

## INFORMAȚII PERSONALE



## Lavric Alexandru

📍 Str. Vasile Gemeniuc, nr. 65, sat Sfintu Ilie, com. Șcheia, jud. Suceava

📞 0740084569

✉ lavric@eed.usv.ro

Sexul Masculin | Data nașterii 25/04/1987 | Naționalitatea română

## EXPERIENȚA PROFESIONALĂ

27.02.2019 → prezent

**Șef Lucrări**

Universitatea „Ștefan cel Mare”

Activitate de predare:

- Radiocomunicații (curs)
- Comunicații 4G și 5G (curs)
- Rețele de senzori ad-hoc
- Comunicații mobile și prin satelit.
- Comunicații Analogice și Digitale
- Surse de alimentare

Indici activitate cercetare:

**Hirsch Web of Knowledge: 12**

**Hirsch Scopus 17**

**Hirsch Google Scholar 18**

**Educație**

27.02.2017 → 02.2019

**Asistent Universitar**

Universitatea „Ștefan cel Mare”

Activitate de predare:

- Metode Numerice
- Grafică Asistată de Calculator
- Componente și Circuite Pasive
- Comunicații Analogice și Numerice
- Tehnologie Electronică
- Tehnici Avansate de Conducere a Acțiunilor Electrice
- Surse de Alimentare

**Educație**

27.02.2017 →

**Inginer de sistem informatic (consultant)**

SC Eurospeed SRL

- Implementarea, dezvoltarea și testarea rețelelor de date
- Menținerea fluxurilor VPN
- Monitorizarea infrastructurii de comunicație

**Inginerie**

01/04/2014 → 24.02.2017

**Inginer de sistem informatic (Network Architect)**

SC Eurospeed SRL

- Implementarea, dezvoltarea și testarea rețelelor de date
- Menținerea fluxurilor VPN
- Monitorizarea infrastructurii de comunicație

**Inginerie**

1/10/2012 → 15/02/2016

**Asistent Universitar (Plata cu ora)**

Universitatea „Ștefan cel Mare”

Activitate de predare:

- Dispozitive electronice și electronică analogică
- Circuite electronice liniare

- Teoria Transmiterii Informatiei (curs și laborator)
- Informatică
- Rețele de calculatoare (TCP / IP, 802.11, HTML, PHP, CSS)
- Baze de date (SQL)
- Birotică Profesională

#### Educație

01/04/2014 → 30.12.2015

#### Cercetator Postdoctorat- Proiect SOCERT, POSDRU/159/1.5/S/132406

Universitatea „Ștefan cel Mare”, Facultatea de Inginerie Electrică și Știința Calculatoarelor

##### Domenii de cercetare:

- Wireless Sensor Networks WSN-(IEEE 802.15.4)
- Algoritmi de rutare
- Internet of Things
- Smart City
- Protocoale de comunicație wireless
- Rețele de calculatoare

#### Cercetare

07/04/2014 → 01/07/2014

#### Software Developer

Continental Automotive Sibiu

- Tehnici de programare
- Standardul MISRA
- Proceduri de testare
- Dezvoltarea de aplicații software

#### Cercetare

1/10/2010 → 1/10/2013

#### Asistent cercetare – Proiect Q-DOC, POSDRU/107/1.5/S/7853

Universitatea „Ștefan cel Mare”

##### Domenii de cercetare:

- Rețele de senzori wireless WSN (IEEE 802.15.4)
- Protocoale de comunicație wireless
- Rețele de calculatoare
- Rețele ZigBee
- PLC (Power Line Communication)- IEEE P1901
- Dezvoltare hardware
- Senzori inteligenți
- Algoritmi de rutare
- Sisteme embedded
- Sisteme de monitorizare și control
- Antene și propagare

#### Cercetare

1/03/2010 → 1/09/2010

#### Inginer Tehnologii și Sisteme de Telecomunicații

Holding Bit Telecom

- Proiectarea, implementarea și testarea rețelelor wireless
- Proiectare sisteme de automatizare
- Sisteme de securitate

#### Inginerie telecomunicații

### EDUCAȚIE ȘI FORMARE

---

1/10/2010 → 28/11/2013

#### Doctor în Electronică și Telecomunicații

Universitatea „Ștefan cel Mare”, Facultatea de Inginerie Electrică și Știința Calculatoarelor, Suceava

Titlul tezei: “Contribuții privind dezvoltarea sistemelor de iluminat stradal”, Îndrumător: Prof. Dr. Ing. Valentin Popa, cu mențiunea ”Magna cum laude”.

01/10/2010 → 10/06/2012

#### Absolvent de master Computer and Communications Networks

Universitatea „Ștefan cel Mare”, Facultatea de Inginerie Electrică și Știința Calculatoarelor, Suceava

- Computer Network Programming
- Technical Research writing and Communication
- Ad-hoc and sensor network

01/10/2005 → 10/06/2009

### Inginer Tehnologii și Sisteme de Telecomunicații

Universitatea tehnica „Gheorghe Asachi”, Facultatea de Electronica, Telecomunicații si Tehnologia Informatiei, Iași

- Sisteme de comunicații digitale
- Comunicații Mobile
- Antene si Propagare
- Tehnica transmisiei și codării informației
- Circuite integrate analogice și digitale
- Microcontrolere
- Limbaje de programare
- Zgomot si compatibilități electromagnetice

01/10/2008 → 10/06/2010

### Absolvent de master Management și Administrarea Afacerilor

Universitatea „Ștefan cel Mare”, Facultatea de Științe Economice și Administrație Publică, Suceava

- Politici economice europene,
- Informatică pentru Administrarea afacerilor
- Statistica afacerilor, Politici de marketing în afaceri
- Gestiunea financiară a firmelor

01/10/2005 → 10/06/2008

### Licențiat în Științe Administrative

Universitatea „Ștefan cel Mare”, Facultatea de Științe Economice și Administrație Publică, Suceava

- Finanțe publice
- Drept civil și comercial
- Contabilitate
- Managementul resurselor umane
- Marketing
- Sociologie
- Relații publice și protocol

## COMPETENTE PERSONALE

Limba(i) maternă(e) Româna

Alte limbi străine cunoscute

Engleză  
Franceza

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
Engleză	C2	C1	C2	C2	C2
Franceza	A1	A1	A1	A1	A1

Niveluri: A1/2: Utilizator elementar - B1/2: Utilizator independent - C1/2: Utilizator experimentat  
Cadru european comun de referință pentru limbi străine

Competențe organizaționale/manageriale

- Leader în managementul proiectelor;
- Bun conducător și inițiator de proiecte;
- Capacitate de a rezolva probleme;
- Capacitate organizatorică și de management al activităților;
- Capacitate foarte bună de comunicare și relaționare;
- Implicare și competitivitate;

Competențe dobândite la locul de muncă

- Proiectare sisteme de telecomunicații;
- Dezvoltarea și implementarea algoritmilor de AI (Artificial Intelligence)
- Programare microcontrolere și transceivere;
- Utilitare de simulare: Matlab, Ansoft HFSS, Opnet, Omnet++;

- Proiectare hardware: Orcad (Capture CSI/Layout);
- Protocoale și tehnologii de comunicație wireless;
- Data Mining/ Algoritmi de predicție folosind tehnici avansate de AI
- Rețele de calculatoare;
- Baze de date
- Web design;
- Competențe în tehnici și metode de testare;
- Algoritmi WSN.

Competențe informatice

- Competența atestată în utilizarea a calculatorului Office, sisteme de operare;
- Limbaje de programare: C++, C/C++, C#, HTML, PHP, Visual Basic;
- Rețele de senzori wireless WSN ZigBee, LoRa/LoRaWAN, SigFox, NB-IoT;
- Rețele de senzori long-range și large-scale

Proiecte

Participant:

- "Improvement of the doctoral studies quality in engineering science for development of the knowledge based society- QDOC" contract no. POSDRU/107/1.5/S/7853.
- "Mommypreneurs", EEA and Norway Grants Fund for Youth Employment Mommypreneurs, 2017-1-277.
- „SOCERT. Knowledge society, dynamism through research”, contract number POSDRU/159/1.5/S/132406.
- "Intelligent conductive charging stations, fixed and mobile, for electrical propulsion transport (SMILE-EV)", PN-III-P1-1.2-PCCDI-2017-0776/No. 36 PCCDI/15.03.2018.
- „Platformă inteligentă pentru managementul infrastructurii de încărcare a autovehiculelor electrice”, (SMART EVC Platform), 40PTE/ 05.06.2020
- „National Competence Center and solutions for the development of Climate Neutral and Smart Cities” (NetZeRoCities) Contractul de finanțare nr. 760007 / 30.12.2022, cod. 6/16.11.2022-prezent,
- „Artificial intelligence-powered personalized health and genomics libraries for the analysis of long-term effects in COVID-19 patients” (AI-PHGL-COVID), contract de finanțare nr. 760074/23.05.2023-prezent

Premii

- Includere activitate de cercetare in topul: Elsevier World's Top 2% Scientists, 2023, 2022 și 2021 ca fiind unul dintre cei mai citați autori .
- Premiarea următoarelor articole de către Agenția UEFISCDI în cadrul competiției "Premierea rezultatelor cercetării – articole" anii 2019-2023:
  1. Lavric, Alexandru, Adrian I. Petrariu, Partemie-Marian Mutescu, Eugen Coca, and Valentin Popa. "Internet of things concept in the context of the COVID-19 pandemic: a multi-sensor application design." *Sensors* 22, no. 2 (2022): 503.
  2. Al-Timemy, A. H., Mosa, Z. M., Alyasseri, Z., Lavric, A., Lui, M. M., Hazarbassanov, R. M., & Yousefi, S. (2021). A hybrid deep learning construct for detecting keratoconus from corneal maps. *Translational Vision Science & Technology*, 10(14), 16-16.
  3. Lavric, Alexandru, Liliana Anchin, Valentin Popa, Ali H. Al-Timemy, Zaid Alyasseri, Hidenori Takahashi, Siamak Yousefi, and Rossen M. Hazarbassanov. "Keratoconus severity detection from elevation, topography and pachymetry raw data using a machine learning approach." *Ieee Access* 9 (2021): 84344-84355.
  4. Lavric, Alexandru, Valentin Popa, Hidenori Takahashi, Rossen M. Hazarbassanov, and Siamak Yousefi. "Association between visual field damage and corneal structural parameters." *Scientific Reports* 11, no. 1 (2021): 10732.
  5. Lavric, Alexandru, Adrian I. Petrariu, Eugen Coca, and Valentin Popa. "Lora traffic generator based on software defined radio technology for lora modulation orthogonality analysis: Empirical and experimental evaluation." *Sensors* 20, no. 15 (2020): 4123.
  6. Lavric, Alexandru, Valentin Popa, Hidenori Takahashi, and Siamak Yousefi. "Detecting keratoconus from corneal imaging data using machine learning." *IEEE Access* 8 (2020): 149113-149121.
  7. A. Lavric, A. I. Petrariu and V. Popa, "Long Range SigFox Communication Protocol Scalability Analysis Under Large-Scale, High-Density Conditions," in *IEEE Access*, vol. 7, pp. 35816-35825, 2019. doi: 10.1109/ACCESS.2019.2903157 Article (CrossRef Link) Q1 Rank Journal, IF:4,098, SRI: 2,047.
  8. Alexandru Lavric, "LoRa (Long-Range) High-Density Sensors for Internet of Things," *Journal of Sensors*, vol. 2019, Article ID 3502987, 9 pages, 2019. Article (CrossRef Link) Q2 Rank Journal, IF:2,024, SRI: 0,910.

## INFORMATII SUPLIMENTARE

Activitatea de cercetare desfășurată de autor până în prezent s-a materializat printr-un număr de peste **87 de lucrări științifice** prezentate în cadrul unor conferințe naționale sau internaționale și publicate în jurnale de interes internațional.

Publicații (extras)  
Prezentări  
Conferințe  
Seminarii

1. Alyasseri, Z.A.A., Al-Timemy, A.H., Abasi, A.K., Lavric, A., Mohammed, H.J., Takahashi, H., Milhomens Filho, J.A., Campos, M., Hazarbassanov, R.M. and Yousefi, S., 2022. A Hybrid Artificial Intelligence Model for Detecting Keratoconus. *Applied Sciences*, 12(24), p.12979.
2. Lavric A, Petrariu AI, Popa V. LoRa Modulation: A 2.4 GHz Communication Strategy. In 2022 3rd International Conference on Computation, Automation and Knowledge Management (ICCAKM) 2022 Nov 15 (pp. 1-4). IEEE.
3. Al-Timemy, Ali, Laith Al-Zubaidi, Nebras Ghaeb, Hidenori Takahashi, Alexandru Lavric, Zahraa Mosa, Rossen M. Hazarbassanov, Zaid Abdi Alkareem Alyasseri, and Siamak Yousefi. "A device-agnostic deep learning model for detecting keratoconus based on anterior elevation corneal maps." *Investigative Ophthalmology & Visual Science* 63, no. 7 (2022): 2101-F0090.
4. Hazarbassanov, Rossen M., Zaid Abdi Alkareem Alyasseri, Ali Al-Timemy, Alexandru Lavric, Ammar Kamal Abasid, Hidenori Takahashi, Jose Arthur Milhomens Filho, Mauro Campos, and Siamak Yousefi. "Detecting keratoconus on two different populations using an unsupervised hybrid artificial intelligence model." *Investigative Ophthalmology & Visual Science* 63, no. 7 (2022): 2088-F0077.
5. Mutescu PM, Lavric A, Petrariu AI, Popa V. Evaluation of a new spectrum sensing technique for internet of things: An ai approach. In 2022 International Conference on Development and Application Systems (DAS) 2022 May 26 (pp. 91-94). IEEE.
6. Raboaca MS, Meheden M, Musat A, Viziteu A, Creanga A, Vlad V, Filote C, Rață M, Lavric A. An overview and performance evaluation of open charge point protocol from an electromobility concept perspective. *International Journal of Energy Research*. 2022 Feb;46(2):523-43.
7. Lavric A, Petrariu AI, Mutescu PM, Coca E, Popa V. Internet of things concept in the context of the COVID-19 pandemic: a multi-sensor application design. *Sensors*. 2022 Jan;22(2):503.
8. Petrariu, Adrian I., Alexandru Lavric, Eugen Coca, and Valentin Popa. "Hybrid Power Management System for LoRa Communication Using Renewable Energy." *IEEE Internet of Things Journal* 8, no. 10 (2021): 8423-8436.
9. Petrariu, Adrian I., Eugen Coca, and Alexandru Lavric. "Large-Scale Internet of Things Multi-Sensor Measurement Node for Smart Grid Enhancement." *Sensors* 21, no. 23 (2021): 8093 WOS:000735114600001.
10. Petrariu, Adrian Ioan, Partemie-Marian Mutescu, Eugen Coca, and Alexandru Lavric. "A Study on LoRa Signal Propagation Models in Urban Environments for Large-Scale Networks Deployment." *Advances in Electrical and Computer Engineering* 21, no. 4 (2021): 61-68, WOS:000725107100007.
11. Lavric, Alexandru, Adrian I. Petrariu, and Liliana Anchin. "Internet of Things Software Defined Radio Technology for LoRaWAN Wireless Communication: A survey." In 2021 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE), pp. 1-4, WOS:000676164800052. IEEE, 2021.
12. PETRARIU, A.I. and LAVRIC, A., 2021, March. Sigfox wireless communication enhancement for internet of things: A study. In 2021 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE) (pp. 1-4). IEEE, WOS:000676164800091.
13. Mutescu, Partemie-Marian, Adrian Ioan Petrariu, and Alexandru Lavric. "Wireless communications for IoT: Energy efficiency survey." In 2021 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE), pp. 1-4. IEEE, 2021, WOS:000676164800160.
14. Al-Timemy, Ali H., Zahraa M. Mosa, Zaid Alyasseri, Alexandru Lavric, Marcelo M. Lui, Rossen M. Hazarbassanov, and Siamak Yousefi. "A Hybrid Deep Learning Construct for Detecting Keratoconus From Corneal Maps." *Translational vision science & technology* 10, no. 14 (2021): 16-16.
15. Al-Timemy, Ali H., Rossen M. Hazarbassanov, Zahraa M. Mosa, Zaid Alyasseri, Alexandru Lavric, Claudio Alan Oliveira da Rosa, Camila Palmeira Griz, Hidenori Takahashi, and Siamak Yousefi. "A hybrid deep learning framework for keratoconus detection based on anterior and posterior corneal maps." *Investigative Ophthalmology & Visual Science* 62, no. 11 (2021).
16. Takahashi, Hidenori, Ali H. Al-Timemy, Zahraa M. Mosa, Zaid Alyasseri, Alexandru Lavric, Jose Arthur Pinto Milhomens Filho, Kentaro Yuda, Rossen M. Hazarbassanov, and Siamak Yousefi. "Detecting keratoconus severity from corneal data of different populations with machine learning." *Investigative Ophthalmology & Visual Science* 62, no. 8 (2021).
17. Hazarbassanov, Rossen M., Alexandru Lavric, Jose Arthur Pinto Milhomens Filho, Liliana Anchin, Valentin Popa, Ali H. Al-Timemy, Zaid Alyasseri, Hidenori Takahashi, and Siamak Yousefi. "Evaluation of keratoconus detection from elevation, topography and pachymetry raw data using machine learning." *Investigative Ophthalmology & Visual Science* 62, no. 8 (2021).
18. Lavric, Alexandru, Adrian I. Petrariu, Stefan Havriiuc, and Eugen Coca. "Glaucoma Detection by Artificial Intelligence: GlauNet A Deep Learning Framework." In 2021 International Conference on e-Health and Bioengineering (EHB), pp. 1-4. IEEE, 2021.

19. Maftai, A.A., Mutescu, P.M., Popa, V., Petrariu, A.I. and Lavric, A., 2021, November. Internet of Things Healthcare Application: a Blockchain and LoRa Approach. In 2021 International Conference on e-Health and Bioengineering (EHB) (pp. 1-4). IEEE.
20. Lavric, A., Anchin, L., Popa, V., Al-Timemy, A.H., Alyasseri, Z., Takahashi, H., Yousefi, S. and Hazarbassanov, R.M., 2021. Keratoconus severity detection from elevation, topography and pachymetry raw data using a machine learning approach. IEEE Access, 9, pp.84344-84355.
21. Lavric, A., Popa, V., Takahashi, H., Hazarbassanov, R.M. and Yousefi, S., 2021. Association between visual field damage and corneal structural parameters. Nature - Scientific Reports, 11(1), pp.1-11.
22. Lavric, A., Petrariu, A. I., Coca, E., & Popa, V. (2020, May). LoRaWAN analysis from a high-density internet of things perspective. In 2020 International Conference on Development and Application Systems (DAS) (pp. 94-97). IEEE, WOS:000589776100017.
23. Lavric, A., Petrariu, A. I., Coca, E., & Popa, V. (2020). Lora traffic generator based on software defined radio technology for lora modulation orthogonality analysis: Empirical and experimental evaluation. Sensors, 20(15), 4123, WOS:000567661100001.
24. Lavric, A., Popa, V., Takahashi, H., & Yousefi, S. (2020). Detecting keratoconus from corneal imaging data using machine learning. IEEE Access, 8, 149113-149121 (WOS:000562071500001).
25. Alexandru Lavric Adrian Petrariu and Popa Valentin Scalability Analysis Under Large-Scale, High-Density Conditions," in IEEE Access, vol. 7, pp. 35816-35825, 2019. doi: 10.1109/ACCESS.2019.2903157 [Article \(CrossRef Link\)](#) Q1 Rank Journal, IF:4,098, SRI: 2,047.
26. Alexandru Lavric, Adrian I. Petrariu and Valentin Popa, SigFox Communication Protocol: The New Era of IoT?, International Symposium on Sensors and Instrumentation in IoT Era August 29-30, 2019, Lisbon, Portugal.
27. Adrian I. Petrariu, Alexandru Lavric, Eugen Coca, LoRaWAN Gateway: Design, Implementation and Testing in Real Environment, 2019 IEEE 25th International Symposium for Design and Technology in Electronic Packaging
28. Adrian I. Petrariu, Alexandru Lavric, Eugen Coca, Renewable Energy Powered LoRa-based IoT Multi Sensor Node, 2019 IEEE 25th International Symposium for Design and Technology in Electronic Packaging.
29. Lavric, A., Popa, V., David, C. and Pavel, C.C., 2019, June. Keratoconus Detection Algorithm using Convolutional Neural Networks: Challenges. In 2019 11th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-4). IEEE.
30. Lavric, A., Raboaca, M.S., Nasture, A.M. and Filote, C., 2019, June. Proton-Exchange Membrane Fuel Cells: The Renewable Energy Era. In 2019 11th International Conference on Electronics, Computers and Artificial Intelligence (ECAI) (pp. 1-4). IEEE.
31. Lavric, V. Popa, KeratoDetect: Keratoconus Detection Algorithm Using Convolutional Neural Networks, Computational intelligence and neuroscience, 2019, WOS:000482138400001, Article (CrossRef Link) Q2 Rank Journal, IF:2,154, SRI: 0,634
32. Filote C, Felseghi RA, Cârlea F, Rață M, Martiș CS, Lavric A, Fodorean D, Răboacă MS. Green Hybrid Energy for Office Building. InE3S Web of Conferences 2019 (Vol. 111). EDP Sciences.
33. LAVRIC, Alexandru; PETRARIU, Adrian I.; POPA, Valentin. Long range sigfox communication protocol scalability analysis under large-scale, high-density conditions. IEEE Access, 2019, 7: 35816-35825, WOS:000464095900001.
34. Lavric, Alexandru. "LoRa (long-range) high-density sensors for internet of things." Journal of Sensors 2019 (2019)WOS:000460899100001, .
35. Lavric, A., Petrariu, A. I., Coca, E., & Popa, V. (2020, May). LoRaWAN analysis from a high-density internet of things perspective. In 2020 International Conference on Development and Application Systems (DAS) (pp. 94-97). IEEE, WOS:000589776100017.
36. Lavric, A., Petrariu, A. I., Coca, E., & Popa, V. (2020). Lora traffic generator based on software defined radio technology for lora modulation orthogonality analysis: Empirical and experimental evaluation. Sensors, 20(15), 4123, WOS:000567661100001.
37. Lavric, A., Popa, V., Takahashi, H., & Yousefi, S. (2020). Detecting keratoconus from corneal imaging data using machine learning. IEEE Access, 8, 149113-149121 (WOS:000562071500001).
38. 12. Petrariu, A. I., Lavric, A., Coca, E., & Popa, V. (2020). Hybrid Power Management System for LoRa V. (2020). Hybrid Power Management System for LoRa Communication Using Renewable Energy. IEEE Internet of Things Journal, 8(10), 8423-8436 (WOS:000648206800048).
39. Alexandru Lavric and Popa Valentin, "KeratoDetect: Keratoconus Detection Algorithm Using Convolutional Neural Networks," Computational Intelligence and Neuroscience, vol. 2019, Article ID 8162567, 9 pages, 2019. [Article \(CrossRef Link\)](#) Q2 Rank Journal, IF:2,154, SRI: 0,634
40. Alexandru Lavric, "LoRa (Long-Range) High-Density Sensors for Internet of Things," Journal of Sensors, vol. 2019, Article ID 3502987, 9 pages, 2019. [Article \(CrossRef Link\)](#) Q2 Rank Journal, IF:2,024, SRI: 0,910.
41. Alexandru Lavric and Valentin Popa, "Performance Evaluation of LoRaWAN Communication Scalability in Large-Scale Wireless Sensor Networks," Wireless Communications and Mobile Computing, vol. 2018, Article ID 6730719, 9 pages, 2018. [Article \(CrossRef Link\)](#) Q3 Rank Journal IF:1,396, SRI: 0,517.
42. Petrariu, A.I., Lavric, A. and Coca, E., 2018. Design of an High Frequency RFID Multi-Loop Antenna for Applications in Metallic Environments. Advances in Electrical and Computer Engineering, 18(2), pp.35-41. WOS:000434245000005. Q3 Rank Journal IF: 0.650, SRI: 0.190.
43. Răboacă, M.S.; Badea, G.; Enache, A.; Filote, C.; Răsoi, G.; Rata, M.; Lavric, A.; Felseghi, R.-A. Concentrating Solar Power Technologies. Energies 2019, 12, 1048, Q3 Rank Journal IF: 2.707, SRI: 0.601.
44. Adrian I. Petrariu, Alexandru Lavric, Eugen Coca, Renewable Energy Powered LoRa-based IoT Multi Sensor Node, 2019 IEEE 25th International Symposium for Design and Technology in Electronic Packaging (SIITME) (IEEE EXPLORE)
45. Lavric, A. and Petrariu, A.I., 2018, May. LoRaWAN communication protocol: The new era of IoT. In 2018 International Conference on Development and Application Systems (DAS) (pp. 74-77). IEEE.WOS:000467080400014

46. A. I. Petrariu, A. Lavric and E. Coca, "VLC for vehicular communications: A multiple input multiple output (MIMO) approach," 2018 International Conference on Development and Application Systems (DAS), Suceava, 2018, pp. 134-137. WOS:000467080400025, doi: 10.1109/DAAS.2018.8396085
47. Alexandru Lavric, Valentin Popa, LoRa Wide-Area Networks from an Internet of Things Perspective, ECAI 2017 - International Conference – 9th Edition Electronics, Computers and Artificial Intelligence, pp.1-4, 2017, DOI: 10.1109/ECAI.2017.8166397 (WOS: WOS:000425865900013).
48. Alexandru Lavric, Valentin Popa, Internet of Things and LoRa Low-Power Wide-Area Networks Challenges, ECAI 2017 - International Conference – 9th Edition Electronics, Computers and Artificial Intelligence, pp.1-4, 2017, DOI: 10.1109/ECAI.2017.8166405, WOS: WOS:000425865900021.
49. Alexandru Lavric, Valentin Popa, „A LoRaWAN: Long Range Wide Area Networks Study”, 11-th International Conference on Electromechanical and Power Systems (SIELMEN 2017), pp. 435-438, DOI: 10.1109/SIELMEN.2017.8123360, (IEEE). WOS:000426906000079
50. Alexandru Lavric, Adrian I. Petrariu and Valentin Popa, SigFox Communication Protocol: The New Era of IoT?, International Symposium on Sensors and Instrumentation in IoT Era August 29-30, 2019, Lisbon, Portugal, (IEEE EXPLORE)
51. Adrian I. Petrariu, **Alexandru Lavric**, Eugen Coca, LoRaWAN Gateway: Design, Implementation and Testing in Real Environment, 2019 IEEE 25th International Symposium for Design and Technology in Electronic Packaging (SIITME) (IEEE EXPLORE)
52. **Alexandru Lavric**, Valentin POPA, The Design and Implementation of a Street Lighting Control System using a 802.11 Communication Protocol: A Case Study, Buletinul AGIR nr. 3 (5th International Symposium on Electrical Engineering and Energy Converters), pp. 1-5, 2013 (ISSN 1224-7928), (BDI: Index Copernicus International, Academic Keys);
53. Males Codrin, Popa Valentin, **Lavric Alexandru**, Finis Ilie, Performance Evaluation of Power Line Communications over Power Transformers, 2012 20th Telecommunications Forum (TELFOR), pp. 627-630, 2012, DOI: 10.1109/TELFOR.2012.6419288, (ISI Proceedings);
54. D. Simion, M.F. Ursuleanu, A. Graur, A.D. Potorac, **A. Lavric**, Efficiency Consideration for Data Packets Encryption within Wireless VPN Tunneling for Video Streaming, International Journal of Computers, Communications & Control (IJCCC), pp. 112-122, Vol. 8, nr.1, 2013, ISSN: 1841-9844 revistă cotate ISI, având factorul de impact 0,441 pentru anul 2012;
55. Daniel Simion, Adrian Graur, **Lavric Alexandru**, Ali Haider Mahdi, An Optimize Particle Swarm Optimization Routing Algorithm for Data Transmission in Cognitive Radio Networks, International Symposium on Electronics and Telecommunications (ISETC), pp. 213-216, 2012, DOI: 10.1109/ISETC.2012.6408148 (ISI Proceedings);
56. **Alexandru Lavric**, Valentin Popa, Codrin Males, Ilie Finis, New Technologies in Street Lighting, Buletinul AGIR nr. 2 (International Word Energy System Conference -WESC), pp. 811-816, 2012, (BDI: Index Copernicus International, Academic Keys);
57. **Alexandru Lavric**, Valentin Popa, Codrin Males, Ilie Finis, Design And Performance Evaluation Of A Low Cost Automatic Gain Control Circuit, Buletinul AGIR nr. 2 (International Word Energy System Conference -WESC), pp. 263-269, 2012, (BDI: Index Copernicus International, Academic Keys);
58. **Alexandru Lavric**, Valentin Popa, Codrin Males, Ilie Finis, A Performance Study of ZigBee Wireless Sensors Network Topologies for Street Lighting Control Systems, International Workshop on Mobile Ad-Hoc Wireless Networks iWMANET, France, pp. 130-133, 2012 DOI: 10.1109/COST.2012.6271280, (BDI IEEE Explore);
59. **Lavric Alexandru**, Valentin Popa, Comparative analysis of communication protocols and routing algorithms used in street lighting control systems, Revista Sisteme Distribuite (Suceava - online), pp. 32-35, ISSN 1842-6808, Suceava, 2011;
60. S. Sfichi, A. Graur, V. Popa, I. Finis, **A. Lavric**, Innovative Movement Monitoring System for Elderly using Passive Infrared and Linear Phased Antenna Arrays, WSEAS International Conference on Automatic Control, Modelling & Simulation (ACMOS13), pp.219 - 225, 2013, ISBN: 978-1-61804-189-0 (BDI);
61. **Alexandru Lavric**, Valentin Popa, Ilie Finis, Codrin Males, Performance evaluation of Tree and Mesh ZigBee Network Topologies used in Street Lighting Control Systems, Przegląd Elektrotechniczny, nr. 4, pp. 168-171, 2013, (BDI INSPEC, SCOPUS);
62. **Alexandru Lavric**, Valentin Popa, Performance evaluation of topology control algorithms that can be integrated into a street lighting control sensor network, RoEdu International Conference, pp. 1-4, 2013, DOI: 10.1109/RoEduNet.2013.6511741 (ISI Proceedings);
63. **Alexandru Lavric**, Valentin Popa, Ilie Finis, Adrian M. Gaitan, Adrian I. Petrariu, Packet Error Rate Analysis of IEEE 802.15.4 under 802.11g and Bluetooth Interferences, 9th International Conference on Communications, COMM 2012, pp. 259-262, 2012 DOI: 10.1109/ICComm.2012.6262616, (ISI Proceedings);
64. **Alexandru Lavric**, Valentin Popa, Ștefan Sfichi, Adaptive Channel Selection Algorithm for a Large Scale Street Lighting Control ZigBee Network in the Presence of WLAN Interference, Elektronika ir Elektrotehnika Journal, Vol. 19, Nr. 9, pp. 105-109, 2013, revistă cotate ISI, având factorul de impact 0,411 pentru anul 2012 (ISSN 1392-1215);
65. **Lavric Alexandru**, Popa Valentin, Finis Ilie, Males Codrin Găitan Adrian-Mihai, An original lighting monitoring and control system using Wireless Sensor Networks, Proceedings of the Fifth European Conference on the Use of Modern Information and Communication Technologies ECUMICT, 2012, pp. 167 – 173;
66. **Alexandru Lavric**, Valentin Popa, Ilie Finis, Daniel Simion, The design and implementation of an energy efficient street lighting monitoring and control system, Przegląd Elektrotechniczny, Nr. 11, pp. 312-316, 2012 revistă cotate ISI, având factorul de impact 0,244 pentru anul 2011;
67. **Alexandru Lavric**, Valentin Popa, Ilie Finis, The Design of a Street Lighting Monitoring and Control System, International Conference and Exposition on Electrical and Power Engineering (EPE), pp. 314-317, 2012 DOI: 10.1109/CEPE.2012.6463912, (BDI IEEE Explore);
68. **Alexandru Lavric**, Valentin Popa, The Hardware Design of a Street Lighting Control with Vehicle and Malfunction Detection, The 8th International Symposium on Advanced Topics In Electrical Engineering Bucharest May 23-25, pp. 1-4, 2013 DOI: 10.1109/ATEE.2013.6563532 (BDI IEEE Explore);
69. **Alexandru Lavric**, Valentin Popa, The Design and Development of a Street Lighting Monitoring and Control System, Development and Application Systems International Conference, Doctoral Symposium –Poster Presentation, Suceava, pp. 57, 2012, ISSN: 1844-5020;

70. **Alexandru Lavric**, Valentin Popa, A Traffic Prediction Algorithm for Street Lighting Control Efficiency, Journal of Applied Computer Science & Mathematics, no. 15 (7), pp. 13-17, 2013, (ISSN: 2066-4273, BDI, B+: Directory of Open Access Journals - DOAJ, ICAAP- Journal database, Zentralblatt Math, EBSCO, Ulrich's Periodical Directory, Index Copernicus).
71. A.-I. Petrariu, V. Popa, V.-G. Gaitan, **I. Finis**, A. Lavric, 13.56 MHz RFID multi-turn antenna for metallic environments, ECUMICT 2012, European Conference on the Use of Modern Information and Communication Technologies, Gent, Belgium, pp. 187-196, 2012;
72. **I. Finis**, V. Popa, A. Lavric, C. Males, S. Sfichi, Performance Evaluation of 13.56 MHz RFID Antenna Operating in Metallic Environments, 20th Telecommunications forum TELFOR 2012 Serbia, Belgrade, November 20-22, pp. 1210-1213, DOI: 978-1-4673-2984-2/12, IEEE, 2012, (BDI IEEE Explore);
73. **I. Finis**, V. Popa, A. Lavric, A.-I. Petrariu and C. Males, An Analytical Determination of the Reading Volume for an HF RFID Antenna, 2012 2nd Baltic Congress on Future Internet Communications (BCFIC), pp. 170-173, 2012, DOI: 10.1109/BCFIC.2012.6217998, (BDI IEEE Explore);
74. I. Finis, V. Popa, **A. Lavric**, A Mathematical Approach of a HF RFID Multi Loop Antenna for Metallic Environments, International Conference and Exposition on Electrical and Power Engineering (EPE 2012), pp. 679 - 682, 2012, DOI: 10.1109/ICEPE.2012.6463854, (BDI IEEE Explore);
75. I. Finis, **A. Lavric**, „The Design of a HF RFID Tag Antenna for Warehouse Management”, Research and Science Today No. 2(4)/2012, pp 134-141, ISSN: 2247 – 4455, 2012.
76. I. Finis, V. Popa, **A. Lavric**, A.-I. Petrariu, S. Sfichi, The Design and Implementation of a HF RFID Loop Antenna for Metallic Environments, 11th International Conference on Development and Application Systems, Suceava, Romania, pp. 66-69, ISSN: 1844-5020, 2012;
77. I. Finis, V. Popa, A.-I. Petrariu, **A. Lavric**, A.-M. Gaitan, Smart shelves architecture for warehouse management using HF RFID, ECUMICT 2012, European Conference on the Use of Modern Information and Communication Technologies, Gent, Belgium, pp. 253-260, 2012;
78. Adrian-Mihai Găitan, Valentin Popa, Vasile-Gheorghita Găitan, Adrian-Ioan Petrariu, **Alexandru Lavric**, Simona-Anda Gherasim, „Rfid Network Traffic Analysis Based On An Empirical Model,” 9th International Conference on Communications, COMM 2012, pp 201-204, 2012 (ISI Proceedings).

#### Participări la conferințe (extras)

- 
- International Symposium on Sensors and Instrumentation in IoT Era August 29-30, 2019, Lisbon, Portugal ISSI 2019,
- International Conference on Development and Application Systems (DAS), Suceava, 2018
- Conference on Electromechanical and Power Systems (SIELMEN 2017)
- International Conference on Computation, Automation and Knowledge Management (ICCAKM) 2022, Dubai

#### Voluntariat (extras)

Reviewer activ la următoarele jurnale (extras):

- 1.IEEE Internet of Things Journal
- 2.IEEE Transactions on Industrial Informatics
- 3.MDPI Algorithms
- 4.MDPI Sensors
- 5.IET Communications
- 6.Eye and Vision Journal
- 7.MDPI Electronics
- 8.IEEE Access

Data

Semnătura

16.01.2024