



**The IVth International Congress of
Automotive and Transport Engineering
Automobiles, Mobility, Modeling, Alternative solutions
17-19 October 2018, Technical University of Cluj–Napoca, Romania**

AMMA 2018 is the annual international congress of the Society of Automotive Engineers of Romania (SIAR) and is organized under FISITA patronage by the Technical University of Cluj-Napoca and SAE International (Society of Automotive Engineers) as co-host.

The Congress purpose is to gather members from academia, industry and government and present their possibilities for investigations and research, in order to establish new future collaborations in the automotive engineering and transport domain.

The students are also invited (free of charge) to take part and learn the most recent developments in their field of interest.

A special workshop will be organized to discuss the challenges that universities are facing as providers of human resource for the industry (Automotive Engineering and Transport Education Workshop). This workshop will include presentations on innovative education methods in automotive and transport engineering to better serve the need of the industry.

AMMA Evolution

AMMA edition	Type of event	Number of participants	Number of papers	Patronage
AMMA 2002	National Congress with International Participation	311	188	Patronage of FISTA
AMMA 2007	International Congress	288	156	Patronage of FISTA
AMMA 2013	International Congress	275	82	Patronage of FISTA
AMMA 2018	International Congress	333	143	Patronage of FISTA & SAE co-host

Source: <http://www.amma2018.ro/index.php/amma/index/pages/view/history>

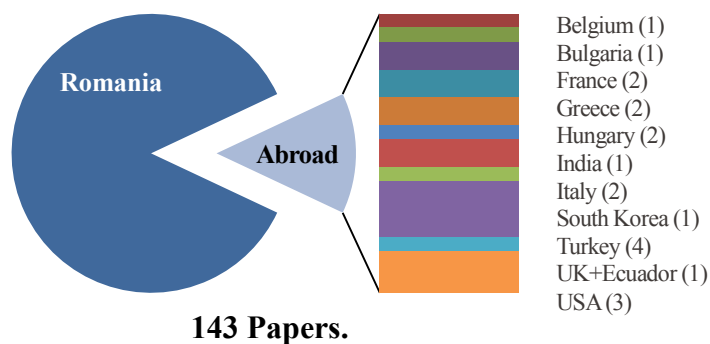
Topics

- *Hybrid and electric vehicles;*
- *Powertrain and propulsion;*
- *Advanced engineering, software and simulation;*
- *Road safety, traffic control and transportation engineering;*
- *Manufacturing technologies and Materials;*
- *Green Vehicle Solutions.*

Papers

The proceeding of AMMA 2018, contain **143 reviewed and accepted papers for presentation**, that are published in two volumes:

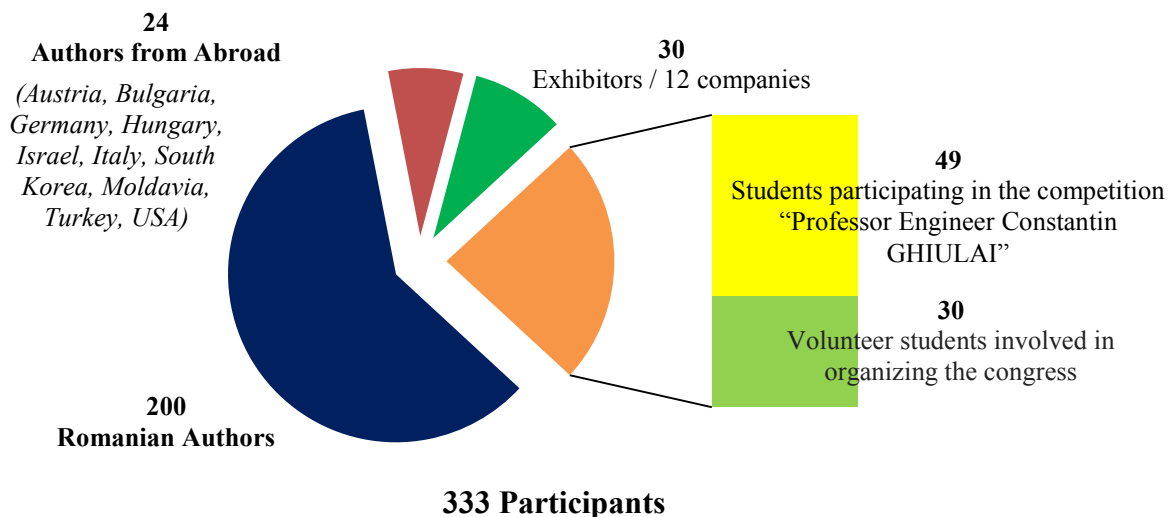
- Nicolae Burnete & Bogdan Ovidiu Varga Editors, *Proceedings of the 4th International Congress of Automotive and Transport Engineering (AMMA 2018)*. Springer Publishing Editor, ISBN 978-3-319-94408-1.
 - contains 99 papers indexed in Springer Database <http://www.springer.com/series/16022>,
 - the papers represent a collection of selections made in a peer review mode from a serious number of papers that have been sent for evaluation by academia, research scientist and R&D employees working in the automotive industry;
- Nicolae Filip & Marius Gheres Editors, *AMMA 2018 - The IVth International Congress, Selection of Papers*, Ed. U.T.Press, Cluj-Napoca, ISBN 978-606-737-314-1.
 - 44 papers - abstracts available online on the conference website http://www.amma2018.ro/public/site/papers/cuprins_UTPress.pdf.



The published papers show the results of **257 authors from Romania** (123 papers) and **35 authors from abroad**: Belgium, Bulgaria, Ecuador, France, Greece, India, Italy, South Korea, Turkey, Hungary, UK and USA (20 papers).

Participants

AMMA - 2018 Congress was attended by members from academia and industry who presented research, opportunities and challenges in the field of automotive engineering and transport.



Papers presented

Plenary Section	Number of papers presented
<i>Automated driving and electromobility</i> , Oliver SCHATZ, Senior Vice President Technical, Robert Bosch KFT.	4
<i>Future mobility</i> , Dirk LAPPE, Managing Director, Porsche Engineering Group GmbH	
<i>The future automobiles new roles and structures</i> , Prof. Dr.-Ing. habil. Prof. E.h. Dr. h.c. mult. Cornel Stan, Fellow of SAE International, President of the Scientific Committee AMMA 2018	
<i>Smart mobility</i> , Dragos NEDELEA	

Keynote Presentations	Number of papers presented
<i>Flash-Boiling Fuel Injection for IC Engines: Principles, Challenges and Limitations</i> , SHER, Eran – Technion, Israel Institute of Technology, Israel	3
<i>Some Remarks on the Electrification of the Powertrain</i> , REUSS, Hans-Christian – University of Stuttgart, Germany	
<i>Looking Towards the Future</i> , DEPCIK, Christopher – University of Kansas, USA	

Section	Number of papers presented
Hybrid and electric vehicles	12
Road safety, traffic control and transportation engineering	21
Powertrain and Propulsion	26
Advanced engineering, software and simulation	24
Manufacturing Technologies and Materials	15
Green Vehicle Solutions	11

Workshops	Number of papers presented
<i>Automated driving: how sensors data “meet” the steering systems</i>	4
<i>Connected industry 4.0 in Bosch plant Cluj</i>	
<i>Electric vehicle range prediction using Artificial Intelligence</i>	
<i>Smart Romania: The country of the learning communities</i>	

TOTAL papers presented	120
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Exhibition

- Q SOUND SOFT
- CAELYNX
- AUTOTECHNICA
- CARRION EXPEDITION
- MERCOM
- MATRIXROM
- LEYKOM
- MAGIC ENGINEERING
- OMNIASIG
- PORSCHE ENGINEERING
- BOSCH
- AVL



Student Contests

The National Student Contest on Automotive Engineering “Professor Constantin GHIULAI”

Section	Number of participants	Winners	Supported by:
Vehicle Dynamics	29	<ul style="list-style-type: none"> – Military Technical Academy “Ferdinand I” Bucharest; – Technical University of Cluj-Napoca; – University of Pitesti. 	
Computer Aided Design	20	<ul style="list-style-type: none"> – Transylvania University of Brasov; – Military Technical Academy “Ferdinand I” Bucharest; – Technical University of Cluj-Napoca; – Technical University Gheorghe Asachi Iasi. 	

Supported by



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CLUJ-NAPOCA

Eveniment realizat cu sprijinul Primăriei și
Consiliului Local Cluj-Napoca



ROMÂNIA
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VISIT CLUJ
The Heart of Transylvania

Event organized with the support of the City
Hall and the Local Council of Cluj-Napoca

Sponsors



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driving technologies



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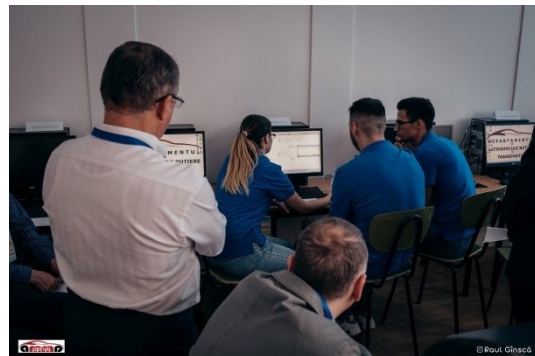
Photo gallery

AMMA 2018



More at: <https://photos.app.goo.gl/FWDgHFWLLc38rbEb8>

Student Contests



More at: <https://photos.app.goo.gl/7FRtt5qXRaLUY8v6>

Closing ceremony



More at: <https://photos.app.goo.gl/D39EYpmZkFAWmaH18>