



Curriculum vitae Europass



Personal Information

First name / Surname **Daniel Condurache**

Address "Gheorghe Asachi" Technical University of Iași, Romania

Phone +40 232242109 Mobile: +40 744615285

E-mail daniel.condurache@gmail.com

Web <http://www.ac.tuiasi.ro/~dcondurache/>

Nationality Romanian

Data of birth 15.08.1955

Desired employment / Occupational field

CNATDCU
Mechanical Engineering, Mecatronics and Robotics Commission

Main activities and responsibilities

Member

Work Experience

Dates 2012 → 2020

Occupation and position held Vice-rector

Main activities and responsibilities Informatization and digital communications

Name and address of employer "Gheorghe Asachi" Technical University of Iași, Romania

Dates 2005 - 2012

Occupation and position held Head of Department

Name and address of employer "Gheorghe Asachi" Technical University of Iași, Romania

Main activities and responsibilities Department of Theoretical Mechanics

Dates 2001 - present

Occupation and position held Professor

Name and address of employer "Gheorghe Asachi" Technical University of Iași, Romania

Main activities and responsibilities Department of Theoretical Mechanics

Dates	1996 - 2001
Occupation and position held	Associate professor
Name and address of employer	"Gheorghe Asachi" Technical University of Iași, Romania
Main activities and responsibilities	Department of Theoretical Mechanics

Dates	1990 - 1996
Occupation and position held	Lecturer
Name and address of employer	"Gheorghe Asachi" Technical University of Iași, Romania
Main activities and responsibilities	Department of Theoretical Mechanics

Dates	1984 - 1990
Occupation and position held	Assistant Professor
Name and address of employer	Polytechnic Institute of Iași
Main activities and responsibilities	Department of Theoretical Mechanics

Education and training

Dates	1990-1995
Title of qualification awarded	PhD. Mechanical Engineering (Magna Cum Laude)
Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iași (România)
International or national classification level	ISCED 4

Dates	1980-1985
Title of qualification awarded	Teacher of Mathematics
Name and type of organisation providing education and training	„Alexandru Ioan Cuza" University of Iași (Romania) Faculty of Mathematics
International or national classification level	ISCED 4

Dates	1975-1980
Title of qualification awarded	Engineer
Name and type of organisation providing education and training	Polytechnic Institute of Iași (Faculty of Electronics and Telecommunications)
International or national classification level	ISCED 4

Personal skills and competences

Engineering skills	<ul style="list-style-type: none"> • Algebraic and geometric procedures for dynamic systems • Astrodynamics, Telecommunications satellites, Satellites formation • Integral transformations on hypercomplex spaces, wavelets analysis • Orbital mechanics • Robot kinematics and dynamics • Courses taught (in Romanian): Mecanică teoretică, Mecanică, Modelarea și simularea sistemelor mecanice, Fundamentele mecanice ale roboticii, Simularea și modelarea sistemelor • CNATDCU member - Mechanical Engineering, Mechatronics and Robotics • PhD supervisor (Mechanical Engineering)
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Mother tongue	Romanian
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Foreign languages

Self-assessment

European level (*)

English

French

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent user	C1	Proficient user	B2	Independent user	B1	Independent user	B1	Independent user
C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user

(*)Common European Framework of Reference for Languages

Driving licence B

Computer skills Proficient user of Matlab, Mathematica, QuarkXpress

Other skills

1999 - present - Editor of the weekly newspaper *Opinia studentească* (both print and online)
Coordinator of the news agency *Cuzanet* (part of the *Alexandru Ioan Cuza University*)
Courses taught: *Tehnici și tehnologii media, Multimedia și Canale media*, Departament of Journalism and Communication Sciences, Faculty of Letters, "Al. I. Cuza" University of Iași
Author of over 300 articles (news, reportages, interviews, investigations etc.) published in *Viața Studentească, Opinia studentească, Europa Liberă, BBC, Expres Magazin, Evenimentul Zilei*
1996-1999 - general manager of the newspaper network *Monitorul*
1993-1996 - deputy editor *Evenimentul Zilei*
1992-1993 - department head *Evenimentul Zilei*
1992-1996 - department head *Expres Magazin*
1990-1992 - reporter *Europa Liberă*
1989-1992 - editor *Opinia studentească*
1982-1989 - deputy editor *Opinia studentească*
1975-1980 - deputy editor *Opinia studentească*
1974-1980 - deputy chief *Viața Studentească*
Founding member of Asociația Ziaristilor din România
Honorary president of Asociația Jurnaliștilor Profesioniști din Iași
Member in the board of Centrul pentru Jurnalism Independent
Rotary International Public Image Coordinator - Evanston USA 2010-2014
District Governor Rotary International 2241 România și Republica Moldova 2009-2010

Additional information

Researcher ID

ID: B-7153-2011 6

Published research articles

Over 100 articles published in research data bases and ISI web of knowledge

ISI articles

Condurache D., Burlacu A., *On Six D.O.F Relative Orbital Motion Parametrization using Rigid Bases of Dual Vectors*, *Advances in the Astronautical Sciences*, Vol.150, pp. 2293-2312.

Condurache D., Burlacu A., *Dual Tensors based Solutions for Rigid Body Motion Parameterization*, *Mechanism and Machine Theory*, Vol. 74, 2014, pp. 390-412.

Condurache D., Martinusi V., *Universal Functions in the Study of the Relative Orbital Motion*, *Advances in the Astronautical Sciences*, Vol. 145, 2012, pp.881-893 (AAS 12-359).

Condurache D., Martinusi V., *A Closed form Solution of the Two Body Problem in Non-Inertial Reference Frames*, *Advances in the Astronautical Sciences*, Vol. 143, 2012, pp. 1649-1668 (AAS 12-213).

Condurache D.; Martinusi, V., *Quaternionic Exact Solution to the Relative Orbital Motion Problem*, *AIAA Journal of Guidance, Control, and Dynamics*, Vol. 33, no. 4, 2010, pp. 1035-1047.

Condurache D., Martinusi, V., *Hypercomplex Eccentric Anomaly in the Unified Solution to the Relative Orbital Motion*, *Advances in the Astronautical Sciences*, Vol. 135, 2010, pp. 281-300. (AAS 09-321).

Condurache D., Martinusi, V., *Exact Solution to the Relative Orbital Motion in Eccentric Orbits*, *Solar System Research*, Volume 43, Issue 1, 2009, pp. 41-52.

Condurache D., Martinusi, V., *TOChNOEREShENIEZADACHi OTNOSITEL'NOGO ORBITAL'NOGO DVIZhENIYa PO EKSTsENTRICHESKOI ORBITE*, *Astronomicheskii Vestnik/Astronomy Review*, Vol. 43, No. 1, 2009, pp. 44-55.

Condurache D., Martinusi, V., *Foucault Pendulum-like problems: A Tensorial Approach*, *International Journal of Non-linear Mechanics*, vol. 43, issue 8, 2008, pp. 743-760.

Condurache D., Martinusi, V., *A Complete Closed Form Solution to the Kepler Problem*, *Meccanica*, Vol. 42, no.5, 2007, pp. 465-476.

Condurache D., Martinusi, V., *Relative Spacecraft Motion in a Central Force Field*, *AIAA Journal of Guidance, Control, and Dynamics*, vol. 30, no. 3, 2007, pp. 873-876.

Condurache D., Martinusi, V., *Kepler's Problem in Rotating Reference Frames. Part I : Prime Integrals, Vectorial Regularization*, *AIAA Journal of Guidance, Control and Dynamics*, Vol. 30, no. 1, 2007, pp. 192-200.

Condurache D., Martinusi, V., *Kepler's Problem in Rotating Reference Frames. Part II: Relative Orbital Motion*, *AIAA Journal of Guidance, Control and Dynamics*, Vol. 30, no. 1, 2007, pp. 201-213.

Condurache D., Martinusi, V., *Vectorial Regularization and Temporal Means in Keplerian Motion*, *Journal of Nonlinear Mathematical Physics*, Vol. 13, No. 3, 2006, pp.420-440.

Indexed articles

Martinusi, V., **Condurache, D.**, *Remarks on the Hamiltonian of A Particle in A Rotating Reference Frame*, *Bul. Inst. Polit. Iași, LV(LIX), 4, Sect. Mathematics, Theoretical Mechanics, Physics, 2009, pp. 19-24.*

Condurache D., Martinusi, V., *A Novel Hypercomplex Solution to Kepler's Problem*, *PADEU, Astronomy Department. of the Eötvös University.*, vol. 19, 2007, pp. 65-80.

Condurache D., Martinusi, V., *A Closed Form Vectorial Solution to the Relative Orbital Motion*, *PADEU, Astronomy Department. of the Eötvös University.*, vol. 19, 2007, pp. 49-64.

Condurache D., Martinusi, V., *A Short Solution to the Keplerian Ballistic Problem Using the Velocity Hodograph*, *Bul. Inst. Polit. Iași, LII(LVI), 1-2, Sect. Mathematics, Theoretical Mechanics, Physics, 2007.*

Additional information
Article
(international conferences proceedings)

Condurache D., Burlacu A., Fractional Order Cayley Transforms for Dual Quaternions based Pose Representation, AAS/AIAA Astrodynamics Specialist Conference, , Aug 9-13, 2015, Vail, CO, USA, Burlacu A., Condurache D., Clim E., Kinematic Evaluation of Articulated Rigid Objects, 18th Int. Conference on System Theory, Control and Computing, pp. 175-180, Oct. 17-19 2014, Sinaia, Romania.

Condurache D., Burlacu A., On Board Exact Solution to the Full Body Relative Orbital Motion Problem, AIAA Space and Astronautics Forum and Exposition: AIAA/AAS Astrodynamics Specialist Conference, 4-7 August 2014, San Diego, USA.

Condurache D., Burlacu A., Dual Lie Algebra Representations of the Rigid Body Motion, AIAA Space and Astronautics Forum and Exposition: AIAA/AAS Astrodynamics Specialist Conference, 4-7 August 2014, San Diego, USA.

Condurache, D., Burlacu A., Recovering Dual Euler Parameters from Feature-Based Representation of Motion, 14th Int. Symposium on Advances in Robot Kinematics, June 29 – July 3, 2014, Ljubljana, Slovenia.

Condurache, D., Martinusi, V., Analytical Orbit Propagator Based on Vectorial Orbital Elements, AIAA Guidance, Navigation and Control Conference, 19-21 August 2013, Boston, MA, USA. Paper AIAA-2013-5188.

Condurache D., Burlacu A., On Six D.O.F Relative Orbital Motion Parametrization using Rigid Bases of Dual Vectors, AAS/AIAA Astrodynamics Specialist Conference, Hilton Head, South Carolina, August 11-15, 2013.

Condurache, D., Burlacu A., Rigid Body Pose Estimation using Dual Quaternions Computed from Direct Measurements, 43rd International Symposium on Robotics, May 29-31, Taiwan, Taipei, 2012.

Condurache, D., Martinusi, V., State Space Analysis for the Relative Spacecraft Motion in Geopotential Fields, AIAA Guidance, Navigation, and Control Conference, 8 – 11 Aug 2011, Portland, Oregon, USA.

Condurache, D., Martinusi, V., Super-integrability in the unperturbed relative orbital motion problem, AIAA/AAS Astrodynamics Specialist Conference, Toronto, Canada, 2-5 August 2010.

Condurache, D; Martinusi, V., Analytic Solution to the Relative Orbital Motion Around an Oblate Planet, AIAA Guidance, Navigation and Control Conference and Exhibit, Chicago, Illinois, 10-13 Aug. 2009.

Condurache, D; Martinusi, V., Hypercomplex Eccentric Anomaly in the Unified Solution to the Relative Orbital Motion, AAS/AIAA Astrodynamics Specialist Conference, Pittsburgh, Pennsylvania, 9-13 Aug. 2009 (paper AAS-09-321).

Condurache, D.; Martinusi, V., Exact solution to the relative orbital motion in a central force field, IEEE/AIAA 2nd International Symposium on Systems and Control in Aerospace and Astronautics, Shenzhen, China, 10-12 Dec. 2008, DOI: 10.1109/ISSCAA.2008.4776296.

Condurache, D.; Martinusi, V., A Quaternionic Exact Solution to the Relative Orbital Motion, AIAA/AAS Astrodynamics Specialist Conference and Exhibit, Honolulu, Hawaii, 18-21 Aug. 2008, AIAA Paper 2008-6764.

Condurache, D., Martinusi, V., Exact Solution to the Relative Orbital Motion in Eccentric Orbits, International Conference “Analytical Methods of Celestial Mechanics”, Sankt-Petersburg, Russia, 2007.

Condurache, D., Martinusi, V., A Novel Hypercomplex Solution to Kepler’s Problem, CMDA 2006 – International Workshop on Actual Problems in Celestial Mechanics and Dynamical Astronomy, Babeş-Bolyai University Cluj-Napoca, Romania, 2006.

Condurache, D., Martinusi, V., A Closed Form Vectorial Solution To the Relative Orbital Motion, CMDA 2006 - International Workshop on Actual Problems in Celestial Mechanics and Dynamical Astronomy, Babes-Bolyai University Cluj-Napoca, România, 2006.

Condurache, D., Martinusi, V., A General Method to Study the Motion in A Non-inertial Reference Frame, 3rd International Conference “Computational Mechanics and Virtual Engineering” COMEC, Braşov, Romania, October 2009.

Condurache, D., Martinusi, V., A Generalized Solution to the Relative Orbital Motion in a Central Force Field, International Conference “CAIUS IACOB” , Braşov, 2006.

Condurache, D., Martinusi, V., A Quaternionic Procedure in the Study of the Keplerian Relative Orbital Motion, International Conference “CAIUS IACOB” , Braşov, 2006.

Condurache, D., Martinuşi, V., Computing the Field of nth Order Accelerations in Rigid Motion by Direct Measurements, The 2nd International Conference “Advanced Concepts in Mechanical Engineering” , Iaşi , 15-17 iunie, 2006.

Condurache, D., Martinuşi, V., A Tensorial Explicit Solution to Darboux Equation, The 2nd International Conference “Advanced Concepts in Mechanical Engineering” , Iaşi, 15-17 iunie, 2006.

Additional information	<p>Condurache D., Burlacu A., <i>Recovering Dual Euler Parameters from Feature-Based Representation of Motion</i>, Advances in Robot Kinematics, Jadran Lenarcic and Ousama Khatib (Eds), pp.295-305, Springer International, 2014, ISBN: 978-3-319-06697.</p>
Books	<p>Condurache D., <i>Spacecraft Relative Orbital Motion</i>, Advances in Spacecraft Systems and Orbit Determination, Dr. Rushi Ghadawala (Ed.), Intech, 2012, ISBN: 978-953-51-0380-6.</p>
	<p>Condurache D., <i>A New General investigation of the Kinematics of the Rigid Bodies</i>, Polirom, 2010, ISBN 973-9476-21-X.</p>
	<p>Condurache D., <i>Reprezentări simbolice. Aplicații în teoria semnalelor și studiul sistemelor dinamice (Symbolic Representations. Applications in Signal Theory and Dynamical Systems)</i>, Nord-Est, Iași, 1996, ISBN 973-97101-8-2.</p>
	<p>Condurache, D., Matcovschi M. H., <i>Fundamentele matematice ale mecanicii roboților</i>, 2000</p>
	<p>Rusu, E., Condurache D., <i>Culegere de probleme de mecanica si aplicatii in proiectare de utilaj textil</i>, Editura Universității Tehnice “Gheorghe Asachi”, Iași, 1994.</p>
	<p>2007-2009: Principal Investigator: <i>Exact solutions in relative orbital dynamics. Applications in formation flying spacecraft guidance and control</i> (CNCSIS code 200).</p>
Research grants	<p>2006: <i>Sustinerea integrării cercetării românești în domeniul poluării electromagnetice în rețele, programe și parteneriate europene de profil</i>, CEEEX 2006.</p>
	<p><i>Relative Orbital Motion Analysis Using Dual Lie Algebra Representations</i>, 66th International Astronautical Congress 2015, Astrodynamics Symposium, 12-16 October 2015, Jerusalem, Israel.</p>
Conferences (selective)	<p><i>Fractional Order Cayley Transforms For Dual Quaternions Based Pose Representation</i>, AAS/AIAA Astrodynamics Specialist Conference, 9-13 August 2015, Vail, Colorado, USA.</p>
	<p><i>On Board Exact Solution to the Full Body Relative Orbital Motion Problem</i>, AIAA Space and Astronautics Forum and Exposition: AIAA/AAS Astrodynamics Specialist Conference, 4-7 August 2014, San Diego, USA.</p>
	<p><i>Dual Lie Algebra Representations of the Rigid Body Motion</i>, AIAA Space and Astronautics Forum and Exposition: AIAA/AAS Astrodynamics Specialist Conference, 4-7 August 2014, San Diego, USA.</p>
	<p><i>Recovering Dual Euler Parameters from Feature-Based Representation of Motion</i>, <u>14th Int. Symposium on Advances in Robot Kinematics</u>, June 29 – July 3, 2014, Ljubljana, Slovenia.</p>
	<p><i>Analytical Orbit Propagator Based on Vectorial Orbital Elements</i>, AIAA Guidance, Navigation and Control Conference, 19-21 August 2013, Boston, MA, USA. Paper AIAA-2013-5188.</p>
	<p><i>On Six D.O.F Relative Orbital Motion Parametrization using Rigid Bases of Dual Vectors</i>, AAS/AIAA Astrodynamics Specialist Conference, Hilton Head, South Carolina, USA, August 11-15, 2013.</p>
	<p><i>Rigid Body Pose Estimation using Dual Quaternions Computed from Direct Measurements</i>, <u>43rd International Symposium on Robotics</u>, 29-31 May, Taiwan, Taipei, 2012.</p>
	<p><i>State Space Analysis for the Relative Spacecraft Motion in Geopotential Fields</i>, <u>AIAA Guidance, Navigation, and Control Conference</u>, 8 -11 August 2011, Portland, Oregon, USA.</p>
	<p><i>Super-integrability in the unperturbed relative orbital motion problem</i>, <u>AIAA/AAS Astrodynamics Specialist Conference</u>, Toronto, Canada, 2-5 August 2010.</p>
	<p><i>Analytic Solution to the Relative Orbital Motion Around an Oblate Planet</i>, <u>AIAA Guidance, Navigation and Control Conference and Exhibit</u>, Chicago, Illinois, USA, 10-13 Aug. 2009.</p>
	<p><i>Hypercomplex Eccentric Anomaly in the Unified Solution to the Relative Orbital Motion</i>; AAS/AIAA Astrodynamics Specialist Conference, Pittsburgh, Pennsylvania, USA, August 2009 (paper AAS-09-321).</p>
	<p><i>Analytic Solution to the Relative Orbital Motion Around an Oblate Planet</i>; AIAA Guidance, Navigation and Control Conference and Exhibit, Chicago, Illinois, August 2009 (paper AIAA 2009-6098).</p>
	<p><i>Exact Solutions in Relative Orbital Dynamics</i>; 3rd International Conference on Computational mechanics and virtual engineering, COMEC, Brasov, October 2009.</p>
	<p><i>A Quaternionic Exact Solution to the Relative Orbital Motion</i>, AIAA/AAS; Astrodynamics Specialist Conference and Exhibit, Honolulu, Hawaii, 18-21 August 2008, AIAA Paper 2008-6764.</p>
	<p><i>Exact Solution to the Relative Orbital Motion in a Central Force Field</i>; The 2nd IEEE/AIAA International Symposium on Systems and Control in Aeronautics and Astronautics, Shenzhen, China, 10-12 December 2008.</p>
	<p><i>Exact Solution to the Relative Orbital Motion in Eccentric Orbits</i>; International Conference "Analytical Methods of Celestial Mechanics", Sankt-Petersburg, Russia, July 2007.</p>
	<p><i>A Novel Hypercomplex Solution to Kepler's Problem</i>, PADEU, Astronomy Department. of the Eötvös University, 19, June 2007.</p>

Additional information

Honours and awards

Honorary citizen of Iași town - 14 October 2014
Winner of the Romanian Press Club Gala - 2003, for best editorial project

Memberships

Member The New York Academy of Science ID 11012654
Senior Member AIAA (American Institute of Aeronautics and Astronautics) ID 268679
Member AAS (American Astronautical Society) ID 12690
Member ASME (American Society of Mechanical Engineering) ID 9012220
Member IEEE (The Institute of Electrical and Electronics Engineers-USA)
Member IEEE Robotics and Automation Society ID 80605322
Member IEEE Aerospace and Electronic Systems Society ID 80605322
Member AMS (American Mathematical Society USA) code CNDXK
Founding member of Romanian Society of Theoretical and Applied Mechanics