v5/i1/p051808_s1?isAuthorized=no)  
<doi:10.1117/1.3594090>

Petar S. Matavulj, and Miomira V. Lazović, and Jovan B. Radunović. An Unique SPICE Model of Photodiode with Slowly Changeable Carriers' Velocities. *Journal of Infrared, Millimeter, and Terahertz Waves*, pp. 64-78, vol. 32, no. 1, 2011. (ISSN 1866-6892)  
<http://www.springerlink.com/content/vg040331170724n4/>  
<doi:10.1007/s10762-010-9737-6>

M. D. Mraković and P. S. Matavulj. Analysis of Coexisting GPON and NG-PON1(10G-PON) Systems. *TELFOR Journal*, pp.43-48, vol.3, no.1, 2011. (ISSN 1821-3251)  
[http://journal.telfor.rs/Published/Vol3No1/Vol3No1\\_A9.pdf](http://journal.telfor.rs/Published/Vol3No1/Vol3No1_A9.pdf)

M. Radivojević and P. Matavulj. Advanced Scheduling Algorithm for Quality of Service Support in WDM EPON. *37<sup>th</sup> European Conference and Exhibition on Optical Communication (ECOC 2011)*, Geneva, Switzerland, September 18-22, 2011.

M. Radivojević and P. Matavulj. „Advanced Scheduling Algorithm for Quality of Service Support in WDM EPON“ in *European Conference and Exhibition on Optical Communication (ECOC) Proc. (Optical Society of America, Washington, DC, 2011)*, paper We.10.P1.105, pp. 1-3. (ISBN 978-1-4577-1918-9)  
[http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6066064&contentType=Conference+Publications&searchField%3DSearch\\_All%26queryText%3DMatavulj](http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6066064&contentType=Conference+Publications&searchField%3DSearch_All%26queryText%3DMatavulj)  
<http://www.opticsinfobase.org/abstract.cfm?URI=ECOC-2011-We.10.P1.105>

T. Keća, P. Matavulj, W. Headley, and G. Mashanovich. FSR adjustment of silicone rib racetrack resonator. *Photonica11 - III International School and Conference on Photonics, Optoelectronics and Optocommunications*, paper P.OE.8, p. 129, Belgrade, Serbia, August 29 - September 02, 2011.  
(ISBN 978-86-7306-110-8)  
<http://www.vin.bg.ac.rs/photonica2011//UserFiles/File/Book%20of%20Abstracts.pdf>

Petar S. Matavulj, Milan S. Blanuša. Tehno-ekonomska analiza GPON i FTTC/VDSL mreža za pristup. *Elektronski zbornik XIX telekomunikacionog foruma TELFOR 2011*, rad 6-9, str. 844-847, Beograd, Srbija, 22-24. Novembar 2011. (ISBN 978-1-4577-1498-6)  
[http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6143676&contentType=Conference+Publications&sortType%3Dasc\\_p\\_Sequence%26filter%3DAND%28p\\_IS\\_Number%3A6143488%29%26pageNumber%3D8](http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6143676&contentType=Conference+Publications&sortType%3Dasc_p_Sequence%26filter%3DAND%28p_IS_Number%3A6143488%29%26pageNumber%3D8)  
<doi: 10.1109/TELFOR.2011.6143676>

2012.

Mirjana Radivojević and Petar Matavulj. *The Emerging WDM EPON*. Academic Mind, Belgrade 2012.

ISBN 978-86-7466-449-0

<http://akadembska-misao.rs/index.html#/info/book/235>

J. P. Petrović, P. S. Matavulj, L. R. Pinto, A. Thapa, and S. R. Živanović. Thickness dependent absorption and polaron photogeneration in poly-(2-metoxy-5-(2[prime]-ethyl-hexyloxy)-1,4-phenylene-vinylene). *Journal of Applied Physics*, **111**, 124512 (8p), 2012. (ISSN 0021-8979)

<http://aip.scitation.org/doi/10.1063/1.4729770>

[doi: 10.1063/1.4729770](#)

T. Keča, P. Matavulj, W. Headley and G. Mashanovich. Free spectral range adjustment of a silicon rib racetrack resonator. *Physica Scripta*, T149, 014031 (4p), 2012. (ISSN 0031-8949)

<http://stacks.iop.org/PhysScr/T149/014031>

[doi:10.1088/0031-8949/2012/T149/014031](#)

Bogdan Ušćumlić, Petar Matavulj, Annie Gravey, Philippe Gravey, and Michel Morvan. WDM Optical Packet Ring Performance Insights: Scheluding and Capacity. *Proceedings of IEEE Symposium on Computers and Communications (ISCC2012)*, pp. 253-258, Cappadocia, Turkey, July 01-04, 2012. (ISBN 978-1-4673-2712-1)

[http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6249304&contentType=Conference+Publications&sortType%3Dasc\\_p\\_Sequence%26filter%3DAND%28p\\_IS\\_Number%3A6249257%29%26pageNumber%3D2](http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6249304&contentType=Conference+Publications&sortType%3Dasc_p_Sequence%26filter%3DAND%28p_IS_Number%3A6249257%29%26pageNumber%3D2)

[doi: 10.1109/ISCC.2012.6249304](#)

Petar S. Matavulj and Tatjana Keča. Influence of Geometric Parameters on the SOI Racetrack Resonator Properties. *Progress in Electromagnetic Research Symposium Proceedings (PIERS2012)*, pp. 13-17, Moscow, Russia, August 19-23, 2012. (ISBN 978-1-934142-22-6)

<http://piers.org/piersproceedings/download.php?file=cGllcnMyMDEyTW9zY293fDFBMV8wMDEzLnBkZnwxMjAzMTkxNjUzMzg=>

Bogdan Ušćumlić, Veselin Gredić, Annie Gravey, Philippe Gravey, Michel Morvan, and Petar Matavulj. Stable dimensioning issue for optical packet ring with uniform and symmetric traffic. *Proceedings of 20th Telecommunication Forum (TELFOR 2012)*, pp. 915-918, Belgrade, Serbia, November 20-22, 2012. (ISBN 978-1-4673-2983-5)

<http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6419357&url=http%3A%2F%2Fieeexplore.ieee.org%2Fstamp%2Fstamp.jsp%3Ftp%3D%26arnumber%3D6419357>

[doi: 10.1109/TELFOR.2012.6419357](#)

Milan Blanuša, Petar Matavulj. Tehno-ekonomski aspekti planiranja i razvoja optičkih mreža. *Telekomunikacije*, godina V, broj 9, str. 2-20, maj 2012. (ISSN 1820-7782)

[http://www.telekomunikacije.rs/arhiva\\_brojeva/deveti\\_broj/milan\\_blanusa,\\_prof\\_dr\\_petar\\_matavulj:\\_tehno\\_ekonomski\\_aspekti\\_planiranja\\_i\\_rzvoja\\_optickih\\_veza.417.html](http://www.telekomunikacije.rs/arhiva_brojeva/deveti_broj/milan_blanusa,_prof_dr_petar_matavulj:_tehno_ekonomski_aspekti_planiranja_i_rzvoja_optickih_veza.417.html)

2013.

Mirjana Radivojević and Petar Matavulj. *Advances in Communications and Media Research. Volume 9: Successful Migration of EPON to WDM EPON*. Nova Science Publisher, Inc., Hauppauge, New York 2013.

ISBN 978-1-62808-237-1

[https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=43195](https://www.novapublishers.com/catalog/product_info.php?products_id=43195)

Mirjana R. Radivojević and Petar S. Matavulj. Highly Flexible and Efficient Model for QoS Provisioning in WDM EPON. *Journal of Optical Communication and Networking*, pp. 921-931, vol. 5, no. 8, 2013. (ISSN 1943-0620)

<http://www.opticsinfobase.org/jocn/abstract.cfm?uri=jocn-5-8-921>

<http://dx.doi.org/10.1364/JOCN.5.000921>

Ž. Jelić, J. Petrović, P. Matavulj, J. Melancon, M. Galib and S. Živanović. Modeling polymer solar cell based on P3HT:PCBM active layer. *Photonica13 - IV International School and Conference on Photonics, Optoelectronics and Optocommunications*, paper E10, p. 118, Belgrade, Serbia, August 26 - 30, 2013.

(ISBN 978-86-82441-36-6)

<http://www.photonica13.ipb.ac.rs>

Bogdan Ušćumlić, Veselin Gredić, Annie Gravey, Philippe Gravey, Michel Morvan and Petar Matavulj. Cost of Stable Dimensioning in Optical Packet Ring with Uniform and Symmetric Traffic. *TELFOR Journal*, pp.43-47, vol.5, no.1, 2013. (ISSN 1821-3251)

[http://journal.telfor.rs/Published/Vol5No1/Vol5No1\\_A8.pdf](http://journal.telfor.rs/Published/Vol5No1/Vol5No1_A8.pdf)

Mirjana Radivojević, Petar Matavulj. Tehnoekonomsko poređenje jednokanalnih i višekanalnih EPON mreža. *Zbornik XXXI simpozijuma o novim tehnologijama u poštanskom i telekomunikacionom saobraćaju PostTel 2013*, str. 297-306, Beograd, Srbija, 03-04. decembar 2013. (ISBN 978-86-7395-314-4)

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjI3\\_rUnKjgAhWuMewKHQQVBLwQFjAAegQIAhAC&url=http%3A%2F%2Fpostel.sf.bg.ac.rs%2Fsimpozijumi%2FPOSTEL2013%2FRADOVI%2520PDF%2FTelekomunikacioni%2520saobracaj%2C%2520mreze%2520i%2520servisi%2F8.%2520Radivojevic%2C%2520Matavulj.pdf&usg=AOvVaw3juEydOV3PGHCSeVAdKARA](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwjI3_rUnKjgAhWuMewKHQQVBLwQFjAAegQIAhAC&url=http%3A%2F%2Fpostel.sf.bg.ac.rs%2Fsimpozijumi%2FPOSTEL2013%2FRADOVI%2520PDF%2FTelekomunikacioni%2520saobracaj%2C%2520mreze%2520i%2520servisi%2F8.%2520Radivojevic%2C%2520Matavulj.pdf&usg=AOvVaw3juEydOV3PGHCSeVAdKARA)

2014

Ž. Jelić, J. Petrović, P. Matavulj, J. Melancon, A Sharma, C. Zellhofer and S. Živanović. Modeling of the polymer solar cell with a P3HT:PCBM active layer. *Physica Scripta*, T162, 014035 (4p), 2014. (ISSN 0031-8949)

<http://iopscience.iop.org/1402-4896/2014/T162/014035/>

<doi:10.1088/0031-8949/2014/T162/014035>

2015

A.Stojanović, R. Viana Ramos, P.Matavulj. Assistant procedures for Quantum Key Distribution in future Optical Communication Systems. *Photonica2015 - V International School and Conference on Photonics*, Optical Communication, paper P.OC.2, p. 160, Belgrade, Serbia, August 24 - 28, 2015.

(ISBN 978-86-7306-131-3)

<http://www.photonica.ac.rs/photonica2015/>

B. Pajčin, P. Matavulj, M. Radivojević. Simulation analysis of energy efficient WDM Ethernet Passive Optical Network. *Photonica2015 - V International School and Conference on Photonics*, Optical Communication, paper P.OC.3, p. 161, Belgrade, Serbia, August 24 - 28, 2015.

(ISBN 978-86-7306-131-3)

<http://www.photonica.ac.rs/photonica2015/>

M. Radivojević and P. Matavulj. Techno-economic analysis of NGNs implementation in rural areas based on the geographic and socio-demographic characteristics of Serbia. *Photonica2015 - V International School and Conference on Photonics*, Optical Communication, paper P.OC.5, p. 163, Belgrade, Serbia, August 24 - 28, 2015.

(ISBN 978-86-7306-131-3)

<http://www.photonica.ac.rs/photonica2015/>

2016

Aleksandar D. Stojanović, Rubens Viana Ramos and Petar S. Matavulj Authenticated B92 QKD protocol employing synchronized optical chaotic systems. *Optical and Quantum Electronics*, 285(7p), vol. 48, no. 5, 2016. (ISSN 0306-8919)

<http://link.springer.com/article/10.1007/s11082-016-0559-1>

<doi:10.1007/s11082-016-0559-1>

Bojan Pajčin, Petar Matavulj and Mirjana Radivojević. Simulation analysis of energy efficient WDM ethernet passive optical network. *Optical and Quantum Electronics*, 313(7p), vol. 48, no. 6, 2016. (ISSN 0306-8919)

<http://link.springer.com/article/10.1007/s11082-016-0572-4>

<doi:10.1007/s11082-016-0572-4>

Tatjana P. Keča, William R. Headley, Goran Z. Mashanovich and Petar S. Matavulj. Repeated passing principle for propagation in optical resonators. *Optical Review*, pp. 254-259, vol. 23, no. 2, 2016. (ISSN 1340-6000)

<http://link.springer.com/article/10.1007%2Fs10043-016-0195-9>

<doi:10.1007/s10043-016-0195-9>

Bojan Pajčin, Petar Matavulj and Mirjana Radivojević. MPCP adjusting for improving QoS in Green WDM EPON. *6th International Workshop on Fiber Optics in Access Networks (FOAN2016)*, pp. 29-34, Lisbon, Portugal, October 19, 2016. (ISBN 978-1-5090-3319-5)

<https://edas.info/web/foan2016/program.html>

<http://ieeexplore.ieee.org/document/7764543/>

<doi:10.1109/FOAN.2016.7764543>

Nemanja Miljković, Aleksandar Stojanović and Petar Matavulj. Physical model for B92-QKD authentication based on

analogy with optical chaotic systems. *Proceedings of 24th Telecommunication Forum (TELFOR 2016)*, pp. 915-918, Belgrade, Serbia, November 22-23, 2016. (ISBN 978-1-5090-4085-8)  
<http://ieeexplore.ieee.org/document/7818943/>  
<doi:10.1109/TELFOR.2016.7818943>

J. Ciganović, P. Matavulj, M. Trtica, J. Stašić, J. Savović, S. Živković and M. Momčilović. Pulsed TEA CO<sub>2</sub> laser irradiation of titanium-controllable gas ambience. *Proceedings of 13<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry (Physical Chemistry 2016)*, vol 2, pp. 561-564, Belgrade, Serbia, September 26-30, 2016.

(ISBN 978-86-82475-33-0)

<http://www.socphyschemserb.org/media/pc2016/program.pdf>

Dragan Knežević, Petar Matavulj and Zoran Nikolić. The possibility of an information processing in the infrared picture. *9<sup>th</sup> Photonics Workshop, Book of Abstracts*, p. 3, Kopaonik, Serbia, March 2 - 6, 2016.

(ISBN 978-86-82441-44-1)

<http://photonicworkshop.ipb.ac.rs/9/clanak.php?r=br-23/Program-for-March-4-2016.html>

Nemanja Miljković, Vladimir Kostić and Petar Matavulj. Simulation, Measurement and Characterization of OTN/DWDM Optical Transport Platform. *9<sup>th</sup> Photonics Workshop, Book of Abstracts*, p. 4, Kopaonik, Serbia, March 2 - 6, 2016.

(ISBN 978-86-82441-44-1)

<http://photonicworkshop.ipb.ac.rs/9/clanak.php?r=br-22/Program-for-March-3-2015.html>

Bojan Pajčin, Petar Matavulj i Mirjana Radivojević. Uštede energije u optičkim WDM EPON mrežama koje koriste 1Gb/s i 10Gb/s primopredajnike. *Elektronski zbornik radova konferencije INFOTEH-JAHORINA*, tom 15, rad KST-2-3, str. 290-294, Jahorina, Bosna i Hercegovina, 16-18. mart 2016. (ISBN 978-99955-763-9-4)

<http://infoteh.etf.unssa.rs.ba/zbornik/2016/radovi/KST-2/KST-2-3.pdf>

2017.

Mirjana Radivojević and Petar Matavulj. *The Emerging WDM EPON*. Springer, Cham, Switzerland 2017.

ISBN 978-3-319-54224-9

[http://www.springer.com/gp/book/9783319542225?wt\\_mc=Internal.Event.1.SEM.BookAuthorCongrat](http://www.springer.com/gp/book/9783319542225?wt_mc=Internal.Event.1.SEM.BookAuthorCongrat)

J. Ciganović, P. Matavulj, M. Trtica, J. Stašić, J. Savović, S. Živković and M. Momčilović. Pulsed TEA CO<sub>2</sub> Laser Irradiation of Titanium in Nitrogen and Carbon Dioxide Gases. *Russian Journal of Physical Chemistry A*, vol 91, no. 13, pp. 2696-2701, 2017. (ISSN 0036-0244)

<doi:10.1134/S003602441713009X>

Mirjana R. Radivojević and Petar S. Matavulj. Techno-economic Analysis of NGNs Implementation in Rural Areas Based on the Geographic and Socio-demographic Characteristics of Serbia. *Tehnika*, pp. 707-713, vol. 66, no. 5, 2017. (ISSN 0040-2176)

<http://scindeks-clanci.ceon.rs/data/pdf/0040-2176/2017/0040-21761705707R.pdf>

<doi:10.5937/tehnika1705707R>

UDC: 004.738.45:621.391

Bojan Pajčin, Petar Matavulj and Mirjana Radivojević. What does mean adaptive sleep cycle in energy efficient optical access network? *7th International Workshop on Fiber Optics in Access Networks (FOAN2017)*, pp. 1-5, Munich, Germany, November 7, 2017. (ISBN 978-1-5386-2413-5)

<https://edas.info/web/foan2017/program.html>

<https://ieeexplore.ieee.org/document/8215252/>

<doi:10.1109/FOAN.2017.8215252>

Bojan Pajčin, Petar Matavulj, and Mirjana Radivojević. How long can ONU be inactive in four-wavelengths model of WDM Ethernet Passive Optical Network? *Proceedings of 16<sup>th</sup> International Conference INFOTEH-JAHORINA*, vol. 16, KST-2-5, str. 207-210, Jahorina, Bosnia and Herzegovina, March, 22-24. 2017. (ISBN 978-99976-710-0-4)

<http://infoteh.etf.unssa.rs.ba/zbornik/2017/radovi/KST-2/KST-2-5.pdf>

A. Petrović, J. Gojanović, P. Matavulj, M. Islam and S. Živanović. Temperature dependence of P3HT:ICBA polymer solar cells. *Proceedings of 17th International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD 2017)*, pp. 133-134, Copenhagen, Denmark, July 24-28, 2017. (ISBN 978-1-5090-5323-0, ISSN 2158-3242)

<http://www.nusod.org/2017/nusod17paper67.pdf>

<https://ieeexplore.ieee.org/document/8010027/>

[doi:10.1109/NUSOD.2017.8010027](https://doi.org/10.1109/NUSOD.2017.8010027)

Nemanja Miljković, Aleksandar Stojanović and Petar Matavulj. Performances of BB84 and B92 QKD authentication protocols analyzed by proposed physical model, 10<sup>th</sup> *Photonics Workshop, Book of Abstracts*, p. 7, Kopaonik, Serbia, February 26 – March 2, 2017.

(ISBN 978-86-82441-45-8)

<http://photonicsworkshop.ipb.ac.rs/10/clanak.php?r=br-22/Program-for-February-27-2017.html>

Bojan Pajčin, Petar Matavulj and Mirjana Radivojević. Benefits of implementing online Dynamic Bandwidth Allocation algorithm in energy efficient WDM EPON, 10<sup>th</sup> *Photonics Workshop, Book of Abstracts*, p. 15, Kopaonik, Serbia, February 26 – March 2, 2017.

(ISBN 978-86-82441-45-8)

<http://photonicsworkshop.ipb.ac.rs/10/clanak.php?r=br-22/Program-for-February-27-2017.html>

D. Knežević, P. Matavulj, and Z. Nikolić. Modeling of aircraft IC signature based on comparative tracking, *Photonica2017 - VI International School and Conference on Photonics*, Devices and components, paper P.D.C.11, p. 137, Belgrade, Serbia, August 28 – September 1, 2017.

(ISBN 978-86-82441-46-5)

<http://www.photonica.ipb.ac.rs/2017/>

Nemanja Miljković, Aleksandar Stojanović, Rubens Viana Ramos, Petar Matavulj. Multiparameter QKD authentication protocol design over optical quantum channel, *Photonica2017 - VI International School and Conference on Photonics*, Optical Communication, paper P.O.C.1, p. 145, Belgrade, Serbia, August 28 – September 1, 2017.

(ISBN 978-86-82441-46-5)

<http://www.photonica.ipb.ac.rs/2017/>

B. Pajčin, P. Matavulj, and M. Radivojević. Improving Quality of Service in four-channel WDM Ethernet Passive Optical Network, *Photonica2017 - VI International School and Conference on Photonics*, Optical Communication, paper P.O.C.4, p. 148, Belgrade, Serbia, August 28 – September 1, 2017.

(ISBN 978-86-82441-46-5)

<http://www.photonica.ipb.ac.rs/2017/>

2018

Bojan Pajčin, Petar Matavulj and Mirjana Radivojević. Analysis of Online DBA Algorithm with Adaptive Sleep Cycle in WDM EPON. *Fiber and Integrated Optics*, pp. 171-184, vol. 37, no. 3, 2018. (ISSN 0146-8030)

<https://www.tandfonline.com/doi/abs/10.1080/01468030.2018.1455928?journalCode=ufio20>

[doi:10.1080/01468030.2018.1455928](https://doi.org/10.1080/01468030.2018.1455928)

Bojan Pajčin, Petar Matavulj and Mirjana Radivojević. Improving quality of service in four-channel WDM Ethernet passive optical network. *Optical and Quantum Electronics*, 37(14p), vol. 50, no. 10, 2018. (ISSN 0306-8919)

<https://link.springer.com/article/10.1007/s11082-018-1637-3#citeas>

[doi:10.1007/s11082-018-1637-3](https://doi.org/10.1007/s11082-018-1637-3)

Dušan Radovanović and Petar Matavulj. Digital measurement of optical transfer function. *Proceedings of 17<sup>th</sup> International Conference INFOTEH-JAHORINA*, pp.1-5, Jahorina, Bosnia and Herzegovina, March, 21-23. 2018. (ISBN 978-1-5386-4907-7)

<https://ieeexplore.ieee.org/document/8345510>

[doi:10.1109/INFOTEH.2018.8345510](https://doi.org/10.1109/INFOTEH.2018.8345510)

2019

Mirjana Radivojević, Petar Matavulj. Techno-economic analysis of multiservice EPON deployment. *Transactions on Emerging Telecommunications Technologies*, e3613, vol. 30, no. 6, 2019. (ISSN 2161-3915)

<https://onlinelibrary.wiley.com/doi/10.1002/ett.3613>

[doi:10.1002/ett.3613](https://doi.org/10.1002/ett.3613)

A. Khalif, J. Gojanović, N. Ćirović, M. Islam, S. Živanović, and. P. Matavulj, “Analysis of the Surface Recombination Influence on Organic Solar Cell J-V curve,” *Proceedings of OSA Advanced Photonics Congress (AP) 2019 (IPR, Networks, NOMA, SPPCom, PVLED)*, paper JT4A.26, Burlingame, California United States, July 29-August 2, 2019

(ISBN 978-1-943580-64-4).

<https://www.osapublishing.org/abstract.cfm?uri=PVLED-2019-JT4A.26>

M. Stanojević, J. Gojanović, P. Matavulj and S. Živanović. Organic solar cell physics analyzed by Shockley diode equation, *Photonica2019 - VII International School and Conference on Photonics, Devices and components*, paper DC.10, p. 145, Belgrade, Serbia, August 26 – 30, 2019.

(ISBN 978-86-7306-153-5)

<http://www.photonica.ipb.ac.rs/2019/>

Nemanja Miljković, Petar Matavulj. Quantum Key Distribution system characterization using InGaAs/InP SPAD photodetector simulation model, *12<sup>th</sup> Photonics Workshop, Book of Abstracts*, p. 19, Kopaonik, Serbia, March 10-14, 2019.

(ISBN 978-86-82441-49-6)

<http://photonicworkshop.ipb.ac.rs/12/index.php/time-table>

2020.

Ali R. Khalf, Jovana P. Gojanović, Nataša A. Ćirović, Sandra Živanović, and Petar S. Matavulj, The Impact of Surface Processes on the J-V Characteristics of Organic Solar Cells. *IEEE Journal of Photovoltaics*, pp. 514-521, vol. 20, no. 2, 2020. (ISSN 2156-3381)

<https://ieeexplore.ieee.org/document/8970518>

doi:10.1109/JPHOTOV.2020.2965401

Milan Stanojević, Jovana Gojanović, Petar Matavulj, and Sandra Živanović. Organic solar cell physics analyzed by Shockley diode equation. *Optical and Quantum Electronics* 345(10p), vol. 52, no. 7, 2020. (ISSN 0306-8919)

<https://link.springer.com/article/10.1007%2Fs11082-020-02459-6>

doi: 10.1007/s11082-020-02459-6

<https://rdcu.be/b5uef>

---

## REVIEWER ACTIVITIES

---

### *Journals*

1. IEEE Photonics Journal
2. IEEE Photonics Technology Letters
3. IEEE Access
4. IEEE Network
5. IEEE Communication Letters
6. Optical Material Express
7. Journal of Optics A: Pure and Applied Optics
8. Semiconductor Science and Technology
9. Optical and Quantum Electronics
10. Nanotechnology
11. Journal of Optics
12. Physica Scripta

### 13. International Journal of Numerical

Modeling: Electronic Networks,  
Devices and Fields

### 14. IET Communications

### 15. Hindawi Advances in OptoElectronics

### 16. Electronics Journal

### 17. Facta Universitatis. Series: Electronics and Energetics

### 18. TELFOR Journal

### *Conferences*

1. EUROCON
2. MIEL
3. WOSSPA
4. FOAN
5. PHOTONICA
6. ETRAN
7. TELFOR