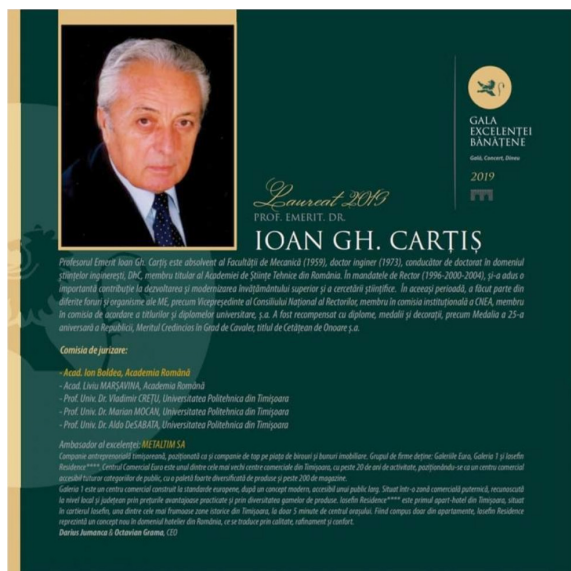


## Gala Excelenței Bănățene - Banat Excellence Gala, 2019

### Premiul "Traian Vuia" pentru Științe Inginerești - "Traian Vuia" Prize for Engineering Science Professor Ioan Gh. CARTIȘ, PhD



The Council for Excellence Timișoara (Romanian Academy - Timiș branch, West University Timișoara, Polytechnic University Timișoara, University of Medicine and Pharmacy Timișoara, University of Agricultural Sciences and Veterinary Medicine of Banat) organized, on December 14, 2019, the Banat Excellence Gala, dedicated to the Romanian Revolution which started in Timișoara 30 years ago.

The main objective of the Banat Excellence Gala is to highlight and recognize the personalities of Timișoara and Banat, who brought valuable achievements in their fields of activity. At this anniversary edition, the "Traian Vuia" Prize for Engineering Science was awarded on Professor Ioan Gh. Cartiș.

Professor Emeritus Ioan Gh. Cartiș is a graduate of the Faculty of Mechanics (1959), doctor of engineering (1973), doctoral supervisor in the field of engineering sciences, DnC, full member of the Romanian Academy of Technical Sciences.

During his term as Rector (1996-2000-2004), he made an important contribution to the development and modernization of higher education and scientific research. During the same period, he was part of various forums and bodies of the Ministry of Education, such as Vice President of the National Council of Rectors, member of the institutional commission of CNEA, member of the commission for awarding university degrees and diplomas, etc. He was rewarded with diplomas, medals, and decorations, such as the 25th Anniversary Medal of the Republic, the Faithful Merit in the Degree of Knight, the title of Honorary Citizen of the City of Timișoara, etc.

The members of the jury for the Engineering Science committee included Academicians Ion Boldea and Liviu Marșavina, Romanian Academy; Professors Vladimir Crețu, Marian Mocan and Aldo deSabata, Politehnica University Timișoara.



## Banat Excellence Gala 2019 Romanian Academy Award Academician Dan DUBINĂ, PhD



On the occasion of the Banat Excellence Gala 2019, Academician Dan DUBINĂ was honored with the ROMANIAN ACADEMY AWARD, for his entire activity.

Academician Dan Dubină, civil engineer, graduate in 1974 of the “Traian Vuia” Polytechnic Institute in Timișoara, university professor at the Politehnica University of Timișoara. His domains of excellence in research are the stability and ductility of structures, steel structures engineering, and behavior of structures under extreme actions. He has been a member of the Romanian Academy since 2015 (corresponding member since 2010), President of the Timisoara Division of the Romanian Academy, Doctor Honoris Causa of the Technical University of Cluj-Napoca (2005), honorary member of the University of Pecs (2012).

He has published an impressive number of benchmark papers in the field of structural engineering and steel structures engineering, in prestigious international journals and with famous publishers worldwide. He is an author of inventions, evaluator of EU projects, a laureate of the European Steel Design Award, in 2003 and 2007, a member of doctoral boards in France, Belgium, Spain, Portugal, Slovenia, Hong Kong, India, Australia, a member of prestigious international institutions, organizations and professional associations in the field of civil engineering. He gave lectures and speeches at international conferences and events all over the world, in Europe, Asia, Africa, and South America. Since 1997, he has been a member of the Executive Board of the European Convention for Steel Structures, with headquarters in Brussels; he took on the presidency of the board in 2005-2006. Since 2009, he has represented Romania in COSCO – The Coal and Steel Committee of the Research Fund for Coal and Steel – RFCS.





## Banat Excellence Gala 2019, PRO INVENT Exhibition 2019, University of Craiova Awards for Excellence in Research Politehnica University Timișoara

In the year 2019, Politehnica University Timișoara was awarded at various scientific events:



Timisoara Council of Excellence (Timisoara Branch of the Romanian Academy, The West University of Timisoara, Politehnica University of Timisoara, The Medicine and Pharmacy University of Timisoara, The University of Agricultural Sciences and Veterinary Medicine of Banat) organized, on December 14<sup>th</sup>, 2019, Banat Excellence Gala, a special edition dedicated to the Romanian Revolution started in Timisoara. At the Gala, The Politehnica University of Timisoara was awarded the Ambassador of Excellence Diploma.



The Special Prize PRO INVENT, awarded to the Politehnica University of Timisoara, for the inventions presented at the PRO INVENT Exhibition in 2019. The prize was awarded for the practical applicability of the inventions, for the quality of the presentation given by the PUT delegation, the large number of exhibits (stands, prototypes, products, posters), the quality of the display, and the high interest of the visitors.



The Special Prize INNOVATION AWARD from the University of Craiova to the Politehnica University, for its spirit of innovation in the field of science and implicitly for its inventions shown at the International EuroInvent 2019 Exhibition.

## Romanian Academy The „Aurel Vlaicu” Prize awarded in 2019 Anghel CERNESCU, PhD & Ion DUMITRU, PhD

“Aurel Vlaicu” Award of Romanian Academy to Anghel Cernescu and Ion Dumitru for a research monograph entitled „*Fatigue of overhead power lines conductors*”.

The monograph is part of a research tradition of the Politehnica University of Timisoara in the field of mechanical strength of overhead power line conductors and cables. The book addresses a new field regarding the fatigue life of the conductors in the presence of variable amplitude loadings generated by the wind vibrations. Thus, designers, electric conductor manufacturers and those exploiting the overhead power lines are provided with a basic material for understanding and deepening the fatigue phenomenon generated by wind vibrations. The high scientific level of this book is based on considerable amount of bibliographic data, the latest computing methods and a vast experience of the authors. The cracking and fracture mechanisms of the wires in the contact area between the conductor and the clamping support are described through the notions of fretting fatigue. Also, a

series of theoretical and experimental contributions are presented in the book with the purpose of implementing within the Mechanics and Strength of Materials lab the new techniques for fatigue life evaluation of overhead power line conductors. Based on the proposed experimental method, the authors have conducted the first fatigue analysis of a 13 m long conductor (122-AL1/20-ST1A) in the presence of variable amplitude loads that simulate wind vibrations.

### Fatigue of overhead power lines conductors

*Authors:* Anghel Cernescu, Ion Dumitru

*Publisher:* Romanian Academy Publishing House

*Year:* 2017

*ISBN:* 978-973-27-2783-6





## Romanian Academy The „Henri Coandă” Prize awarded in 2019 Prof. Ioan SÂRBU, PhD & Lecturer Călin SEBARCHIEVICI, PhD

The Romanian Academy “Henri Coanda” prize for Technical Sciences for 2017 was awarded to the book “Solar Heating and Cooling Systems: Fundamentals, Experiments and Applications”, Elsevier, Oxford, UK, 2017, 424 pages, ISBN 978-0-12-811662-3, authors Ioan Sarbu and Calin Sebarchievici, affiliated to University Politehnica of Timisoara. The award ceremony took place in the high hall for science and culture at the General Assembly of the Romanian Academy on 12<sup>th</sup> December 2019.

This book provides a comprehensive coverage of emerging solar technologies and applications with an emphasis on heating and cooling in buildings, based on original research and the synthesis of consistent bibliographic material to meet the increasing need for modernisation and for greater energy efficiency to significantly reduce CO<sub>2</sub> emissions. Technical, economic, and energy saving aspects related to design, modelling, and operation of these systems is also explored. This reference includes physical and mathematical concepts developed to make this publication a self-contained and up-to-date source of information for engineers, researchers, and professionals interested in the use of solar energy as an alternative energy source.

The book, which is indexed by the ISI - Web of Science and already present in the libraries of more than 80 top universities in the world, supports the dissemination of the results of the Romanian research worldwide and the affirmation of the knowledge development in Romania.

**Ioan Sarbu** is a professor emeritus and doctoral degree advisor of the Department of Civil and Building Services Engineering at the Polytechnic University of Timisoara, Romania. He obtained a diploma in civil engineering from the “Traian Vuia” Polytechnic Institute of Timisoara in 1975, a PhD degree in civil engineering from the

Timisoara Technical University in 1993, and the European engineer title, designated by the European Federation of National Engineering Associations (Brussels) in 2001. His main research interests are related to refrigeration systems and heat pumps. He is also active in the field of solar energy conversion and storage and numerical simulations and optimizations in building services. He has published over 370 scientific papers in his research domains, 37 books/chapters, more than 150 articles in indexed journals and about 60 articles in proceedings of international conferences. He is also author of 6 patent certificates and up to 30 computer programs. His current h-index is 18 (Google Scholar), 14 (Scopus) and 11 (Clarivate Analytics Web of Science) as of December 2019.

**Calin Sebarchievici** is a lecturer of the Civil and Building Services Engineering Department and the Director of the Building Services Engineering Research Centre from the Polytechnic University of Timisoara, Romania. He obtained a diploma in building services engineering and a PhD degree in civil engineering at the Polytechnic University of Timisoara in 2003 and 2013, respectively. His research is focused on heat pumps, refrigeration systems, and solar energy conversion. He is coauthor of 4 books, 4 book chapters, 1 utility model, 19 indexed journal articles and more than 15 conference proceeding publications.



## Romanian Academy

### The „Anghel Saligny” Prize awarded in 2019

Lect. Cristian VULCU, PhD, Assoc. Prof. Aurel STRATAN, PhD & Prof. Adrian CIUTINĂ, PhD

“Anghel Saligny” Award of Romanian Academy to Lect. Cristian VULCU, Assoc. Prof. Aurel STRATAN, Prof. Adrian CIUTINA for a series of two scientific papers entitled „Beam-to-CFT high-strength joints with external diaphragm”.



The prize regards the papers:

- Vulcu, C., Stratan, A., Ciutina, A., Dubina, D., (2017): *Beam-to-CFT High Strength Joints with External Diaphragm. I: Design and Experimental Validation*. Journal of Structural Engineering / ASCE, Vol 143/5, Article 04017001.
- Vulcu, C., Stratan, A., Ciutina, A., Dubina, D., (2017): *Beam-to-CFT High Strength Joints with External Diaphragm. II: Numerical Simulation of Joint Behavior*. Journal of Structural Engineering / ASCE, Vol 143/5, Article 04017002.

The series of two papers awarded by Romanian Academy is based on the research carried out within the framework of the European research project RFSR-CT-2009-00024 “High Strength Steel in Seismic Resistant Building Frames” HSS-SERF, funded by the Research Fund for Coal and Steel, and carried out during 2009-2013, under the coordination of Acad. Dan DUBINA ([www.ct.upt.ro/centre/cemsig/hss-serf.htm](http://www.ct.upt.ro/centre/cemsig/hss-serf.htm)).

The research topic approached by the authors aimed to broaden the scope of high-performance steels in construction. Although the metallurgical industry has developed high strength steels, they are currently only used very little in constructions and not at all in the structures located in seismic zones, mainly due to the insufficient knowledge regarding the behavior and the limitation of the seismic design codes to soft steels. The authors identified a potential for the

application of high-strength steel to the non-dissipative elements of multi-story structures (e.g. columns and joints, characterized by high strength requirements). They undertook a systematic research program, using experimental, numerical and analytical methods, resulting in the elaboration and validation of a procedure for calculating high-strength beam-to-CFT column joints for multi-story structures located in seismic zones.

The HSS-SERF research project supported also Mr. Cristian VULCU in obtaining, in 2013, his PhD degree with the thesis “Seismic performance of dual steel frames of CFRHS and welded beam-to-column joints”, under the coordination of Acad. Dan DUBINA.





## Technical Sciences Academy of Romania Honorary Member Prof. Radu BĂNCILĂ, PhD

A new recognition of professional merits for a professor of the University Politehnica of Timisoara! During a solemn ceremony held in Bucharest, at the headquarters of the Romanian Academy of Technical Sciences, Professor Emeritus Radu Băncilă, from the Faculty of Constructions of UPT, was awarded the diploma of Honorary Member of ASTR, in recognition of his remarkable activity in the field of science and technology.

Prof. emeritus dr. ing. Radu Bancila is a graduate of the Timisoara Polytechnic Institute, Faculty of Constructions, class of 1967. In 1981 he came to be a Doctor of Engineering in the field of Steel Constructions. Since 1992 he became a university professor within the Faculty of Constructions, specialty – Steel Bridges. In 1997 he became a doctoral supervisor, and in 2012 he received the title of professor emeritus of the University Politehnica of Timisoara.

In 1991, Professor Radu Bancila initiated the study of civil engineering in German – founding the German Teaching Branch at the Faculty for Civil Engineering in Timisoara. Professor Bancila was the initiator of the partnership contract, in 1993, between the University Politehnica of Timisoara and the Technical University of Munich, and the department was included in the promotion program of the German Academic Exchange Service DAAD. Professor Radu Bancila, head for many years of the Civil Engineering department with teaching in German, has been involved in multilateral exchanges with the German Universities.

He is also member of many European Associations.

Professional Professor Radu Bancila is an expert in the construction of steel bridges and is involved in the development of the Romanian Railway and highway network, with new structures in innovative solutions.

He is a member or founding member of a series of international Associations of caliber in the field of construction, he has 110 scientific papers published in prestigious international journals, 10 specialized books published, 4 in English and 2 in German.

In 2012 Professor Bancila received the “Order of Merit of the Federal Republic of Germany – Class 1” from the Ambassador of the Federal Republic of Germany in Romania.



## Technical Sciences Academy of Romania Honorary Member Prof. Emeritus Ioan DAVID, PhD

Prof. emeritus Ioan DAVID was elected as honorary member of the Academy of Technical Sciences Romania in the General Assembly that took place on June 2019. He is member of the Construction and Urbanism Section of the Academy of Technical Sciences.

Prof DAVID born in 1940 received the Dipl. Ing. degree in Civil engineering in 1963, the Diploma in mathematics in 1972 and the Ph.D. degree in 1973. In 1976-77 he performs a post-doctoral research program as "Alexander von Humboldt" fellow at the Technical University Darmstadt, Germany publishing the research results as Technical rapport Nr. 19, 1977 of the Hydraulic and Hydrology Department, Technical University Darmstadt (equivalent habilitation). *Prof. David performed his university teaching activity as assistant professor, associate professor (1964-1989) and since 1990 as full professor and PhD scientific supervisor in Civil engineering (about 25 PhD title). In the period 1993-2005 he was visiting professor for Numerical fluid dynamic and Groundwater modelling at the Technical University Darmstadt, Germany: [http://www.iib.tu-darmstadt.de/mitarbeiter\\_iib/team\\_iib.de.jsp](http://www.iib.tu-darmstadt.de/mitarbeiter_iib/team_iib.de.jsp). In October 2005 restarts his professorship at the "Politehnica University" in Timisoara, Romania until his retirement in 2010. He is since 2006 also visiting professorship at the University of Applied Science Giessen, Germany where currently give semester lectures in the field of Renewable Energy (Waterpower and Wind power).*

*The relevant international recognised achievements and performances in research and technic can be summarized as follow:*

- *Elaboration of about 200 scientific papers as author/co-author published in Journals and Proceedings of International Conferences (e.g. Journals of the Romanian Academy, French Academy, Russian Academy) and Proceedings of numerous International Conferences (Austria, France, Germany, Greece, Netherlands, Romania, UK, USA etc.). Several examples to publication subject are: Extension of standard integral representations for solutions of groundwater flow and transport processes coupling Analytical Element Method (AEM) and Boundary Element Method (BEM) applied in conception and implementation of complex groundwater recharge/discharge systems (e.g. Groundwater recovery/recharges systems in "Hessisches Ried" Germany). He is author/co-author of 17 books some of them publishing abroad like Groundwater Hydraulic, Springer-Vieweg, 1998, Germany; Mathematical-Numerical Modelling of Technical Systems, Couvillier-Göttingen, 2005, Germany; Basics for modelling of flood runoff using advanced Hydroinformatics tools, (2015), IGI Global, USA.*
- *Coordination of laboratory experimental research programs for sizing of various hydraulic plants in frame of over 60 implemented water engineering projects in Romania and Germany.*



- *Coordination of International Cooperation Projects among others: TEMPUS Joint European Project "Environmental Sound River Basin Development", (TU. Delft, TU Karlsruhe, TU Wien, TU Budapest, TU. Timisoara), (1991-1993); LEONARDO DA VINCI EU-Project "Development of knowledge centres for flood risk management using advanced Hydroinformatics tools" (Romania, Hungary, Czech Republic) (2012-2013) and so on.*

*Prof David performed notable activities in several professional and scientific organizations at national and international level as member or in leadership such as: American Romanian Academy of Arts and Sciences (ARA) vice president (2005-2009) and general secretary (2009-2013); External corporation of Hungarian Academy of Sciences (MTA) (2006); Consulting engineer in "Ingenieurkammer Hessen" (IngKH) Germany (2005); General Association of Romanian Engineers; International Association of Hydrological Sciences; European Geophysical Society; Dean of the Water Engineering faculty (UPT) (1990-2004); Scientific secretary of the Senate of Polytechnic University Timisoara; Editor in Chief of Transactions on Hydraulics, "Politehnica" University of Timisoara;*

*Prof. David obtained also several academic distinctions among another: Diploma awarded of the German Foundation "Alexander von Humboldt" for scientific research (1992); Academic title of Honorary Professor of the Technical University of Darmstadt Germany (1999); Title of Excellence from the Foundation "Polytechnica" (2010); Emeritus professor of the University "Politehnica" of Timisoara (2015); Marquis Who's Who (2006-2007) and Hübners Who's Who (2007).*



## International Federation for the Promotion of Mechanism and Machine Science (IFToMM) IFToMM Secretary General Prof. Erwin-Christian LOVASZ, PhD

At the 14<sup>th</sup> IFToMM World Congress, held in Krakow, Poland, between 30 June – 4 July, was elected the new Secretary General of IFToMM Prof. Erwin-Christian Lovasz from the Politehnica University of Timisoara, Romania.

The International Federation for the Promotion of Mechanisms and Machines Science (IFToMM) is one of the most important professional federation worldwide, considering the large number of national member organizations and its wide range of activities. The goal of IFToMM is to promote research and development in the field of Mechanisms and Machine Science by theoretical and experimental methods, along with their practical applications.

IFToMM was founded in 1969, in Zakopane, near Krakow, Poland, under the motto "Science without political barriers". The list of the original 13 founders is extended today to 43 national organizations, counting more than 10.000 members.

IFToMM is an organization lead by the Executive Council, which includes the President, the Vice-President, the Secretary General, the Treasurer, the Past President and six Council Members. There are four Permanent Commissions and 13 Technical Committees.

The association gathers scientists and researchers from all over the world on the occasion of different scientific events, such as conferences and summer schools organized under its patronage and an own congress, held each four years.

IFToMM is associated with Springer, that publishes a series called Mechanisms and Machine Science (presently at volume 83), which displays the proceedings of different conferences in the field. There are six important journals affiliated to IFToMM: Mechanism and Machine Theory, Open-access Mechanical Sciences, Chinese Journal of Mechanical Engineering, Advances in Vibration Engineering, MDPI journal Machines and MDPI journal Robotics.

At the 15<sup>th</sup> IFToMM World Congress, held in Krakow, Poland, between 30 June – 4 July, were elected Prof. Andres Kecskemethy (University Duisburg, Germany) as new President, Fernando Viadero-Rueda (Universidad de Cantabria, Spain) as new Vice-President, Prof. Erwin-Christian Lovasz (Politehnica University of Timisoara, Romania) as new Secretary General and Andeas Müller (Johannes Kepler Universität, Austria) as new Treasurer, for a four-year mandate (2020 – 2023).

Prof. Erwin-Christian Lovasz is an active member of the national organization ARoTMM (Asociația Română de Știința Mecanismelor și Mașinilor), whose Scientific Secretary is at present. Within IFToMM, he was Chair of the Technical Committee Linkages and Mechanical



Controls (2011-2017) and Secretary of Honors and Awards Committee (2018 – 2019).

Prof. Erwin-Christian Lovasz participated to all IFToMM World Congresses since 1995 (Milan, Italy – 1995, Oulu, Finland – 1999, Tianjin, China – 2004, Besancon, France – 2007, Guanajuato, Mexico – 2011, Taipei, Taiwan – 2015, Krakow, Poland – 2019). He initiated and organized during his chairship The First MeTrApp 2011, MAAM 2014, The Summer School MMDR 2014 and the forthcoming MTM&Robotics 2020 at the Politehnica University of Timisoara, bringing to our university international recognition and prestige.

The election of Prof. Erwin-Christian Lovasz in the highest leading structures of IFToMM, as a proof of his professional and managerial recognition at international level, honors the organizations he represents, namely the Politehnica University of Timisoara and the national organization ARoTMM and, subsequently, Romania.



# Research Report 2019

## BIG SEE Architecture Festival BIG SEE Architecture Award 2019 - WINNER Prof. Arch. Vlad GAIVORONSKI, PhD



With its work "HOME OF ART", a residential project in Timisoara, prof. arch. ph.d. Vlad GAIVORONSKI was declared WINNER at residential architecture category at BIG SEE Architecture Festival in Ljubljana on 17 april 2019.

BIG SEE is an annual international event which systematically explores, evaluates, exposes promotes and develop business and creative excellence from South-East Europe.

It brings together 19 countries and 350 million people. The countries invited to the event are: Albania, Austria, Bulgaria, Bosnia and Herzegovina, Cyprus, Czech Republic, Greece, Croatia, Italy, Hungary, Kosovo, North Macedonia, Moldova, Montenegro, Romania, Slovakia, Slovenia, Serbia and Turkey.

BIG SEE platform represents an unique forum and community for discussion and development of the cultural, economic and political role of the region and its importance and impact on the globalised world.

BIG SEE AWARDS are intended to research, promote and connect authors, investors and partners in various projects and expose the architectural excellence of the Southeast Europe.

In the last decades, Vlad Gaivoronschi obtained also other international recognition, as The European Prize for Steel Construction ECCS in 1997, Nominations at European Architecture Prize "Mies van der Rohe" Barcelona in 2008 and 2010, Shortlisting at World Architecture Festival in 2010 in Barcelona and 2016 in Berlin and Winner at German Design Awards in 2018 and 2020 in Frankfurt.





## 7<sup>th</sup> International Conference on Information Technology and Quantitative Management ITQM 2019 Best Paper Award

Raul-Cristian ROMAN, Radu-Emil PRECUP, Claudia-Adina BOJAN-DRAGOȘ & Alexandra-Iulia SZEDLAK-STÎNEAN

The team consisting of As.Dr.Ing. Raul-Cristian ROMAN, Prof.Dr.Ing. Radu-Emil PRECUP, Ș.I.Dr.Ing. Claudia-Adina BOJAN-DRAGOȘ, Ș.I.Dr.Ing. Alexandra-Iulia SZEDLAK-STÎNEAN received "Best Paper Award" for the paper "Combined Model-Free Adaptive Control with Fuzzy Component by Virtual Reference Feedback Tuning for Tower Crane Systems" presented at the 7<sup>th</sup> International Conference on Information Technology and Quantitative Management ITQM, which took place in Granada, Spain, in November 03-06, 2019. (<http://itqm-meeting.org/2019/>)

The International Conference on Information Technology and Quantitative Management (ITQM), established by International Association of ITQM (IAITQM), is a global forum for exchanging research findings and case studies that bridge the latest information technology and quantitative management techniques. It explores how the use of information technology to improve quantitative management techniques and how the development of management tools can reshape the development of information technology. This conference is focused on exploring innovations, controversies, and challenges facing our scientific community today. The theme of ITQM 2019 is "Information technology and quantitative management based on Artificial Intelligence".

Three specific optimization problems are defined and solved by Model-Free Adaptive Control, VRFT and GWO algorithms. The novel algorithm is validated using experimental results to the arm angular position of the nonlinear tower crane system laboratory equipment.

This work was supported in part by the Romanian research grants GNaC2018-ARUT, no. 1348/01.02.2019, CNCS - UEFISCDI PN-III-P1-1.1-PD-2016-0331, within PNCDI III, and the grant CNFIS-FDI-2019-0696.



The paper proposes a novel mix of two data-driven algorithms. The purpose of mixing the algorithms is to exploit the main advantage of data-driven Virtual Reference Feedback Tuning (VRFT) algorithm, represented by the automatic computation of the optimal parameters using metaheuristic Grey Wolf Optimizer (GWO) for the Compact Form Dynamic Linearization (CFDL) version of the authors' Model-Free Adaptive Control Takagi-Sugeno Fuzzy Algorithm (CFDL-PDTSFA), and the parameters of the CFDL-PDTSFA are optimally tuned in a model-free manner using VRFT.



## 6<sup>th</sup> International SGEM Conference on Social Sciences and Arts Best Presentation Award Assoc. Prof. Mariana CERNICOVA-BUCĂ, PhD

Assoc. Prof. Mariana CERNICOVA-BUCĂ, PhD, from the Faculty of Communication Sciences (UPT), obtained the Best Presentation Award for the paper "Tentative Conclusions Regarding the Ascension of Community Supported Agriculture in Romania" at the 6th International SGEM Conference on Social Sciences and Arts, which took place in Albena, Bulgaria in August 24-September 2, 2019 (<http://sgemsocial.org/>). The SGEM International Conferences on Social Sciences and Arts are organized under the aegis of 18 national academies from three continents and examine the nature of disciplinary and interdisciplinary scientific concepts that arise in the context of 'real world' applications. The focus of the papers ranges from the finely grained and empirical principles to wide-ranging multidisciplinary practices and perspectives on knowledge and method.

The paper presented by assoc. prof. Mariana Cernicova-Bucă is based on case studies analyzing the concept of community supported agriculture (CSA) implemented in Romania since 2008, in connection with such topics as ethical consumption, solidarity and revival of traditional values, from a communication point of view. The communication campaigns and the projects that supported the promotion of this type of relations still rely mainly on a tiny layer of consumers, ready to share the philosophy behind new types of economic relations, where ethical considerations, solidarity and trust represent core values. The CSA model remains an early attempt to introduce new patterns of economic relations in Romania, in the larger trend of fair trade and responsible consumption.

The "Best presentation award", bearing a diploma and an engraved crystal trophy, is awarded at the proposal of the section moderators in which the papers are presented. The titles are presented to the laureates at a festive ceremony, at the end of the multidisciplinary conference and disseminated through the conference website:

<https://sgemsocial.org/index.php/committee/sgem-award-certificate>

The distinguished paper, bearing the DOI number 10.5593/SWS.ISCSS.2019.3/S12.096 is published in the Conference Proceedings Volume "6th SWS International Scientific Conference on Social Sciences ISCSSL 2019" Book 3 (ISSN 2682-9959) and is subjected to indexing in ISI Web of Knowledge, Clarivate Analytics, ELSEVIER products Mendeley, CrossRef, EBSCO, ProQuest, RSCI, Google Scholar, CiteUlike, CrossRef Citedby Linking, British Library, etc.





## TIMTED 2019 International Conference "Current economic trends in emerging and developing countries" Best Paper Award Prof. Claudiu ALBULESCU, PhD

The paper entitled "CO2 emissions, renewable energy production and environmental regulation in the EU countries" (authors Claudiu ALBULESCU, Caius LUMINOSU, Alin ARTENE and Matei TĂMAȘILĂ) received the distinction of "Best Paper Award", delivered by Scientific Committee of the TIMTED 2019 International Conference "Current economic trends in emerging and developing countries", held in Timișoara, on 16 to 18 May 2018.

The purpose of TIMTED 2019 International Conference was to share most recent developments in the fields of economics and business, with a focus on emerging and developing economies. The TIMTED conference is organized every two years by the Faculty of Economics and Business Administration, West University of Timișoara, and benefits from noteworthy international participation and reputed keynote speakers.

The research conducted within the paper presented at TIMTED 2019 International Conference was supported by a grant of the Romanian National Authority for Scientific Research and Innovation, CNCS-UEFISCDI, project number, PN-II-RU-TE-2014-4-1760, project entitled "The impact of the economic and financial stability on investments, innovation process and entrepreneurial activity in the EU" (Director, Prof. Claudiu ALBULESCU).

The paper is accepted for publication in "Environmental Science and Pollution Research".



## 47<sup>th</sup> International Exhibition of Inventions Geneva 2019 Gold Medal, Taiwan Medal, “Vincit Amor Patriae” Medal & Diplomas Roland SZABO, PhD & Aurel GONTEAN, PhD

The event 47<sup>th</sup> International Exhibition of Inventions of Geneva took place in Switzerland, in the period of 10–14 April, 2019, where the following invention was presented: PORTABLE FLASH MEMORY ON THE ETHERNET INTERFACE.

The prizes won at this event are the following:

- Diploma of the 47<sup>th</sup> International Exhibition of Inventions of Geneva 2019, accompanied by a gold medal with congratulations of the jury;
- Special award from the Taiwan Inventions Association with a diploma and medal;
- “Vincit Amor Patriae” award from the Romanian Research and Innovation Minister with a diploma and medal.

The authors of the invention presented the invention at this event and carried out their professional activity in the Politehnica University Timișoara, Faculty of Electronics, Telecommunications and Information Technologies, Applied Electronics Department.

The invention relates to a portable flash memory on an Ethernet interface, designed to increase the transfer speed when copying small files and / or increasing the transfer distance.

The advantages of this invention are as follows:

- The possibility to have a portable flash memory type with much faster write / read speed (even for many and small files) than the other solutions of portable flash memories on USB interface;
- Simplicity;
- Compatibility with existing switches and PCs.



## 33<sup>th</sup> International Festival of Innovation, Knowledge and Creativity TESLA FEST, October 12-15, 2019, Novi Sad, Serbian Republic Multiple medals for Politehnica University Timisoara

This event was organised under the auspices of the Government of the Serbian Republic, Government of AP Vojvodina and the city of Novi Sad. The works presented on this occasion (and registered with the O.S.I.M. under the tutelage of UPT) in the form of a poster, were appreciated by an international jury and the visiting public. At the same time, the UPT stand was visited and appreciated by Dr. Ștefan IMRE, counselor of the minister from the Embassy of Romania – Belgrade, Serbian Republic. I also gave an interview to the reporter from *Novi Sad television and radio – Romanian language department*, the reportage was presented in the date of 13.10.2019 ([http://media.rtv.rs/sr\\_ci/magazin-tv/50590](http://media.rtv.rs/sr_ci/magazin-tv/50590)). Reporter Marina ANCAITAN wrote the article: "TIME JUDGES US AND THE FACTS SPEAK" in the newspaper *LIBERTY*, (the newspaper of the romanians from Serbia) article printed in no. 44 (4021), in the date of 02.11.2019, page 15, in which are mentioned and appreciated the presented works (<https://libertatea.rs/dr-ing-pavel-stefan-timpul-ne-judeca-iar-faptele-vorbesc/>). Following the judging, all the presented works obtained 7 GOLD medals, and 3 SILVER medals (<http://teslafest.com/>).

The presented works were the following:

1. Electric installation for dental medical units air disinfection
  - Inventors: Stefan PAVEL, Ancuta Letitia TUTELCA, Deian Adrian JIFCU, Eugen-Florin LACATUSU, Andrei ADAM, Daliborca Cristina VLAD, Victor DUMITRASCU, Elena HOGEA, Iconia Ecaterina BORZA si Silviu Cristian SUCIU
  - Gold Medal
2. Instalation for the evaluation of the magnetic field exposure effects
  - Inventors: Stefan PAVEL, Lavinia Afrodita LUPA, Marian Liviu MOCAN, Daniel Viorel UNGUREANU, Ioan Silviu DOBOSI, Aurel MOLDOVAN, Alina Georgiana SIMINA, Alexandru BINZAR, Silviu Cristian SUCIU
  - Gold Medal and Diploma of Excellence – Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara
3. Earthing electrode with corrosion resistant connection
  - Inventors: Stefan PAVEL, Daniel-Viorel UNGUREANU, Marian Liviu MOCAN, Ioan Silviu DOBOSI, Florin-Ionel TOPALA
  - Gold Medal
4. Lighting system for the "Ceramic room" compartment of the dental laboratories
  - Inventors: Stefan PAVEL, Ioan BORZA, Emanuel Adrian BRATU, Ioan Silviu DOBOSI, Paulina Ioana GAINA, Felicia STREIAN, Serban TALPOS-NICULESCU
  - Gold Medal
5. Portable device for signaling pain, sensivity or discomfort during the course of medical dentar activity
  - Inventor: Stefan PAVEL
  - Gold Medal
6. Mobile installation used for the support of the child during the pediatric radiology
  - Inventors: Stefan PAVEL, Calin Marius POPOIU, Marian Liviu MOCAN, Ioan Silviu DOBOSI, Dan-Andrei SERBAN
  - Gold Medal
7. Device for the disinfection surface in enclosed environments
  - Inventors: Stefan PAVEL, Silviu-Cristian SUCIU
  - Gold Medal
8. Compressed air system for dental units
  - Inventors: Stefan PAVEL, Ioan BORZA
  - Silver Medal
9. Electrical light installation for dental esthetics
  - Inventors: Stefan PAVEL, Cristina KREMS, Marian Liviu MOCAN, Ioan Silviu DOBOSI
  - Silver Medal
10. Waste water decontamination system in the dental unit
  - Inventors: Stefan PAVEL, Ioan BORZA, Emanuel Adrian BRATU, Ioan Silviu DOBOSI, Paulina Ioana GAINA, Felicia STREIAN, Serban TALPOS-NICULESCU
  - Silver Medal





## PRO INVENT International Exhibition of Scientific Research, Innovation and Inventions, 17<sup>th</sup> edition, March 2-22, 2019, Cluj-Napoca Multiple medals for Politehnica University Timisoara

The PRO INVENT Salon from Cluj-Napoca was and wishes to remain a distinct meeting place between the inventors and inventions and the business-men and entrepreneurs interested in implementing the results of human research, innovation and human creativity.

Innovative companies wishing to present new products and technologies can do so in a separate section, commonly called the "Technology Arena," which provides an opportunity for participating companies to present to the audience both innovative technical solutions created already and the medium to long-term innovation strategy. Also inventors will have an exclusive space called the "Inventors Arena" where they can expose and share ideas from various domains.

Salon theme: innovative materials, processes and products (energy, environment, health, agriculture, resources, etc.).

Graphic presentations accompanied by models, prototypes, finished products, video presentations, as well as data on the social, financial impact of the work will enjoy the express appreciation of the jury.

The stand of Politehnica University Timișoara, one of the most important in the Salon, was rewarded with the following awards:

### 1. Integrated thermal deflector

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Gold Medal and Diploma of Excellence INMA - National Research and Development Institute for Machinery and Installations for Agriculture and Food Industry

### 2. Tubular lighter from powdered ferrous waste

- Inventors: Teodor HEPUȚ, Ana SOCALICI, Erika ARDELEAN, Marius ARDELEAN, Nicolae CONSTANTIN, Miron BUZDUGA, Radu BUZDUGA
- Pro Invent Medal and Excellence Award University of Agronomic Sciences and Veterinary Medicine in Bucharest - USAMV

### 3. Installation for determining the resistance to thermal fatigue

- Inventor: Camelia PINCA- BRETOTEAN
- Pro Invent Medal

### 4. R.I.M.S. Air by Corneliu

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Pro Invent Medal and Special Award SPWiR (Inventor's Association from Poland)

### 5. "DEXTER"'s Laboratory

- Inventors: Corneliu BIRTOK BĂNEASĂ, Adina BUDIUL BERGHIAN
- Special Award Romanian Association for Unconventional Technologies - ARTN

### 6. MicroU

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Diploma of Excellence Justin Capră Association

### 7. Bircor

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Excellence Award University of Agronomic Sciences and Veterinary Medicine in Bucharest - USAMV



## International Exhibition of Inventions and Innovations “Traian Vuia” Timișoara, 5<sup>th</sup> edition, June 12-14, 2019, Timișoara Multiple medals for Politehnica University Timisoara

Politehnica University Timisoara has once again confirmed its potential for innovation. At the 5<sup>th</sup> edition of the “Traian Vuia” International Salon for Inventions and Innovations Timișoara, which took place for three days between June 12 and 14, 2019 at the Youth House, UPT had a remarkable presence, exposing 21 inventions.

The Grand Prize of the International Traian Vuia Salon was awarded to Politehnica University Timisoara. The report of the UPT delegation also includes 14 gold medals, 4 silver medals, 3 bronze medals, 10 special prizes and 6 diplomas of excellence.



The stand of Politehnica University Timișoara, one of the most important in the Salon, was rewarded with the following awards:

1. Installation for evaluating the effects of exposure to magnetic field
  - Inventors: Ștefan PAVEL, Lavinia Afrodita LUPA, Marian Liviu MOCAN, Daniel-Viorel UNGUREANU, Ioan Silviu DOBOȘI, Aurel MOLDOVAN, Alina Georgiana SIMINA, Alexandru BÎNZAR, Silviu Cristian SUCIU
  - Gold Medal, IDEA Special Award, Special Award University of Medicine and Pharmacy “Victor Babeș” Timișoara and Grand Prize of the International Salon of Inventions “Traian Vuia” 2019
2. Construction ground electrode with corrosion-resistant connections
  - Inventors: Ștefan PAVEL, Daniel-Viorel UNGUREANU, Marian Liviu MOCAN, Ioan Silviu DOBOȘI, Florin-Ionel TOPALĂ
  - Gold Medal and Special Prize of the Polytechnic University of Bucharest
3. Integrated thermal deflector
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Gold Medal and Special Award NATIONAL RESEARCH AND DEVELOPMENT INSTITUTE FOR MECHATRONICS AND MEASUREMENT TECHNIQUE INCDMTM BUCHAREST
4. Process for treating residues from the incineration of households waste by solidification-stabilization in ash rock
  - Inventors: Mihail Reinhold WÄCHTER, Ioana IONEL, Adina NEGREA
  - Gold Medal and IDEA Special Award - Diploma awarded by Ötlet Club 13 Egyesület
5. Tubular lighter from powdery ferrous waste
  - Inventors: Teodor HEPUȚ, Ana SOCALICI, Erika ARDELEAN, Marius ARDELEAN, Nicolae CONSTANTIN, Miron BUZDUGA, Radu BUZDUGA
  - Gold Medal
6. R.I.M.S. AIR by CORNELIU
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Gold Medal, ISIM Special Award and Diploma of Excellence Petroșani University
7. Installation for determining the resistance to thermal fatigue
  - Inventor: Camelia PINCA- BRETOTEAN
  - Gold Medal

8. Process for the synthesis of silver nanowires coated with low melting point metal nanoparticles

- Inventors: Radu Nicolae BĂNICĂ, Andrea Rozalia KELLENBERGER, Daniel Horațiu URSU, Liliana CSEH, Petrică Andrei LINUL, Nicolae VASZILCSIN
- Gold Medal and OSIM Special Award

9. FSU Suction air filter

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Gold Medal

10. Inverted suction filter

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Gold Medal

11. W Suction air filter

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Gold Medal

12. Dynamic air transfer system

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Gold Medal and ARTN Special Award

13. Novel modular stack design for high Pressure PEM water electrolyzer technology with wide operation range and reduced cost (PRETZEL)

- Project team coordinated by Andrea KELLENBERGER
- Gold Medal

14. Portable flash memory, "stick" type, on Ethernet interface

- Inventors: Roland SZABO, Aurel GONTEAN
- Gold Medal and Special Award National Research and Development Institute for Mechatronics and Measurement Technique INCDMTM Bucharest

15. "DEXTER"'s Laboratory

- Inventors: Corneliu BIRTOK BĂNEASĂ, Adina BUDIUL BERGHIAN
- Silver Medal and Diploma of Excellence University of Agricultural Sciences and Veterinary Medicine of Banat "King Mihai I of Romania" in Timisoara – USAMVB / Justin Capra

16. Bircor

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Silver Medal

17. RoboFIH Team

- Inventor: Ovidiu TIRIAN
- Silver Medal

18. Power steering- "DEXTER"'s Laboratory

- Inventors: Amalia DASCĂL, Corneliu BIRTOK BĂNEASĂ
- Silver Medal

19. MicroU

- Inventor: Corneliu BIRTOK BĂNEASĂ
- Bronze Medal

20. AC Installation—experimental stand

- Inventor: Vasile ALEXA
- Bronze Medal

21. GPL supply plant – "DEXTER"'s Laboratory

- Inventors: Sorin RAȚIU, Corneliu BIRTOK BĂNEASĂ
- Bronze Medal





## European Exhibition of Creativity and Innovation - EUROINVENT, May 16-18, 2019, Iași Multiple medals for Politehnica University Timisoara

The Exhibition promotes the International and Romanian creativity in European context by displaying the contributions of consecrated schools of higher education and academic research and also of individual inventors. In this way, at the exhibition are participating researchers and inventors through associations, foundations or institutions specialized on development and creativity.

While the economic crisis continues to get worse, creativity and innovation are the key to strengthen Europe's development. Creativity and innovation contribute to economic prosperity as well as to social and individual well-being.

Innovative Researches where Students, MsD, PhD and Post Doc researchers were able to present their projects. The International Jury evaluated all registrations and will award Diplomas, Medals and Prizes. All the inventions and research details have been published in EUROINVENT Catalogue (ISBN).

The stand of Politehnica University Timișoara was rewarded with the following awards:

1. Tubular lighter from powdery ferrous waste
  - Inventors: Teodor HEPUȚ, Ana SOCALICI, Erika ARDELEAN, Marius ARDELEAN, Nicolae CONSTANTIN, Miron BUZDUGA, Radu BUZDUGA
  - Gold Medal
2. Installation for determining the resistance to thermal fatigue
  - Inventor: Camelia PINCA BRETOTEAN
  - Gold Medal
3. Suction filter FSU
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Gold Medal
4. Dynamic air transfer system
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Gold Medal
5. Synthesis process of silver nanowires coated with low melting point metal nanoparticles
  - Inventors: Radu Nicolae BĂNICĂ, Andrea Rozalia KELLENBERGER, Daniel Horațiu URSU, Liliana CSEH, Petrică Andrei LINUL, Nicolae VASZILCSIN
  - Silver Medal and Diploma of Excellence with Medal awarded by the State University of Medicine and Pharmacy "Nicolae Testemitanu" from the Republic of Moldova, Diploma of Excellence awarded by the University of Wallachia Targoviste Research Center "Nanomaterials for mechanical microsystems"
6. R.I.M.S. Air by Corneliu
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Silver Medal, Dorel Cernomazu Special Award Ștefan cel Mare University of Suceava - USV, Certificate of Excellence - Petroșani University, Certificate of Excellence Romanian Institute for Research and Advanced Studies - IRSCA
7. Suction filter W
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Silver Medal and Technical University of Cluj Napoca - UTC Special Award
8. MicroU
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Bronze Medal and Special Excellence Innovation Award - Polytechnic University of Bucharest
9. Bircor
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Bronze Medal
10. "DEXTER"'s Laboratory
  - Inventors: Corneliu BIRTOK BĂNEASĂ, Adina BUDIUL BERGHIAN
  - Special Innovation Award & Gold Medal - University of Craiova, HOFIGAL Diploma of Excellence and Diploma of Excellence National Research - Development Institute for Machines and Installations for Agriculture and Food Industry - INMA
11. Integrated thermal deflector
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Special Prize Polytechnic INNOVATION AWARD awarded by the Polytechnic University of Bucharest
12. Inverted suction filter
  - Inventor: Corneliu BIRTOK BĂNEASĂ
  - Special Excellence Innovation Award - Polytechnic University of Bucharest

## The International Fair of Inventions and Practical Ideas INVENT-INVEST, May 7-9, 2019, Ploiești Diplomas and medals for Politehnica University Timisoara

The event The International Fair of Inventions and Practical Ideas INVENT-INVEST took place in Ploiești in the period of 7-9 may 2019, inside the Petrol-Gas University of Ploiești and it was organised by the Petrol-Gas University of Ploiești, the Romanian Inventors Society and "Gheorghe Asachi" Technical University of Iași.

The presented works under the tutelage of Politehnica University of Timișoara were appreciated and awarded with the Diploma of Excellence with the medal of honor of the INVENT-INVEST fair, the Diploma of Excellence (Chamber of Commerce and Industry of Prahova), Certificate of Excellence (Justin Capra Inventors Association) and Diploma of Excellence (Prahova County Council, Prahova County Natural Sciences Museum).

1. Portable device for signaling pain,

- Inventor: Ștefan PAVEL;
- Diploma of Excellence with the medal of honor of the INVENT-INVEST fair;



3. Compressed air system for dental units,

- Inventors: Ștefan PAVEL, Ioan BORZA,
- Certificate of Excellence (Justin Capra Inventors Association);



2. Earthing electrode with corrosion resistant connection,

- Inventors: Ștefan PAVEL, Daniel-Viorel UNGUREANU, Marian Liviu MOCAN, Ioan Silviu DOBOȘI, Florin-Ionel TOPALA
- Diploma of Excellence (Chamber of Commerce and Industry of Prahova);



Diploma awarded for the participation at The International Fair of Inventions and Practical Ideas INVENT-INVEST, Ștefan PAVEL, Diploma of Excellence (Prahova County Council, Prahova County Natural Sciences Museum)



## „Orizonturi Universitare” Association Prize and Diploma „Eminent Researcher 2019” Assoc. Prof. Călin-Adrian POPA, PhD

Călin-Adrian Popa is an Associate Professor at the Department of Computers and Information Technology from the Faculty of Automation and Computers. His research activity is mainly focused on the field of machine learning in general, and neural networks in particular. He was awarded the Prize and Diploma „Eminent Researcher 2019” for Remarkable results in the academic activity by the „Orizonturi Universitare” Association.

During his academic career, he published, as the only author (with 2 exceptions), 5 papers in ISI journals in the Q1 quartile, and 1 paper in an ISI journal in the Q2 quartile, 2 of them at the famous journal Neural Networks, which had an impact factor of 7,19. He also published, as the only author (with one exception), 30 papers at ISI conferences, 7 of them at the famous International Joint Conference on Neural Networks (IJCNN), the most important and prestigious conference in the field of neural networks.

He was the director of the project PCD-TC-2017-41, granted in the internal competition „Proiecte de Cercetare, Dezvoltare pentru Tineri Cercetători (PCD-TC)” (Projects of Research, Development for Young Researchers), organized by the Politehnica University Timișoara. As a recognition of his research activity, he was appointed reviewer for 16 ISI journals in the Q1 quartile and for 3 ISI journals in the Q2 quartile, including the famous journal IEEE Transactions on Neural Networks and Learning Systems, which has an impact factor of 11,68.





## Politehnica University Timișoara Award for EXCELLENCE IN RESEARCH Lecturer Anamaria TODEA, PhD

At the end of the year, Politehnica University Timișoara awarded the “Excellence in Research” prizes to young people who achieved remarkable results during the academic year 2018–2019.

Anamaria Todea is Lecturer at the Department of Applied Chemistry and Engineering of Organic and Natural Compounds from the Faculty of Industrial Chemistry and Environmental Engineering. Her research activity occurs in the Biocatalysis Group led by Prof. Dr. Eng. Francisc Peter from Politehnica University and it is focused on the field of biotechnology and biocatalysis, mainly in enzymatic synthesis and characterization of some biomaterials using renewable raw materials and development and characterization of stable and personalized biocatalysts.

During the 2018–2019 year, she published as first/corresponding author 4 papers in ISI journals in the Q1 quartile and 1 paper in an ISI journal in the Q2 quartile. One of the papers published in Biotechnology Journal was selected as Front Cover of the Journal no 6/2018. She has an Hirsh Index of 6. Her results were presented in this period at 3 prestigious European International Conferences. In the same period she was reviewer for 3 ISI journals in the Q2 quartile.



## Politehnica University Timișoara Award for EXCELLENCE IN RESEARCH Lector Lavinia-Afrodita LUPA, PhD

At the end of the year, Politehnica University Timișoara awarded the “Excellence in Research” prizes to young people who achieved remarkable results during the academic year 2018-2019.

Lavinia-Afrodita Lupa is lector at the Faculty of Industrial Chemistry and Environmental Engineering. Her research activity is mainly carried out in the field of environmental engineering, in close correlation with chemical engineering. In the year 2018-2019 she published 16 articles in ISI journals, from which at 3 as first author and at 2 as the corresponding author. Her main research area is represented by the water treatment technologies using adsorption processes. In this direction she has been continuously concerned with obtaining and developing new viable, efficient and economical adsorbent materials, by reclaiming different wastes and by-products resulting from different industrial branches. The useful elements from waste

resulted, especially from hot -dip galvanizing processes, were reclaimed as layered double hydroxides and used with success in different adsorption or photocatalytic processes. In order to improve the adsorbent capacities of the studied materials, in the last years she has focused on the use of ionic liquids as green extractants in the removal processes of pollutants from water. In this direction she published as first author a manuscript in the journal of Separation and Purification Technology, Q1 quartile having an impact factor of 5.107. The importance and novelty of the experimental studies presented in this article are underlined by the large number of citations gathered in one year since publication, namely 18 (without self-citations).



