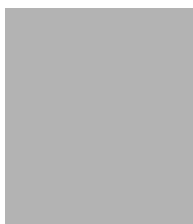


INFORMAȚII PERSONALE



Catalin – Marian DUMITRESCU

 Splaiul Independenței Nr. 313



 catalin.dumitrescu@upb.ro

Sexul masculin | Data nașterii | Naționalitatea romana

EXPERIENȚA PROFESIONALĂ

- 2016-prezent Universitatea Politehnica Bucuresti, Facultatea Transporturi, Depart. Telecomenzi și Electronica, Conferentiar, PhD
- 2018-prezent Solidus AI Tech, CTO
- 2015 - 2018 UTI GROUP, consultant stiintific pentru CTO
- 1995 – 2015 Ministerul Apararii Nationale, cercetator stiintific gr 1
- 1985 – 1995 Institutul de Cercetari in Transporturi Bucuresti, specialist in electronica

EDUCAȚIE ȘI FORMARE

- 2016 Atestat “Expert Informatii pentru Afaceri”, firma SC ICSS SRL, Bucuresti și Ministerul Educației Naționale și Cercetării Științifice
- 2013 Atestat „Manger al Sistemului de Management al Riscurilor”, firma Top Quality Management, Bucuresti si Ministerul Educatiei, Cercetarii, Tineretului si Sportului
- 2005 Titlul de doctor, specializarea analiza de semnal, Universitatea Politehnica Bucuresti, Facultatea de Electronica si Telecomunicatii, titlul tezei de doctorat „Contributii la prelucrarea semnalelor biomedicale cu TMS320C6211”
- 2000 Diploma de studii postuniversitare de specializare, domeniul Managementul Tranzactiilor Internationale, Academia de Studii Economice Bucuresti.
- 1995 Titlul de inginer in Electronica, specializarea Telecomenzi si Electronica in Transporturi, Universitatea Politehnica Bucuresti, Facultatea de Transporturi

COMPETENTE PERSONALE

Limba(i) maternă(e) Romana

Alte limbi străine cunoscute

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
Engleza	B2	B2	B1	B1	B1
Franceza	A2	A2	A1	A1	A1

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

Competențe organizaționale/manageriale

Experienta in domeniul leadership/managerial:
 ▪ leadership (în perioada 2003 – 2015 am condus Departamentul de Cercetare-Dezvoltare, din MApN)

Competențe dobândite la locul de muncă

Experienta in domeniul cercetare-dezvoltare:
 ▪ prelucrarea digitala a semnalelor
 ▪ digital forensic (prelucrarea si analiza semnalelor audio si video)
 ▪ cognitiv radio (software defined radio)
 ▪ brain computer interfacing (interfata om-masina)

Competențe informatice	<ul style="list-style-type: none"> ▪ atestat programator mediul LabVIEW Base si Advanced, firma imperial Electric & National Instruments USA. ▪ Sisteme de operare Windows ▪ Experienta in utilizarea mediilor Matlab si Multisim.
Alte competențe	<p>Competente didactice in mediul universitar:</p> <ul style="list-style-type: none"> ▪ prelucrare digitala de semnal ▪ prelucrare digitala de imagini si secvente video ▪ prelucrarea semnalelor in timp real ▪ filtrare adaptiva ▪ comunicatii digitale ▪ criptografie si watermarking ▪ securitate multimedia ▪ clasificarea si recunoasterea obiectelor / Inteligenta Artificiala
Permis de conducere	<ul style="list-style-type: none"> ▪ B

INFORMATII SUPLIMENTARE

Publicații	Publicații:
Prezentări	▪ C. Dumitrescu, I. Moise, Trajectory Estimation for Transportation Systems: Aircraft Tracking Application , <i>International Conference on Signal Processing Budapest 2015</i> , ISSE 2015 Paper E01.
Proiecte	▪ C. Dumitrescu, I. Moise, Automatic Pedestrian Detection System – Support for Automatic Cooperative Systems , <i>Researcher Conference for Autonomic Road Transport Support Systems – ARTS ECR, Malta 2015</i> .
Conferințe	▪ I. Bădescu, C. Dumitrescu, Post Processing Elements of Artificial Intelligence Adaptive Spatial Filtering with Wavelet for Boundary Detection , <i>proceeding the 16 International Conference on Automatic Control, Modelling and Simulation 2014</i> , pag 180, WSEAS Press, ISSN 1790-5117, ISBN 978-960-474-383-4.
Seminarii	▪ I. Bădescu, C. Dumitrescu, Steganography in Image using Discrete Wavelet Transformation , <i>proceeding of the 5th international conference on mathematical model for engineering science 2014</i> , WSEAS Press, ISSN 2227-4588, ISBN 978-960-474-387-2.
Distincții	▪ I. Bădescu, C. Dumitrescu, Discret-Time Discret-Frequency for Time-Frequency Signal Analysis and Real-Time Applications , <i>proceeding the 15 International Conference on Automatic Control, Modelling and Simulation 2013</i> , ISSN 1790-5117, ISBN 978-1-61804-189-0.
Afilieri	▪ I. Bădescu, C. Dumitrescu, Methods of Improving the Quality of the Images Obtained by Truncating the Wavelet Coefficients Software , <i>proceeding the 15 International Conference on Automatic Control, Modelling and Simulation 2013</i> , ISSN 1790-5117, ISBN 978-1-61804-189-0.
Referințe	▪ I. Moise, C. Dumitrescu Adaptive Noise Cancellation using LabVIEW, 2013 IEEE 19th International Symposium for Design and Technology in Electronic Packaging (SIITME 2013).
	▪ I. Moise, C. Dumitrescu Adaptive Time-Frequency parameterization of epileptic spike, 2013 IEEE 19th International Symposium for Design and Technology in Electronic Packaging (SIITME 2013).
	▪ I. Moise, C. Dumitrescu, F. Nemteanu, Monitoring System with Applications in Road Transport, 2014 IEEE 20th International Symposium for Design and Technology in Electronic Packaging (SIITME 2014).
	▪ I. Moise, C. Dumitrescu, Reliable Solution for Monitoring of Control Performance, 2014 IEEE 20th International Symposium for Design and Technology in Electronic Packaging (SIITME 2014).
	▪ C. Dumitrescu, I. Moise, Applications of the Wavelet Transform in Machine-Learning , IEEE ITS Romanian Congres 2014 .

- C. Dumitrescu, **Wavelet Compression of EEG data using TMS320C6211**, IASTED (The International Association of Science and Technology for Development) International Conference on Signal Processing, Pattern Recognition and Application, Grecia, 2002, ISSN 1482-7922, ISBN 0-88986-337-4.
- C. Dumitrescu, **K – complex Detection using the Continuous Wavelet Transform**, Symposium of Electronics and Telecommunication IEEE Romania Section, Tom 49 (63), pp. 247 – 252, Timișoara, 22 oct. 2004, ISSN 1583-3380.
- C. Dumitrescu, **Time Frequency Analysis – An application to audio signal**, International Conference on Audio Processing, Praga 2003.
- I. Badescu, C. Dumitrescu, **Time-Frequency Structured Decorrelation of Speech Signals via Nonseparable Gabor Frame**. International Conference on Audio Processing, Praga 2003.
- C. Dumitrescu, **Sleep EEG Analysis using LabVIEW**, Conferința Națională de Informatică Medicală, Târgu Mureș, 2004.
- C. Dumitrescu, **Adaptiv time-frequency parametrization of epileptic spike**, Scientific Bulletin University Politehnica of Bucharest, vol 67, nr. 2, pp. 41-48, seria C, 2005, ISSN 1454-2345.
- C. Dumitrescu, I. Moise, **Comparison of Detection Methods – Application to K-complex Detection in Sleep EEG**, WSEAS (World Scientific and Engineering Academy and Society) International Conference on Signal Processing, Veneția, november 2005.
- C. Dumitrescu, **Wavelet Filter Bank in Speech**, WSEAS (World Scientific and Engineering Academy and Society) International Conference on Signal Processing, Veneția, november 2005.
- C. Dumitrescu, **Adaptiv noise Cancellation using LabView**, Scientific Bulletin University Politehnica of Bucharest, Bucharest 2005, ISSN 1454-2346.
- C. Dumitrescu, **Signal Classification using Statistical and Time-Frequency Analyses**, XXI century Modern Technologies, Technical Military Academy, november 2005.
- C. Dumitrescu, **Cohen Clase Join Time-Frequency Analysis**, Romanian Journal of Informatics and Automation, vol 15, nr. 2, pp. 51-58, 2005, ISSN 1220-1758.
- C. Dumitrescu, **Brain wave k-complex detection using liniar prediction**, Romanian Journal of Informatics and Automation, vol 15, nr. 3, pp. 82-86, 2005, ISSN 1220-1758.
- C. Dumitrescu, **Sleep EEG transient wave - Analysis and Detection**, Romanian Journal of Informatics and Automation, vol 14, nr. 3, pp. 67-78, 2004, ISSN 1220-1758.
- C. Dumitrescu, I. Badescu, **EEG Analysis using LabVIEW. Join Time-Frequency Analysis and Representations**, Proceedings of ICAR 2003, The 11th International Conference on Biosignals Analysis, Portugal 2003.
- I. Badescu, C. Dumitrescu, **Adaptiv Algorithms Implementation for Transient Signals Analysis**, Proceedings of the Madrid area workshop on Virtual Instruments processing, June 2004.
- C. Dumitrescu, **Implementation of Single Camera Object Tracking System Using Dynamic Template Matching**, Scientific Bulletin University Politehnica of Bucharest, Bucharest 2005, ISSN 1454-2346.

Proiecte CDI – responsabil de proiect:

- proiectul de cercetare 207PED/2017 intitulat "**Fusuri de somn – monitorizarea nivelului de oboseală mentală a personalului care activează în Infrastructuri Critice**", 2017-2018, 170000 euro.

Articole:

Dumitrescu Cătălin, Copaci Carmen, Iliescu Dan, Hangan Tony and Bobe Alexandru, **Analysis and Detection of EEG Transient Waves During Sleep**, SCIENDO, ARS Medica Tomitana - 2018; 3(24): pag. 133 – 143, 25 Jan 2019, pag 133-134, DOI:10.2478/arsm-2018-0025

Dumitrescu Cătălin, Copaci Carmen, Iliescu Dan, Hangan Tony and Bobe Alexandru, **K-Complex Detection Using the Continuous Wavelet Transform**, SCIENDO, ARS Medica Tomitana - 2018; 4(24): pag. 144 – 152, 15 Apr 2019, pag 133-134, DOI:10.2478/arsm-2018-0031

- proiect de cercetare **Sistem Integrat pentru Suportul și Conducerea Intervențiilor în Situații de Criză**, PNCDI III – SOL- 2017-08-0107 perioada 2017-2021, programul 2 – Programul Soluții – CDI pentru domeniul apararii (3 mil euro).
Brevet: “Sistem si metoda pentru culegerea, analiza si predictia informatiilor de mobilitate a fluxurilor de persoane pentru evacuarea multilor in situatii de criza, bazata pe multiagenti inteligenti pentru determinarea drumului cel mai scurt de evacuare”, OSIM A/00168 / 12 aprilie 2021
Articole:
C. Dumitrescu, P. Ciotirnae, C. Vizitiu, Fuzzy Logic for Intelligent Control System Using Soft Computing Applications, MDPI Sensors 2021, 21, 2617, Section Intelligent Sensors, DOI: 10.3390/s21082617, April 2021, *Quartile in Category Q1*, Impact Factor 3.275 (2019) & 3.427 (5 year), WOS:000644809100001.
C Dumitrescu, M Minea, P Ciotirnae, **UAV Detection Employing Sensor Data Fusion and Artificial Intelligence**, Information Systems Architecture and Technology: Proceedings of 40th Anniversary International Conference on Information Systems Architecture and Technology – ISAT 2019. ISAT 2019. Advances in Intelligent Systems and Computing, vol 1050. Springer, Cham, ISBN 978-3-030-30439-3, DOI 10.1007/978-3-030-30440-9_13, WOS:000564746100013.

Proiecte CDI – membru

- 2016 – 2018, SafeShore - **System for detection of Threat Agents in Maritime Border Environment — SafeShore**, H2020-BES-2014-2015/H2020-BES-2015
- EWISA – „Early Warning for Increased Situational Awareness” – SEC 2013 3.2.1 POV on Land Border, <http://www.ewisa-project.eu/index.php>
- 2017 - 2020: SPIA-VA – Technologies and innovative video systems for person re-identification and analysis of dissimulated behavior PN-III-P2- 2.1-SOL-2016-02-0002 (funded by UEFISCDI, parteneri: UPB, UTI GRUP S.A., MAPN-ACTTM)
- 2016 – 2018, SMIATIC – „Sistem de Monitorizare si Inspectie Avansata Aeriana si Terestra a Infrastructurilor Critice”, POC 2014-2020, ENERGY & ECO CONCEPT SRL, <http://smiatic.ro/>
- 2017 - 2020: UAV platform (unmanned aerial vehicle) with dedicated capabilities and support infrastructure with applications in national security missions (PN-III-P2-2.1-SOL-2016-01-0008 - funded by UEFISCDI, partners: INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE AEROSPATIALA "ELIE CARAFOLI" - I.N.C.A.S. BUCURESTI; UPB; MAPN - ACTTM; ICPE - CA BUCURESTI; UTI GRUP S.A.; AVIOANE CRAIOVA S.A.)
- 2016 – 2018, PhotoNanoP - **High photoconductive oxide films functionalized with GeSi nanoparticles for environmental applications**, M-ERA.NET, **Coordinating institution:** INSTITUTUL NATIONAL DE CERCETARE - DEZVOLTARE PENTRU FIZICA MATERIALELOR BUCURESTI RA **Project partners: Partener (P1)** - INSTITUTUL NATIONAL DE CERCETARE- DEZVOLTARE PENTRU MICROTEHNOLOGIE - IMT BUCURESTI INCD **Partener (P2)** - OPTOELECTRONICA - 2001 S.A.
- 2016 – 2018, **The development of an innovative integrated system for forensic expertise services**, PN-III-P2-2.1-PTE-2016-0141, **Coordinating institution:** OPTOELECTRONICA - 2001 S.A. **Project partners: Partener (P1)** - Academia Tehnica Militara
- 2020-2021, **Sistem multi-senzor pentru estimarea stării de oboseală, somnolență și a nivelului de stres cu aplicabilitate in Infrastructurile Critice**, Cod apel: POC/62/1/3/Stimularea cererii întreprinderilor pentru inovare prin proiecte CDI derulate de întreprinderii individual sau în parteneriat cu institute de CD si universități, în scopul inovării de procese si de produse în sectoarele economice care prezinta potențial de crestere, axa prioritară Cercetare, dezvoltare tehnologică și inovare (CDI), Cod proiect 111022, compania Bioma Delly Trading SRL

- 2020-2021, **Realizare sistem de inspectie aeriană cu drona pentru cresterea eficienței centralelor bazate pe energii regenerabile si oferirea de servicii pentru mentenata**, Cod apel: POC/62/1/3/Stimularea cererii întreprinderilor pentru inovare prin proiecte CDI derulate de întreprinderi individual sau în parteneriat cu institute de CD si universități, în scopul inovarii de procese si de produse în sectoarele economice care prezinta potențial de crestere, axa prioritară Cercetare, dezvoltare tehnologică și inovare (CDI), Cod proiect 109905, compania Intelligent Transport Solutions SRL.

Premii Internationale Saloane Inventica

- TISIAS-TORONTO INTERNATIONAL SOCIETY OF INNOVATION & ADVANCED SKILLS , **SPECIAL HONOUR OF INVENTION** is hereby to: - Minea Marius, **Dumitrescu Cătălin**, Chiva Ionuț-Cosmin, Minea Viviana - Laetitia, Semenescu Augustin for an outstanding exhibition of invention entitled: **Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence - RO A00493/ 2019-08-**, the 24th INTERNATIONAL EXHIBITION OF INVENTIONS, INVENTICA 2020, 29.07-31.07.2020, Moonsuk CHANG-Chairman & Chief Exhibition Officer, TISIAS-Toronto Canada, Bob HUYBRECHTS, RDT- Co-Chairman of the Jury Ican-Toronto, Canada
- TISIAS-TORONTO INTERNATIONAL SOCIETY OF INNOVATION & ADVANCED SKILLS , **SPECIAL HONOUR OF INVENTION** is hereby to: **Cătălin DUMITRESCU**, Marius MINEA, Ilona-Mădălina COSTEA, Ionut-Cosmin CHIVA, Viviana-Letiția MINEA, Augustin SEMENESCU for an outstanding exhibition of invention entitled: **SYSTEM AND METHOD FOR DETECTING ACTIVE AIRCRAFT (DRONE) VEHICLES BY DEEP LEARNING ANALYSIS OF SOUND AND CAPTURE IMAGES - RO A 000330/2020** , the 24th INTERNATIONAL EXHIBITION OF INVENTIONS, INVENTICA 2020, 29.07-31.07.2020, Moonsuk CHANG-Chairman & Chief Exhibition Officer, TISIAS-Toronto Canada, Bob HUYBRECHTS, RDT- Co-Chairman of the Jury Ican-Toronto, Canada
- **SPECIAL AWARD FOR THE INVENTION *Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence - RO A00493/ 2019-08***-Awarded to - Minea Marius, **Dumitrescu Cătălin**, Chiva Ionuț-Cosmin, Minea Viviana - Laetitia, Semenescu Augustin, on the occasion of THE 24th INTERNATIONAL EXHIBITION OF INVENTIONS INVENTICA 2020, IASI 29.07.-31.07.2020, Iasi, July 2020, Decan Prof.Eng.Caius Pănoiu, PhD.
- **GOLD MEDAL FOR THE INVENTION *Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence - RO A00493/ 2019-08***-Awarded to - Minea Marius, **Dumitrescu Cătălin**, Chiva Ionuț-Cosmin, Minea Viviana - Laetitia, Semenescu Augustin, on the occasion of **AT THE 5th ANNIVERSARY EDITION THE INTERNATIONAL INVENTION INNOVATION COMPETITION IN CANADA, iCAN 2020, TORONTO, AUGUST 29, 2020**, MOONSUK CHANG – CHIEF TISIAS – TOTONTO, CANADA & BOB HUYBRECHTS – CHAIRMAN iCAN – TORONTO, CANADA.
- TECHNICAL UNIVERSITY CLUJ-NAPOCA ROMANIA confers **Diploma of Excellence and Gold Medal** Awarded by the Technical University of Cluj-Napoca Romania, To: Minea Marius, **Dumitrescu Cătălin**, Chiva Ionuț-Cosmin, Minea Viviana - Laetitia, Semenescu Augustin_From: University POLITEHNICA Bucharest, Romania. For: for **Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence--RO A00493/2019**, To the 12th edition of EUROINVENT, European Exhibition of Creativity and Innovation 21-23 May 2020, Rector, Prof.dr.eng. Vasile ȚOPA.
- Euroinvent 12 Edition-European Exhibition of Creativity and Innovation 2020, ONLINE IASI-ROMANIA-**DIPLOMA OF GOLD MEDAL** is awarded to: **Method and**

- system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence**, Minea Marius, Dumitrescu Catalin, Chiva Ionut-Cosmin, Minea Viviana-Laetitia, Semenescu Augustin. President of International Jury Dr.Eng.Mohd Mustafa Al Bakri ABDULLAH, President of Exhibitor Prof. Ion SANDU, May 23, 2020.
- **FIH 50-SPECIAL AWARD-: Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence** Minea Marius, Dumitrescu Catalin, Chiva Ionut-Cosmin, Minea Viviana-Laetitia, Semenescu Augustin, University Politehnica of Bucharest, RO, EU, on the occasion of EUROPEAN EXHIBITION OF CREATIVITY AND INNOVATION-EUROINVENT, 11th Edition, Iasi Romania, 21st-23rd of May 2020.
 - Pi-ENVEX Exhibition-**Pi-Envex SPECIAL AWARD** is presented to Minea Marius, Dumitrescu Catalin, Chiva Ionuț Cosmin, Minea Viviana-Laetitia, Semenescu Augustin for commending an excellent and creative effort to invent **Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence**, exhibited at the EUROPEAN EXHIBITION OF CREATIVITY AND INNOVATION (EUROINVENT) 2020, hold on MAY 22nd -23rd, 2020, Iasi Romania, PROFESSOR TS.DR.MOHD MUSTAFA AL BAKRI ABDULLAH, Chairman Pi-ENVEX 2020,Vice PresidentWorld Invention Intellectual Property Associations.
 - **WIIPA SPECIAL AWARD**, presented to Minea Marius, Dumitrescu Catalin, Chiva Ionuț Cosmin, Minea Viviana-Laetitia, Semenescu Augustin in recognition of **Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence** exhibited at the EUROPEAN EXHIBITION OF CREATIVITY AND INNOVATION EUROINVENT May 2020, Palace of Culture, Romania, Manli Hsieh President, World Invention Intellectual Property Associations.
 - EUROINVENT 12 th Edition European Exposition for Creativity and Innovation 2020, National Institute for Research and Development in Environmental Protection, **Diploma of Excellence and Silver Medal** is awarded to: Minea Marius, Dumitrescu Catalin, Chiva Ionuț Cosmin, Minea Viviana-Laetitia, Semenescu Augustin in recognition of **Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligenc**, University Politehnica of Bucharest, Eng DEAK Gyorgy, INCDPM General Manager.
 - **DIPLOMA OF EXCELENCE** - Minea Marius, Dumitrescu Cătălin, Chiva Ionuț-Cosmin, Minea Viviana - Laetitia, Semenescu Augustin, for **Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence - RO A00493/ 2019-08-17**, ROMANIAN INVENTORS FORUM (www.afir.org.ro), EUROINVENT (www.euroinvent.org), President, Assoc.Prof.Eng.PhD. Andrei Victor SANDU, 24th International Exhibition of Inventics, Online Edition 29-31 July 2020, 31.07.2020
 - **Diploma of Honor- Medal Inventica 2020**, offered to Cătălin Dumitrescu, Marius Minea, Ilona-Madalina Costea, Ionut Cosmin Chiva, Viviana-Letiția Minea, Augustin Semenescu, University Politehnica Bucharest for **SYSTEM AND METHOD FOR DETECTING ACTIVE AIRCRAFT (DRONE) VEHICLES BY DEEP LEARNING ANALYSIS OF SOUND AND CAPTURE IMAGES - RO A 000330/2020** in recognition of high scientific contribution and loyalty to the XXIV-th International Exhibition of Inventics, Inventica 2020, Iasi Romania, 29-31 July 2020, General Manager National Institute Of Inventics Prof. Neculai SEGHEDEIN Phd.
 - TISIAS-TORONTO INTERNATIONAL SOCIETY OF INNOVATION & ADVANCED SKILLS-**SPECIAL HONOUR OF INVENTION**, is hereby presented to Minea Marius, Dumitrescu Cătălin, Chiva Ionuț-Cosmin, Minea Viviana - Laetitia, Semenescu Augustin for **Method and system for anonymously collecting position and mobility information in public passenger transport, based on Bluetooth and Artificial Intelligence--RO A00493/2019**, The 12th European Exhibition of Creativity and Innovation, Euroinvent 2020 held ONLINE during 21-23 May 2020 at the Palace of Culture in Iasi, Romania, Moonsuk CHANG-Chairman & Chief Exhibition Officer, TISIAS-Toronto Canada, Bob HUYBRECHTS, RDT Co-Chairman of the Jury Ican-Toronto, Canada.