Curriculum Vitae

PERSONAL INFORMATION

Itu Călin

TRANSILVANIA UNIVERSITY BRASOV

B-dul Eroilor 29, Brasov (Romania)

Personal Mail calinitu@unitbv.ro

WORK EXPERIENCE

Mar 2023 - present

Professor – Transylvania University BRASOV, Mechanical Engineer Department

Responsibilities:

- Prepare and teaching courses, seminars and laboratory for mechanical engineer specialities (Strength of materials, Vibrations, Finite Element Analysis and Multi Body Simulations)
- Coordinate students for undergraduate, dissertation and doctoral theses in the field of mechanics

Oct 2020 – Mar 2023

Associate Professor – Transylvania University BRASOV, Mechanical Engineer Department

Feb 2019 – Oct 2020

Lecturer – Transylvania University BRASOV, Mechanical Engineer Department

Oct 2002 – Feb 2019

Asist. PhD. Eng. – Transylvania University BRASOV, Mechanical Engineer Department

2004 – 2025

Collaborative activity with company from industry SCHAEFFLER company, BRAȘOV (România)

- Consulting and support activity on technical issues related to bearings, shafts and transmission elements, respectively transmission assemblies simulated using an internal Schaeffler Bearinx Simulation Suite software

TATA TECHNOLOGIES company (ex. S.C. CAMBRIC CONSULTING S.R.L)., BRASOV (Romania) - Sr. CAE Analyst Engineer

- MBS analyses made for mechanical systems – see Anexa 1
- FEA analyses made for mechanical systems – see Anexa 2
- Preliminary Hand technical calculus

Mar 2001 – Oct 2002

Engineer of the Design and Research Department

S.C. MARUB S.A., BRASOV (Romania)

- Assurance technical assistance for maintenance and repair diesel engine (ROMAN and MAYBACH)

- Design necessary tooling for workshop
- Coordinate production activity of the maintenance, repair and modernizing department for locomotive, rail cars and rail tools

Nov 1998 – Mar 2001

Mechanical engineer

S.C. CONAS S.A, BRASOV (Romania)

- Coordinate maintenance and repair activity of Deutz engine

Sep 1998 – Oct 1998

Mechanical engineer

S.C. ROMAN S.A., BRASOV (Romania)

- Testing Prototype in the Department Engineer

EDUCATION AND TRAINING

2021

Habilitation graduation (Title thesis - VIRTUAL MODELING AND SIMULATIONS ON METAL AND COMPOSITE STRUCTURES IN THE FIELD OF MECHANICAL ENGINEERING)

2014

Doctorate diploma graduation (Title thesis - CONTRIBUTIONS TO IMPROVING CIRCULAR PLATES MADE FROM LAYERED MATERIAL COMPOSITE)

1998 – 1999

Master graduation

TRANSILVANIA UNIVERSITY, Brasov (Romania)

Bachelor of Science in Mechanical Engineering

Gradution project: FEA simulation of an cylinder engine under different thermal and structural scenario conditions

1993 – 1998

Mechanical engineer diploma

TRANSILVANIA UNIVERSITY, Brasov (Romania)

Bachelor of Science in Mechanical Engineering

Graduation project: Design and calculus of an off-road automotive

1989 – 1993

Bachelor diploma

Dr. I. Meşotă" high school, Brasov (Romania)

Speciality: Mathematics & Physics section

PERSONAL SKILLS

Mother tongue(s): Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English		Independent user			

Curriculum Vitae

Communication skills

Communication ability in teamwork, quickly accommodation to new activities, pleasure to work in the competitive, attractive and dynamic activities, serious and dynamic person

Organisational / managerial skills

Technical Manager for three years (2008 - 2010) of FEA Engineer Team.

- *Proposed project approach,*
- *Estimate budget hours for all CAE new projects*
- *Resource planning*
- *Coordinate CAE projects*
- *Final checking projects*

Extra Curricular Activities

Books published:

STRENGTH OF THE MATERIALS – Set of problems, the 2nd volume– 2005

CONTRIBUTIONS TO THE IMPROVEMENT OF CIRCULAR PLATES MADE OF LAYERED COMPOSITE MATERIALS, Doctorate thesis, 2014

STRATIFIED COMPOSITE MATERIALS, 2015

STRENGTH OF MATERIALS IN MECHANICAL ENGINEERING - course, 2019

STRENGTH OF MATERIALS 1 – Set of applications, 2018

STRENGTH OF MATERIALS 2 – Set of applications, 2019

MODELING AND DYNAMIC CALCULATION OF MULTIBODY SYSTEMS IN MECHANICAL ENGINEERING – MONOGRAPH, 2021

NUMERICAL AND ANALYTICAL CALCULATION METHODS IN MULTIBODY SYSTEMS, 2021

Articles published: see Anexa 3

Computer skills

- **Office suite**: Microsoft Office (Word, Excel, PowerPoint),
- **CAD software**: AutoCAD, Pro/ENGINEER basic & advanced level (Pro-Mechanism, Pro/Mechanica), MathCAD.
- **FEA softwar**e: ANSYS, MSC PATRAN-NASTRAN, Altair Hyperworks, Abaqus CAE
- **MBS software**: CREO Mechanism, MSC ADAMS, Motion View (Altair Package), SAM 6.1 (Mechanism design software) , SimDrive 3D
- **Image processing tools:** Paint Shop Pro, Corel Draw 7, Corel Photo-Paint

Other relevant activities R&D Heavy Machinery

Member of the R&D team for the development of the 8-ton payload and 14-meter lifting height machine - **1644 High Capacity - JLG**. Project coordination: Sr. Chief Engineer Horia Haghiac, Period: 2014 – 2018

https://www.jlg.com/en/equipment/telehandlers/jlg-telehandlers/1644

Member of the R&D team for the development of the 7-ton payload and 10-meter lifting height machine - **1732 High Capacity - JLG**. Project coordination: Sr. Chief Engineer Horia Haghiac, Period: 2014 – 2018

https://www.jlg.com/en/equipment/telehandlers/jlg-telehandlers/1732

Member of the R&D team for the development of the 12-ton payload and 10-meter lifting height machine – **T26 High Capacity - JLG**. Project coordination: Sr. Chief Engineer Horia Haghiac, Period: 2014 – 2015

Member of the R&D team for the development of the 4.5-ton payload and 23-meter lifting height machine - **1075 High Capacity - JLG**. Project coordination: Sr. Chief Engineer Horia Haghiac, Period: 2019 – 2020

https://www.jlg.com/en/equipment/telehandlers/jlg-telehandlers/1075

Responsibilities within R&D Heavy Machinery projects:

- Coordination and management of the technical calculation team
- Generation of technical calculation memories
- Simulations and virtual analyses using the finite element method
- Simulations and virtual analyses using the multibody systems method
- Validations and correlations of results from virtual simulations with experimental measurements

Other relevant activities
R&D Grant/projects

Team member of few R&D grant/projects won through national or international competition within Transilvania University Brasov

1.Cercetări privind comportarea mecanica a unor structuri compozite si nano-compozite hibride ranforsate cu particule, țesături si materiale reciclate in condiții agresive de mediu, NR. Proiect PN-II-ID-PCE, IDEI, cod ID_733 nr. 601 / 19.01.2009 (2009-2011)

Director contract: prof. univ. dr. ing. Cerbu Camelia

2. Cercetări privind conservarea caracteristicilor mecanice ale pieselor din materiale compozite cu matrice polimerica solicitate in mediu coroziv cu variatii de temperatura si umiditate perioada: 2004 – 2007

Director contract: prof. univ. dr. ing. Cerbu Camelia

3. Monitorizarea integrității structurale si autorepararea palelor de turbine eoliene si a altor structuri din compozite inteligente perioada:2014 - 2017 finanțator: UEFISCDI NrContract:59/2014

Director contract: prof. univ. dr. ing. Curtu Ioan

4. Efectuare calcule pentru rezistenta caroseriei autobuzului interurban HOCLL, Contract cercetare științifică 13652/7272/2007 cu ROMAN S.A

Director contract: conf. univ. dr. ing. Ulea Mihai

Anexa 1

Type of projects made in MBS (multi body simulation) domain:

- Clearance study mechanism assembly (example: scraper mechanism, bulldozer mechanism – for tilt motion blade, tipping motion blade and up-down blade). **Software: Pro/E Mech, MSC ADAMS**
- Established the planar and spatial trajectory for the final component of an assembly mechanism (example: bulldozer blade, scraper blade). Create motion envelope of the final mechanism component. **Software: Pro/E Mech**
- Determination the kinematically graph parameters for different moving part components of the mechanism assembly studied for a complete functional cycle (example: velocity and acceleration graphs of the pistons from a hydraulic pump, velocity and acceleration graphs of the blade bulldozer or blade scraper for a complete blade motion: “up-down”, tilt motion “for-after”). **Software: MSC ADAMS**
- Establish load grade of hydraulic pump joints taking into account to functional conditions of pump (pump speed, working pressure), mass and inertia properties of all part components and gravity. **Software: MSC ADAMS.**
- Establish hydraulic pump coefficient of non-uniformity in terms of piston numbers of the pump and the evolution in time of torque motor pump. **Software: MSC ADAMS .**
- Calculate load level in the part components from an extensible sofa with open device based on latent energy accumulation into a central resort. Determined reaction forces from all sofa joints and created free-body diagram for all part components of the mechanism. **Software: MSC ADAMS.**
- Establish normal effort expends by an occupant with different sizes in order to close the mechanism sofa for some preload forces of the resort which accumulation latent energy and open the sofa mechanism. **Software: MSC ADAMS.**
- Bellows compression mechanism, MBS study, Flexible body mechanism analysis. **Software: Motion View (Altair package)**
- Hand calculus of reaction forces for a 4-lever mechanism (JIB 4ft with 36x72 inch platform). Compare the hand calculus solution with MBS software **(Pro/Mechanism & Motion View).**
- Experimental data vs. MBS simulation correlation process on joint force reactions for the John Deere H215 Harvester. **Software: MSC ADAMS 2012.**
- Hand calculus made for kinematic and dynamic bodies motion from High Capacity machines. **Software: Excel & MathCAD**.
- Hand calculus made for pin connections for normal and accidental loading type. **Software: Excel & MathCAD**.
- Buckling and bending safety factor hand calculs made for booms. **Software: MathCAD**
- Stability analysis of two High Capacity machines (Telehandler TH-8010D & TH-7130D) with different rated load using the specification given by existing standards using different attachments (Forks, Bucket & Tire Handler). **Software: MSC ADAMS 2015.**
- Correlation process of tire download forces obtained from virtual simulations with tire forces obtained from real measurements. **Software: MSC ADAMS 2015.**
- Create chart stability diagram for High Capacity machines (TH-810D & TH-713D) based on virtual simulation.
- Simulation of High Capacity machines passing over potholes to extract loading history using for durability estimation of frame and other body components (coupler, carriage and booms). **Software: MSC ADAMS 2015.**
- Generate hand calculus report of High Capacity Telehandler for all dangerous load cases obtained from stabilty chart diagram of machine (TH-810D & TH-713D). **Software: MathCAD**
- Hand calculus and virtual simulation stability of Telehandler High Capacity using as attachment platform deck with people and tools taking into account tire deformations. **Software: MathCAD, Excel & MSC ADAMS.**

Anexa 2

Type of projects made in FEA (Finite Element Analysis) domain:

- Performed Modal and static analysis for the exhaust or intake manifold lines for different type of engine. Compare the frequencies obtained from modal analysis with the ignition frequencies of the engine delivered by the customer. Searching the optimal solution in order to avoid the lowest frequencies obtained from modal analysis or the frequencies that are closer to the ignition engine frequencies. **Software: ANSYS, MSC Patran-Nastran, Abaqus, Altair Optistruct**
- Perform Linear and non-linear analysis of the brackets from the exhaust system. Establish the stress and displacement level of the brackets under the inertial loading applied on the model. Software: **Software: ANSYS, MSC Patran-Nastran, Abaqus, Altair Optistruct.**
- Performed static nonlinear analysis on bolted brackets with pretension and contact simulation. **Software: MSC/Marc, Abaqus, Altair Optistruct**
- Non-linear analysis for deformable body (gasket from steel or cooper material) under variable loading considering contact between parts. **Software: MSC Marc, Abaqus.**
- Fatigue calculation made for part components (after-cooler brackets, housings, block-pumps) based on maximum and minimum stress values obtained from the static linear or non-linear analyses. **Software: Design Life.**
- Large Displacement Finite Element Analysis to simulate crash impact of a machine structure with a rigid wall. **Software: Radioss (Altair Package).**
- Study the structural behavior of a blank plate in a stamping process based on sheet metal forming simulation solution.*Incremental analysis type*. **Software: Hyperform (Altair package)**
- Brackets Life estimation for Hybrid cars (Truck & Van types) based on frequency response analysis. **Software: Design Life & Radioss (Altair Package).**
- Telehandler High Capacity boom stress simulation using loading established from Multi Body simulation scenario or hand calculus. **Software: Altair Hypermesh / Optistruct**

Anexa 3

Scientific publications

Articles published:

1. ***ITU Calin**, Analysis for some constructive parameters of the engine with turning arm comparison by conventional engine with internal combustion,* TEHNONAV 2006, Constanta

2. ***ITU Calin**, Sorin Popa, Structural behavior evaluation of the piston compressor con-rod based on dynamic stress simulation,* TEHNONAV 2006, Constanta

3. *CIOFOAIA Vasile, **ITU Calin**, On the displacement determination for the circular plates with radial stiffners of variable section width,* ACME 2006, Iasi

4. CIOFOAIA Vasile, RUSU Ionel, ***ITU Calin***, Asupra unor aspecte privind vibratiile laterale ale placilor izotrope, Buletinul AGIR nr.4/2005 octombrie – noiembrie

5. ***ITU Calin**, Florin DOGARU, Marius BABA*, *Dynamic con-rod analysis for different type of materials based on virtual simulation,* BRAMAT 2007, Brașov

6. ***ITU Calin,** A possible design solution of the engine for minimize consumption and reduction pollution, COMAT 2008, Brașov*

7. Stanciu Mariana D, Curtu I, **Itu C.**, Savin Adriana*, Researches concerning to the free and forced vibrations of the acoustic ligno-cellulose plates,* 12th International Research/Expert Conference ”Trends in the Development of Machinery and Associated Technology TMT 2008”, Istanbul-Turcia, 2008

8. STANCIU Mariana, CURTU I, **ITU C**, Grimberg R, *Analiza dinamica prin metoda elementelor finite a placilor acustice din componenta chitarei,* PROLigno (CNCSIS cu codul 746 B+, indexata in BDI Academic Search Complete-EBSCO Publishing Ltd USA), vol. 4, Nr. 1-2008 (martie), p. 41-54, ISSN 1841-4737

9. CURTU I, STANCIU Mariana, **ITU C**, GRIMBERG R, *Numerical Modelling of the Acoustic Plates as Constituents of Stringed Instruments*, 6th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2008, Tallinn, Estonia

10. STANCIU MARIANA DOMNICA, CURTU IOAN, **ITU C**, 19th INTERNATIONAL DAAAM SYMPOSIUM "Intelligent Manufacturing & Automation: Focus on Next Generation of Intelligent Systems and Solutions" 22-25 Octombrie 2008, Trnava, Slovacia

11. CURTU I, STANCIU MARIANA DOMNICA, **ITU C**, SAVIN ADRIANA, *Aspects Regarding to the Frequency Response of the Acoustic Plates with Finite Element Method*, BULETINUL INSTITUTULUI POLITEHNIC DIN IASI. PUBLICAT DE UNIVERSITATEA TEHNICA GH. ASACHI IASI. SECTIA CONSTRUCTII DE MASINI, 2008

12. Stanciu M, Curtu I, **Itu C**, *Influenta geometriei si a proprietatilor fizico-mecanice si elastice ale materialelor lignocelulozice asupra frecventelor proprii ale placilor de chitara utilizand FEM*, Buletinul AGIR nr. 1/2009

13. Curtu I., Stanciu M.D., **Itu C.**, Savin A., Rosu D., *Research regarding structural optimization of classical guitar body*, Proc. of The 7th Edition of International Conference „Wood Science and Engineering in the Third Millennium”, ICWSE 2009, 4-6 June 2009, Brasov, ISSN 1843-2689, pp. 654-662, IUFRO si UEA

14. Stanciu Mariana Domnica , Curtu Ioan , Cosereanu Camelia , **Itu Călin** , Rusu Sebastian, Năstac Silviu, *New concept about stiffness of guitar soundboard based on golden section numbers*, TMT 2009, Hammamet, Tunisia

15. **C. ITU**, C. CERBU, A. C.V. POPA, *Computational methods concerning the simmulation of the mechanical tests in case of some composite materials,* COMEC 2009, Brașov

16. Ulea, M., Itu, C., *FEM Analysis for Staticaly Roll Over Test of a Bus Bodywork Section*, COMAT 2010, Brașov

17. Ioan CURTU, Mariana Domnica STANCIU, Vasile CIOFOAIA, Janos TIMAR, Raimond GRIMBERG, **Călin ITU**, Proceedings of the 16th International Conference The Knowledge Based Organzation – Applied Technical Sciences and Advanced Military Technologies, 25-27 November 2010, Sibiu, ISSN 1843-6722, pp. 66 – 70

18. CERBU, Camelia; **ITU, Călin**; CURTU Ioan, *The problem of the using of the composite materials reinforced with glass fibres to manufacturing of some components of the garden chairs*, Journal ProLigno, vol. 6, Nr. 3, septembrie 2010, ISSN 1841-4737, pp.51-60

19. **C. Itu**, C. Cerbu, Virtual methods for the assessment of the forced response of a structure under the action of an external disruptive force, COMEC 2011, Braşov

20. Stanciu M.D, Curtu I., Cerbu C., Timar I., **Itu C.,** *The Simulation of Accidental Impact with Stones from Road Traffic in Case of Noise Barriers made of Different Materials***,** in Proceedings of 15th International Research/Experts Conference "Trends in the Development of Machinery and Associated Technology –TMT 2011, Praga 12-18 septembrie 2011, ISSN 1840 – 4944, pp. 629-632

21. Curtu I., **Itu. C**, Nastac S., Stanciu M.D., *On Dynamic Characterization of Flexible Structures Due to Impulsive Actions,* in Proceedings of 10th International Conference in Vibration Problems, Praga 05-08 septembrie 2011, ISBN 978-80-7372-759-8, pp. 255-261

22. **Itu Călin**, Curtu Ioan, Năstac Silviu, Stanciu Mariana Domnica, *Particular Issues on Dynamics of Flexible Structures* in E-Proceedings of the International Conference Challenges of the Knowledge Society, CKS – CERDOCT Doctoral Schools, Bucuresti, 14-15 Aprilie 2011, ISSN 2247 – 0875, ISSN – L 2247 – 0875, p. 663 – 668

23. Stanciu Mariana Domnica, Curtu Ioan, **Itu Calin**, Nastac Silviu, Savin Adriana, *The Dynamic Behavior of Sound Barrier in case of Accidental Impact with Stones from Road Traffic*, in E-Proceedings of the International Conference Challenges of the Knowledge Society, CKS – CERDOCT Doctoral Schools, Bucuresti, 14-15 Aprilie 2011, ISSN 2247 – 0875, ISSN – L 2247 – 0875, p. 669– 673

24. Stanciu M.D., Curtu I., **Itu C.**, Nastac S., Timar I., *On Static and Dynamic Behavior of Noise Barriers Structures using FEA,* in Proceedings of 10th International Conference in Vibration Problems, ISBN 978-80-7372-759-8, pp.491-496

25. **C. Itu**, M. L. Scutaru, *Comparative dynamic analysis for a door car using deferent types of materials based on virtual simulation*, Proceedings of the 4th International Conference "Advanced Composite Materials Engineering", DERC Publishing House, USA 2012

26. S. VLASE, P.P. TEODORESCU, **C. ITU**, M.L.SCUTARU, *Elasto-Dynamics of a Solid with a General "Rigid" Motion Using FEM Model. Part II. Analysis of a Double Cardan Joint*, pp.882-893 Romanian Journal of Physics, Volume 58, Number 7-8, 2013

27. **Calin ITU**, Sorin VLASE, Maria Luminita SCUTARU, Consuella Sofia PENA, Paul Nicolae BORZA, Mircea MIHĂLCICĂ, Universal absorber applied to NVH in EV's powertrain, Acoustics and Vibration of Mechanical Structures – AVMS 2017, Proceedings of the 14th AVMS Conference Timișoara, România, May 25-26, 2017

28. **Calin ITU**, Andreas Ochsner, Sorin Vlase and Marin I Marin, Improved rigidity of composite circular plates through radial ribs, PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART L-JOURNAL OF MATERIALS AND DESIGN 1464-4207, SAGE JOURNAL

29. Vlase, S., **Itu, C.**, Vasile, O., Năstac, C., Stanciu, M. and Scutaru, M. - Vibration Analysis of a Mechanical System Composed of Two Identical Parts. *Romanian Journal of Acoustics and Vibration*. 15, 1 (Aug. 2018), 58-63.

30. **Itu, C**; Vlase, S.; Scutaru, M.L.; Modrea, A - Bending behavior of a high rigidity plate made by a composite panel, 12th International Conference Interdisciplinarity in engineering (Inter-Eng 2018)

31. Scutaru, M.L.; **Itu, C.**; Marin, M.; Grif, HS - Bending Tests Used to Determine the Mechanical Properties of the Components of a Composite Sandwich Used in Civil Engineering, 12th International Conference Interdisciplinarity in engineering (Inter-Eng 2018)

32. **Itu, C**; Scutaru, M.L.; Modrea, A.; Mihalcica, M. - Traction characteristics for the components of a composite sandwich used to build high-rigidity circular plates, 12th International Conference Interdisciplinarity in engineering (Inter-Eng 2018)

33. **Itu, C.**; Cerbu, C.; Gălățanu, T.-F. - Modeling and Testing of the Sandwich Composite Manhole Cover Designed for Pedestrian Networks, MATERIALS 1996-1944, 2019, 12, 1114

34. Mihaela Violeta Munteanu, Mircea Mihălcică, **Călin Itu**, Sorin Vlase, and Maria Luminita Scutaru - Mechanical design of interaction chamber for the ELIADE array at ELI-NP**,** AIP Advances 10, 2020,

35. **Călin ITU**, Maria Luminița Scutaru, Cătălin Iulian Pruncu, Radu Muntean - Kinematic and Dynamic Response of a Novel Engine Mechanism Design Driven by an Oscillation Arm**,** Applied Sciences 10(8), 2733, 2020

36. **Călin Itu**, Sorin Vlase, Marin Marin, Ana Toderiță - Use of the Symmetries in the Study of Vibration Response of a Hollow Cylinder, SYMMETRY-BASEL, Vol.13, 2021

37. **Itu Călin**, Toderiță Ana, Melnic Lucia-Nicoleta, Vlase Sorin - Effects of Seat Belts and Shock Absorbers on the Safety of Racing Car Drivers, MATHEMATICS, Vol. 10, 2022

38. **Itu Călin**, Bratu Polidor, Drăgan Nicușor, Goanță Adrian Mihai, Nicolae George Lucian, Nițu Marilena Cristina, Borza Paul Nicolae, Vlase Sorin - Dynamic Response of the Inertial Platform of the Laser ELI-NP Magurele-Bucharest Facility, MATHEMATICS, Vol. 10, 2022

39. Vlase Sorin, Marin Marin, Ochsner, Andreas, **Călin Itu** - Elastic response of a hollow cylinder with voids and micropolar structure, CONTINUUM MECHANICS AND THERMODYNAMICS, 2022, Vol.34, Page 855 - 856

40. Bratu Polidor, Goanță Adrian Mihai, Drăgan Nicușor, Vlase Sorin, **Itu Călin**, Nicolae George Lucian, Iacovescu Samir – Dynamic Behavior of the Inertial Platform Related to the Research Facility Building Laser and Gamma at ELI-NP Bucharest, SYMMETRY-BASEL, Vol.14, 2022

41. Baba Marius Nicolae, **Călin Itu** - The influence of dog-bone shaped specimen geometry on tensile test results of fused filament fabricated Nylon 12, JOURNAL OF MECHANICAL SCIENCE AND TECHNOLOGY, 2022

42. **Călin Itu**, Sorin Vlase, Marin Marin – A Vibration Analysis of the Rubber Inertial Dampers Used in Electrical Vehicles, POLYMERS, Vol.14, 2022

43. **Călin Itu**, Sorin Vlase – Impact Attenuator Design for Improvement of Racing Car Drivers' Safety, *Symmetry* , Vol.15, 2023

44. **Călin Itu**, Sorin Vlase – The Effect of Vibrations from Racing Cars on the Human Body in FORMULA STUDENT Races, *Applied Sciences*, Vol.13, 2023

45. **Călin Itu**, Sorin Vlase – The Three-Point Safety Polymeric Belt Webbing versus Four-Point Belt for a Race Car in Frontal Crashes, *Materials*, Vol.16, 2023

46. **Călin Itu**, Maria Luminița Scutaru, Sorin Vlase – The Quick Determination of a Fibrous Composite's Axial Young's Modulus via the FEM, *Applied Sciences*, Vol.14, 2024

47. Sorin Vlase, **Călin Itu** – The Properties of Structures with Two Planes of Symmetry, *Symmetry* , Vol.16, 2024

48. Mostafa Katouzian, Sorin Vlase, **Călin Itu,** Maria Luminița Scutaru - Calculation of Homogenized Mechanical Coefficients of Fiber-Reinforced Composite Using Finite Element Method, *Applied Sciences*, Vol.17, 2024

49. **Călin Itu**, Maria Luminița Scutaru, Sorin Vlase – Elastic Constants of Polymeric Fiber Composite Estimation Using Finite Element Method, *Polymers*, Vol.16, 2024

50. Sorin Vlase, **Călin Itu**, Marin Marin – Gibbs–Appell Equations in Finite Element Analysis of Mechanical Systems with Elements Having Micro-Structure and Voids, *Mathematics* , Vol.12, 2024

51. **Calin Itu**, Sorin Vlase, Marin marin, Andreas Ochsner - Vibration analysis of metallic structure of an innovative dam gate, *Sage journals*, Vol 238, 2024

52. Sorin Vlase, **Călin Itu**, Marin Marin, Maria Luminița Scutaru, Florin Sabou, Radu Necula - Vibration analysis of the Gamma-Ray element in the ELI-NP interaction chamber (IC), *Journal of Computational Applied Mechanics*, 2024

53. Sorin Vlase, Călin Itu, Marin Marin, Andreas Ochsner, Ana Toderiță-Santean - Response of safety belt webbing used for formula student race car in a frontal collision, *Sage Journals*, Vol 238, 2024