



Amal Mersni

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● ABOUT ME

● WORK EXPERIENCE

INTERNATIONAL UNIVERSITY OF SARAJEVO – ILIDŽA, BOSNIA AND HERZEGOVINA

Business or Sector: Education | **Department:** Department of Engineering | **Website:** ius.edu.ba

● **ASSOCIATE PROFESSOR** – 01/07/2026 – Current

● **ASSISTANT PROFESSOR** – 11/08/2021 – 25/07/2026

KHARKIV NATIONAL UNIVERSITY OF RADIO ELECTRONICS – KHARKIV, UKRAINE

● **ASSOCIATE PROFESSOR** – 14/01/2021 – 01/10/2026

● **SENIOR LECTURER** – 01/10/2019 – 13/01/2021

● **ASSISTANT** – 23/01/2017 – 01/10/2019

CISCO INSTRUCTOR – CISCO NETWORKING ACADEMY – 18/10/2018 – Current

Teaching knowledge and skills related to network fundamentals, LAN switching technologies, IPv4 and IPv6 routing technologies, WAN technologies, infrastructure services, infrastructure security, and infrastructure management. Students should master working with the Cisco Systems equipment in the laboratory environment. After getting the required skills, students have to pass the Cisco Certified Network Associate (CCNA) Routing and Switching composite exam.

● EDUCATION AND TRAINING

2012 – 2017 Kharkiv, Ukraine

DOCTOR OF PHILOSOPHY IN SPECIALTY OF TELECOMMUNICATION SYSTEMS AND NETWORKS. Kharkiv National University of Radio Electronics

Address Nauky Ave. 14,, 61166, Kharkiv, Ukraine | **Website** <https://nure.ua/>

01/08/2011 – 31/05/2012 Kharkiv, Ukraine

DIPLOMA OF MASTER IN TELECOMMUNICATION SYSTEMS AND NETWORKS National Technical University "Kharkiv Polytechnic Institute"

Address Kirpichova street, 2, , 61000, Kharkiv, Ukraine | **Website** <https://www.kpi.kharkov.ua/ukr/>

01/09/2007 – 01/07/2011 Kharkiv, Ukraine

DIPLOMA OF BACHELOR IN TELECOMMUNICATIONS National Technical University "Kharkiv Polytechnic Institute"

Address Kirpichova street, 2, , 61000, Kharkiv, Ukraine | **Website** <https://www.kpi.kharkov.ua/ukr/>

11/07/2022 – 31/08/2022 Kharkiv, Ukraine

CERTIFICATE OF COMPLETION IN FOUNDATIONS OF "COMPUTER AND NETWORK SECURITY"

CYBERSECURITY INSTRUCTOR SUMMER TRAINING USAID Cybersecurity for Critical Infrastructure in Ukraine Activity

Website <https://nure.ua/en/university/international-activity/international-programs-and-academic-mobility/usaidd/cybersecurity-for-critical-infrastructure-in-ukraine-activity-project>

17/07/2023 – 04/08/2023 Kharkiv, Ukraine

CERTIFICATE OF COMPLETION IN "THE EUROPEAN EXPERIENCE FOR ENHANCING THE RESILIENCE OF CRITICAL ENTITIES IN UKRAINE" Erasmus + project Jean Monnet module Summer school

Website <https://nure.ua/en/university/international-activity/international-programs-and-academic-mobility/erasmus/about-erasmus/jean-monnet-programme/project-jean-monnet-module-resce>

● PUBLICATIONS

2025

[**Hybrid Intrusion Detection System for Small and Medium Enterprises**](#)

Mersni, A., Šehović, N., Subašić-Hodža, N., Rustempašić, N., Čeljo, M. (2025). Hybrid Intrusion Detection System for Small and Medium Enterprises. IEEE Access, 13, 216253–216271. <https://doi.org/10.1109/ACCESS.2025.3646112>

2025

[**Why do women pursue a Ph.D. in Computer Science?**](#)

Ábrahám, E., Goulão, M., Vujošević Janičić, M., Delany, S.J., Mersni, A., Yeremenko, O., Büyükdağlı, Ö., Boudaoud, K., Oehlhorn, C., Schmid, U., Büsing, C., Bolke-Hermanns, H., Köhnle, K., Pato, M., Sunar Cerci, D., Schmid, L. (2026). Why Do Women Pursue a Ph.D. in Computer Science? Journal of Systems and Software, 231, Article 112586. <https://doi.org/10.1016/j.jss.2025.112586>

2025

[**WoCa Lunch: A Program for Female Students to Get Informed About PhD Studies**](#)

Vujošević Janičić, M., Ábrahám, E., Mersni, A., Yeremenko, O., Goulão, M. (2025). WoCa Lunch: A Program for Female Students to Get Informed About PhD Studies. In: Penzenstadler, B., Boudaoud, K., Di Marco, A., Caner-Yıldırım, S. (eds) Actions for Gender Balance in Informatics Across Europe. Springer, Cham, pp. 137–173. https://doi.org/10.1007/978-3-031-78432-3_7

2025

[**Voices of Female Informatics Students Across Universities**](#)

Büyükdağlı, Ö., Goulão, M., Vujošević Janičić, M., Mersni, A. (2025). Voices of Female Informatics Students Across Universities. In: Penzenstadler, B., Boudaoud, K., Di Marco, A., Caner-Yıldırım, S. (eds) Actions for Gender Balance in Informatics Across Europe. Springer, Cham. https://doi.org/10.1007/978-3-031-78432-3_6

2025

[**Research and development of normalized link blocking models in secure traffic engineering routing for programmable networks**](#)

Lemeshko, O., Persikov, A., Yeremenko, O., Mersni, A., Yevdokymenko, M. (2025). Research and Development of Normalized Link Blocking Models in Secure Traffic Engineering Routing for Programmable Networks. In: Imoize, A.L., Kuznetsov, O., Lemeshko, O., Yeremenko, O. (eds) Advancements in Cybersecurity: Next-Generation Systems and Applications. CRC Press, Boca Raton. <https://doi.org/10.1201/9781003546153-19>

2024

Protect the EU's Digital Energy Infrastructure Against Cyberthreats Through Advanced Technologies, Human Vulnerability Mitigation, and Ethical Practices

Mersni, A., Novikau, A., Koczan, M., Shobole, A.A. (2024). Protect the EU's Digital Energy Infrastructure Against Cyberthreats Through Advanced Technologies, Human Vulnerability Mitigation, and Ethical Practices. In: Crowther, A., Foulds, C., Robison, R., Gladkykh, G. (eds) *Strengthening European Energy Policy*. Palgrave Macmillan, Cham, pp. 115–128. https://doi.org/10.1007/978-3-031-66481-6_9

2024

Potential Cyber Threats Related to Gender Disinformation

Horiainova, K., Yeremenko, O., Mersni, A., Kapusta, R. (2024). Potential Cyber Threats Related to Gender Disinformation. In: 11th ACM Celebration of Women in Computing: womENCourage 2024, Madrid, Spain, June 26–28, 2024, pp. 1–2. <https://womencourage.acm.org/2024/wp-content/uploads/2024/06/womencourage2024-posters-final126.pdf>

2023

Analysis of Proactive Models of Fault-Tolerant Routing under Load Balancing and Border Routers Availability

Lemeshko, O., Yeremenko, O., Mersni, A., Yevdokymenko, M., Persikov, M., Kruhlova, A. (2023). Analysis of Proactive Models of Fault-Tolerant Routing under Load Balancing and Border Routers Availability. In: *2023 17th International Conference on the Experience of Designing and Application of CAD Systems (CADSM)*, Jaroslaw, Poland, pp. 28–31. IEEE. <https://doi.org/10.1109/CADSM58174.2023.10076525>

2023

Gender Issues and Solutions in the ChatGPT AI Tool

Mersni, A., Yeremenko, O., Lemeshko, V., Persikov, M. (2023). Gender Issues and Solutions in the ChatGPT AI Tool. In: ACM womENCourage'23, Trondheim, Norway, September 20–22, 2023, pp. 1–2. <https://womencourage.acm.org/2023/wp-content/uploads/2023/06/womencourage2023-posters-paper61.pdf>

2022

Investigation of the Multicast Routing Model with Support of Traffic Engineering and Its Application in Software-Defined Networking

Hu, Z., Lemeshko, O., Yeremenko, O., Mersni, A., Yevdokymenko, M. (2022). Investigation of the Multicast Routing Model with Support of Traffic Engineering and Its Application in Software-Defined Networking. In: Hu, Z., Zhang, Q., Petoukhov, S., He, M. (eds) *Advances in Artificial Systems for Logistics Engineering*. ICAILE 2022. Lecture Notes on Data Engineering and Communications Technologies, vol. 135. Springer, Cham. https://doi.org/10.1007/978-3-031-04809-8_44

2022

Resilience Improvement by Traffic Engineering Fault-Tolerant Routing in Programmable Networks.

Lemeshko, O., Yeremenko, O., Yevdokymenko, M., Mersni, A., Lemeshko, V., Persikov, M. (2023). Resilience Improvement by Traffic Engineering Fault-Tolerant Routing in Programmable Networks. In: Ilchenko, M., Uryvsky, L., Globa, L. (eds) *Progress in Advanced Information and Communication Technology and Systems*. MCiT 2021. Lecture Notes in Networks and Systems, vol. 548. Springer, Cham. https://doi.org/10.1007/978-3-031-16368-5_12

2022

Fault-Tolerant Multicast Routing with Path and Bandwidth Protection

Lemeshko, O., Yeremenko, O., Yevdokymenko, M., Mersni, A., Al-Dulaimi, A.M.K., Hailan, A.M. (2022). Fault-Tolerant Multicast Routing with Path and Bandwidth Protection. In: 2022 IEEE 16th International Conference on Advanced Trends in Radioelectronics, Telecommunications and Computer Engineering (TCSET), Lviv-Slavske, Ukraine, pp. 340–343. IEEE. <https://doi.org/10.1109/TCSET55632.2022.9766999>

2022

Improvement of Confidential Messages Secure Routing over Paths with Intersection in Cyber Resilient Networks

Lemeshko, O., Yeremenko, O., Mersni, A., Gazda, J. (2022). Improvement of Confidential Messages Secure Routing over Paths with Intersection in Cyber Resilient Networks. In: 2022 XXVIII International Conference on Information, Communication and Automation Technologies (ICAT), Sarajevo, Bosnia and Herzegovina, pp. 1–6. IEEE. <https://doi.org/10.1109/ICAT54566.2022.9811191>

2021

Resilience Aware Traffic Engineering FHRP Solution (Invited Paper).

Lemeshko, O., Yeremenko, O., Mersni, A., Yevdokymenko, M. (2021). Resilience Aware Traffic Engineering FHRP Solution. In: 2021 IEEE International Conference on Information and Telecommunication Technologies and Radio Electronics (UkrMiCo), Odesa, Ukraine, pp. 1–5. IEEE. <https://doi.org/10.1109/UkrMiCo52950.2021.9716677>

2021

Application Prospects of First Hop Redundancy Protocols for Fault-Tolerant SDN Controllers: A Survey

Lemeshko, O., Mersni, A., Yeremenko, O., Omowumi, S.O., Volotka, V., Al-Dulaimi, A.M.K. (2021). Application Prospects of First Hop Redundancy Protocols for Fault-Tolerant SDN Controllers: A Survey. In: 2021 IEEE 8th International Conference on Problems of Infocommunications, Science and Technology (PIC S&T), Kharkiv, Ukraine, pp. 416–420. IEEE. <https://doi.org/10.1109/PICST54195.2021.9772141>

2021

Development of Virtual Laboratories and Innovative Cybersecurity Courses for Distance Learning

Lemeshko, O., Yeremenko, O., Yevdokymenko, M., Kuzminykh, I., Mersni, A. (2022). Development of Virtual Laboratories and Innovative Cybersecurity Courses for Distance Learning. In: Bessalov, A., Ageyev, D., Lahno, V., Sokolov, V. (eds) Proceedings of the Cybersecurity Providing in Information and Telecommunication Systems II. Volume II, CEUR Workshop Proceedings, vol. 3188, Kyiv, Ukraine, pp. 98–107. CEUR-WS.org. <https://ceur-ws.org/Vol-3188/paper10.pdf>

2021

Investigation of Enhanced Mathematical Model for Fault-tolerant Routing.

Lemeshko, O., Yeremenko, O., Mersni, A. (2021). Investigation of Enhanced Mathematical Model for Traffic Engineering Fault-Tolerant Routing. In: 2021 International Conference on Engineering and Emerging Technologies (ICEET), Istanbul, Turkey, pp. 1–6. IEEE. <https://doi.org/10.1109/ICEET53442.2021.9659606>

2021

Analysis of Influence of Network Architecture Nonuniformity and Traffic Self-similarity Properties to Load Balancing and Average End-to-End Delay

Lemeshko, O., Mersni, A., Nevzorova, O. (2021). Analysis of Influence of Network Architecture Nonuniformity and Traffic Self-Similarity Properties to Load Balancing and Average End-to-End Delay. In: Radivilova, T., Ageyev, D., Kryvinska, N. (eds) Data-Centric Business and Applications. Lecture Notes on Data Engineering and Communications Technologies, vol. 48. Springer, Cham. https://doi.org/10.1007/978-3-030-43070-2_33

2019

The overview of method of balanced resource reservation and multicast routing in telecommunication network

Mersni, A., Nevzorova, O., Tolstykh, Y. (2019). The Overview of Method of Balanced Resource Reservation and Multicast Routing in Telecommunication Network. Eskişehir Technical University Journal of Science and Technology A: Applied Sciences and Engineering, 20, 132–133. <https://doi.org/10.18038/estubtda.652003>

2019

Вдосконалення потокової моделі багатоадресної маршрутизації на принципах технології Traffic Engineering

Nevzorova, O., Sleiman, B., Mersni, A., Sukhoteplyj, V. (2019). Вдосконалення потокової моделі багатоадресної маршрутизації на принципах технології Traffic Engineering. Проблеми телекомунікацій, 2(25). <https://doi.org/10.30837/pt.2019.2.02>

2019

Complex Optimality Criterion for Load Balancing with Multipath Routing in Telecommunications Networks of Nonuniform Topology

Mersni, A., Ilyashenko, A., Vavenko, T. (2017). Complex Optimality Criterion for Load Balancing with Multipath Routing in Telecommunications Networks of Nonuniform Topology. In: 2017 14th International Conference The Experience of Designing and Application of CAD Systems in Microelectronics (CADSM), Lviv, Ukraine, pp. 100–104. IEEE. <https://doi.org/10.1109/CADSM.2017.7916095>

2019

Cyber Resilience Approach Based on Traffic Engineering Fast ReRoute with Policing

Lemeshko, O., Yeremenko, O., Yevdokymenko, M., Shapovalova, A., Hailan, A.M., Mersni, A. (2019). Cyber Resilience Approach Based on Traffic Engineering Fast ReRoute with Policing. In: 2019 10th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS), Metz, France, pp. 117–122. IEEE. <https://doi.org/10.1109/IDAACS.2019.8924294>

2019

Mathematical Optimization Model of Congestion Management, Resource Allocation and Congestion Avoidance on Network Routers.

Lemeshko, O., Lebedenko, T., Mersni, A., Hailan, A.M. (2019). Mathematical Optimization Model of Congestion Management, Resource Allocation and Congestion Avoidance on Network Routers. In: 2019 International Conference on Information and Telecommunication Technologies and Radio Electronics (UkrMiCo), Odessa, Ukraine, pp. 1–5. IEEE. <https://doi.org/10.1109/UkrMiCo47782.2019.9165445>

2019

Computation Method of Disjoint Paths under Maximum Bandwidth Criterion

Lemeshko, O., Yeremenko, O., Yevdokymenko, M., Sleiman, B., Hailan, A.M., Mersni, A. (2019). Computation Method of Disjoint Paths under Maximum Bandwidth Criterion. In: 2019 3rd International Conference on Advanced Information and Communications Technologies (AICT), Lviv, Ukraine, pp. 161–164. IEEE. <https://doi.org/10.1109/AIACT.2019.8847756>

2019

Improved two-level method of multicast routing in MPLS-TE network

Nevzorova, O., Lemeshko, O., Mersni, A., Hailan, A.M., Ali, A.S., Harkusha, S. (2019). Improved Two-Level Method of Multicast Routing in MPLS-TE Network. In: 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering (UKRCON), Lviv, Ukraine, pp. 846–850. IEEE. <https://doi.org/10.1109/UKRCON.2019.8879965>

2019

Quality of Service Protection Scheme under Fast ReRoute and Traffic Policing Based on Tensor Model of Multiservice Network

Lemeshko, O., Yevdokymenko, M., Yeremenko, O., Mersni, A., Segeč, P., Papán, J. (2019). Quality of Service Protection Scheme under Fast ReRoute and Traffic Policing Based on Tensor Model of Multiservice Network. In: 2019 International Conference on Information and Digital Technologies (IDT), Zilina, Slovakia, pp. 288–295. IEEE. <https://doi.org/10.1109/DT.2019.8813675>

2019

Development of the Balanced Queue Management Scheme with Optimal Aggregation of Flows and Bandwidth Allocation

Lemeshko, O., Lebedenko, T., Nevzorova, O., Snihurov, A., Mersni, A., Al-Dulaimi, A. (2019). Development of the Balanced Queue Management Scheme with Optimal Aggregation of Flows and Bandwidth Allocation. In: 2019 IEEE 15th International Conference on the Experience of Designing and Application of CAD Systems (CADSM), Polyana, Ukraine, pp. 1–4. IEEE. <https://doi.org/10.1109/CADSM.2019.8779246>

2018

Features of Dynamic Modeling the Routers Operation Modes in Simulink.

Yeremenko, O., Lebedenko, T., Mersni, A. (2018). Features of Dynamic Modeling of Routers Operation Modes in Simulink. In: 2018 International Scientific-Practical Conference Problems of Infocommunications. Science and Technology (PIC S&T), Kharkiv, Ukraine, pp. 520–524. IEEE. <https://doi.org/10.1109/INFOCOMMST.2018.8632061>

● **PROJECTS**

01/11/2025 – CURRENT

European Cybersecurity for Bosnia and Herzegovina (ECS4BIH) Jean Monnet Module

Grant Holder and Project Coordinator of the *European Cybersecurity for Bosnia and Herzegovina (ECS4BIH) Jean Monnet Module* at the International University of Sarajevo. The project is co-funded by the European Union under the Erasmus+ Jean Monnet Action, Project No. 101238145. It promotes teaching, research, and public engagement on EU cybersecurity strategies, principles, policies, and best practices, with particular focus on their relevance to Bosnia and Herzegovina. Project activities include European cybersecurity courses, integration of EU cybersecurity topics into university teaching, seminars, workshops, roundtables, public lectures, stakeholder engagement, and dissemination through academic and public channels.

● **LANGUAGE SKILLS**

Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
FRENCH	C2	C2	C2	C2	C2
ENGLISH	C1	C1	C1	C1	C1
RUSSIAN	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **SKILLS**

Microsoft Office | OPNET, Wireshark , Cisco Packet Tracer , MATLAB /Simulink , Ixchariot , GNS 3 | - good command of Microsoft Office tools (Word, Excel, Power Point and Outlook). | Team-work oriented | Organizational and planning skills | Outlook | Cisco Modeling Labs

Certificates

Cisco CCNA - Associate Level | Fortinet NSE 1 , NSE 2 | CCNA Routing & Switching

● **INTERNATIONAL MOBILITY AND NETWORKS**

Participation in the International ERASMUS Mobility

- **2025 and 2026 | Erasmus+ Staff Mobility, Innovation Crunch Time, Université de Technologie de Belfort-Montbéliard (UTBM), France:** participated in the international Erasmus+ staff mobility programme within

Innovation Crunch Time 2025 and 2026. Contributed to staff training, student coaching, team mentoring, interdisciplinary innovation activities, and final project evaluation.

- **2023 | Erasmus+ Staff Training Mobility, International Staff Week, Riga Technical University (RTU), Latvia:** participated in the International Staff Week at Riga Technical University, including staff training, institutional exchange, networking, and Erasmus+ cooperation activities.
- **2022 | Erasmus+ KA107 Staff Training Mobility, International Staff Meeting, Universidad Rey Juan Carlos (URJC), Spain:** participated in the International Staff Meeting at Universidad Rey Juan Carlos from 4–8 July 2022. The mobility included staff training, international cooperation, networking, and exchange of good practices in higher education.
- **2019 | Erasmus+ Teaching Mobility, Blekinge Institute of Technology (BTH), Karlskrona, Sweden:** participated in an Erasmus+ teaching mobility at Blekinge Institute of Technology (BTH), Karlskrona, Sweden. Delivered teaching activities and provided mentorship at Bachelor's and Master's levels.

COST Actions

COST Action (ongoing)- CA19122---European Network For Gender Balance in Informatics (EUGAIN):

- **Management Committee Member (MC) representing Bosnia and Herzegovina**
- **Working Group WG2**

COST Action (ongoing)- CA22104---Behavioral Next Generation in Wireless Networks for Cyber Security (BEiNG-WISE):

- **Working Groups WG1, WG2, WG3 and WG4**

● **NETWORKS AND MEMBERSHIPS**

2019 – CURRENT USA

IEEE Member

12/08/2021 – CURRENT USA

ACM Member

28/04/2022 – CURRENT Sarajevo

Sarajevo ACM-W chapter Founder

I founded Sarajevo ACM-W Chapter in April 2022 at the International University of Sarajevo. Since then, the chapter has been active, organizing events, workshops, and activities to improve the working and learning environments for women in computing in Bosnia and Herzegovina.