



## Informații personale

Nume / Prenume

[REDACTED]  
[REDACTED]  
[REDACTED]

E-mail

[REDACTED]  
[REDACTED]  
[REDACTED]

**Niculescu Mihai Leonida**

[REDACTED]  
[REDACTED] [REDACTED]  
[REDACTED]

niculescu.mihai@incas.ro

[REDACTED]  
[REDACTED]  
[REDACTED]

## Experiența profesională

Perioada (de la – până la)

Numele și adresa angajatorului

Tipul activității sau sectorul de  
activitate

Funcția sau postul ocupat

Perioada (de la – până la)

Principalele activități și  
responsabilități

01.05.2011 - prezent

Institutul National de Cercetări Aerospațiale „Elie Carafoli” - INCAS, B-dul Iuliu  
Maniu nr. 220, 061126, București, România

Simulare numerica

Cercetător științific gradul II

Cercetare Dezvoltare - Simulari Numerice

- Scriere de coduri de calcul pentru mecanica fluidelor, prin rezolvarea sistemului Navier-Stokes compresibil si incompresibil, si RANS (Reynolds-Averaged Navier-Stokes), implementat modele de turbulenta cu una si doua ecuatii;
- Responsabil de activitate dinamica fluidelor in proiectele ESA: DOC, IATASH, ale CE: Clean Sky Green Regional Aircraft, HAIC, D4D-ATS;
- Implementat modele chimice pentru aerodinamica reintrarii vehiculelor spatiale;
- Implementat modele de tip gaz real in pachetul comercial Fluent si in coduri de casa;
- Dezvoltat rutine pentru calculul fluxului termic folosind corelatii ingineresti si metode avansate;
- Dezvoltat cod de casă Naviers-Stokes laminar cu echilibru chimic;
- Implementarea unor metode simplificate de tip impact pentru regimul hipersonic in proiectul ESA D4D-ATS, Mach>25;
- Studiul reintrarii meteroritilor
- Responsabil de proiectul nucleu PN 16 38 04 01, contract 30 N/2016, coordonând realizarea a 5 etape de proiect
- Responsabil de proiectul nucleu PN 18 01 01 02, contract 8N/2018, coordonând realizarea a 2 etape de proiect

Perioada (de la – până la)	<ul style="list-style-type: none"> <li>- Responsabil de proiectul nucleu Nucleu PN 19 01 0 1 0 1, coordonând realizarea a 6 etape de proiect</li> <li>- Responsabil de proiectul nucleu Nucleu PN 23 17 01 02, coordonând realizarea a 6 etape de proiect. Acest proiect continuă.</li> </ul>
Numele și adresa angajatorului	01.10.2000 – 01.12.2010 Institutul National de Cercetare – Dezvoltare Turbomotoare COMOTI, B-dul Iuliu Maniu nr. 220, 061126, Bucuresti, România
Tipul activității sau sectorul de activitate	Compresoare Centrifugale
Funcția sau postul ocupat	Cercetator stiintific gradul III
Principalele activități și responsabilități	<ul style="list-style-type: none"> <li>- Unelte computationale pentru proiectarea de la cea preliminara pana la rafinarea aerodinamica a rotoarelor de compresor centrifugale</li> <li>- Proiectarea difuzoarelor paletate pentru compresoare centrifugale</li> <li>- Programe de calcul pentru caracteristicile turbinei axiale si compresorului centrifugal</li> <li>- Participant in proiectele finantate de Comisia Europeana: SILENCER, Method participant in proiectele nationale: HILON, Triplu Flux, SISATJA dezvoltat metoda Proper Orthogonal Decomposition pentru analiza compresoarelor centrifugale</li> </ul>
<b>Educație și formare</b>	
Perioada (de la – până la)	1993 - 1998
Numele și tipul instituției de învățământ și al organizației profesionale prin care s-a realizat formarea profesională	Universitatea Politehnica din Bucuresti, Facultatea de Inginerie Aerospatala
Domeniul studiat / aptitudini ocupaționale	Sisteme de Propulsie Aerospatale
Tipul calificării / diploma obținută	Inginer aerospatal cu specializarea in sisteme de propulsie
Perioada (de la – până la)	1998 – 1999
Numele și tipul instituției de învățământ și al organizației profesionale prin care s-a realizat formarea profesională	Universitatea Politehnica din Bucuresti, Facultatea de Inginerie Aerospatala
Domeniul studiat / aptitudini ocupaționale	Sisteme de Propulsie Aerospatale

Tipul calificării / diploma obținută	Studii Aprofundate in Sisteme de Propulsie Aerospatiale									
Perioada (de la – până la)	2002 – 2011									
Numele și tipul instituției de învățământ și al organizației profesionale prin care s-a realizat formarea profesională	Universitatea Politehnica din Bucuresti, Facultatea de Inginerie Aerospatiala									
Domeniul studiat / aptitudini ocupaționale	Titlul tezei: Metode Nestationare Aplicate la Studiul Curgerii prin Turbomasini									
Tipul calificării / diploma obținută	Doctor in Inginerie Aerospatal									
<b>Aptitudini și competențe personale</b>										
Limba(i) maternă(e)	<b>Româna</b>									
Limba(i) străină(e) cunoscută(e)	<b>Engleză, Franceză</b>									
Autoevaluare										
<i>Nivel european (*)</i>										
<b>Engleza</b>										
<b>Franceza</b>										

## Lista celor mai importante lucrari

- M. L. Niculescu, V. Silivestru, G. Vizitiu, *Flow in the Meridional Section of the Centrifugal and Mixed Impellers*, Bulletin of the Transilvania University of Brasov, series B, published by Transilvania University Press, ISSN 1223-964, pp. 283-290, 2006
- M. L. Niculescu, C. Stănică, G. Vizitiu, V. Silivestru, *Numerical Simulation of an Atomizing Air Impeller*, Romanian Conference of Ansys and Fluent, Sinaia, ISBN 978-973-718-757-4, 2007
- M. L. Niculescu, V. Silivestru, G. Vizitiu, S. Dănăilă, C. Berbente, *Theoretical and Numerical Investigation of Centrifugal and Mixed Compressor Impellers*, ISAI8-0012, Proceedings of the 8<sup>th</sup> International Symposium on Experimental and Computational Aerothermodynamics of Internal Flows, Lyon, France, Vol. II, pp. 803-809, July 2007
- M. L. Niculescu, V. Silivestru, G. Vizitiu, B. Gherman, S. Dănăilă, C. Berbente, *Detailed Investigation of an Atomizing Air Compressor*, ISAI8-00125, Proceedings of the 8<sup>th</sup> International Symposium on Experimental and Computational Aerothermodynamics of Internal Flows, Lyon, France, Vol. II, pp. 829-836, July 2007
- G. Fetea, M. L. Niculescu, V. Silivestru, B. Gherman, G. Vizitiu, C. Stănică – *Aerodynamic Analysis of a Centrifugal Blower Impeller*, Romanian Conference of Ansys and Fluent, ISBN 978-606-521-012-7, Sinaia, 2008
- M. L. Niculescu, V. Silivestru, G. Vizitiu, D. Ionescu, M. Andrei, S. Dănăilă, C. Berbente, *Numerical Investigation of the Flow in Vertical-Axis Wind Turbines*, Proceedings of the European Wind Energy Conference and Exhibition EWECE 2008, Bruxelles, April 2008
- D. Robescu, V. Silivestru, M. Ionescu, R. Mocanu, M. L. Niculescu, B. Gherman, *High Speed Radial Flow Blower*, Proceedings of the International Conference on Hydraulic Machinery and Equipments, published in Scientific Bulletin of the Politehnica University of Timișoara, Transactions on Mechanics, Special Issue, ISSN 1224-6077, Tom 53(67), pp. 259-264, 2008
- M. Nițulescu, M. L. Niculescu, G. Vizitiu, *Analiză gazodinamică a unui compresor centrifugal cu randament ridicat, utilizat la comprimarea gazelor naturale*, MENER 2008-Energie, pg. 119-126, 2008
- M. L. Niculescu, D. Ionescu, M. Andrei, C. Cercel, *Analysis of Aerodynamic Field and Noise from a Ducted Wind Turbine*, Proceedings of XXXII<sup>nd</sup> Caius Iacob National Conference on Fluid Mechanics and its Technical Applications, ISSN 2067-4414, pp. 159-171, Bucharest, October 2009
- M. L. Niculescu, S. Dănăilă, *Unsteady Rotor-Stator Interaction in a Low Pressure Centrifugal Compressor*, Proceedings of the 3<sup>rd</sup> WSEAS International Conference on Finite Differences - Finite Elements - Finite Volumes - Boundary Elements, ISSN 1790-2769, pp. 209-214, Bucharest, April 2010

- S. Dănilă, M. L. Niculescu, *Proper orthogonal decomposition for unsteady rotor-stator interaction in a low pressure centrifugal compressor*, WSEAS Transactions on Fluid Mechanics, ISSN 1790-5087, Vol. 5, Issue 3, pp. 226-235, July 2010
- M. L. Niculescu, S. Dănilă, *Numerical Analysis of the Unsteady Rotor-Stator Interaction in a Low Pressure Centrifugal Compressor by Using Adamczyk and Proper Orthogonal Decompositions*, Proceedings of the 8<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics 2010 (ICNAAM 2010), ISBN 978-0-7354-0834-0, Rhodes, Greece, published in AIP (American Institute of Physics) Conference Proceedings, Vol. 1281, Issue 1, pp. 59-62, September 2010
- M. L. Niculescu, S. Dănilă, *An Extraction of the Dominant Rotor-Stator Interaction Modes by the Use of POD Technique in a Low Pressure Centrifugal Compressor*, U.P.B. Scientific Bulletin, Series D, ISSN 1454-2358, Vol. 73, Issue 1, pp. 139-150, 2011
- M. L. Niculescu, S. Dănilă, *Calculation of transonic and supersonic internal flows using upwind schemes*, Proceedings of XXXIIIrd "Caius Iacob" National Conference on Fluid Mechanics and its Technical Applications, Bucharest, ISSN 2067-4414, pp. 153-162, September 2011
- M. G. Cojocaru, M. L. Niculescu, C. Vădean, *Unsteady numerical estimation of the aerodynamic loads of the Krueger flap*, INCAS Bulletin, ISSN 2066-8201, Vol. 4, Issue 1, pp. 3-14, 2012
- M. L. Niculescu, M. G. Cojocaru, C. Niță, *Aerodynamic study of a small horizontal-axis wind turbine*, INCAS Bulletin, ISSN 2066-8201, Vol. 4, Issue 2, pp. 69-73, 2012
- M. L. Niculescu, M. G. Cojocaru, V. M. Pricop, *Analysis Of Aerodynamic Field And Noise Of A Small Wind Turbine*, Proceedings of the 9th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA 2012), Vienna, Austria, July 2012, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1105-0, Vol. 1493, Issue 1, pp. 699-702, 2012
- V. M. Pricop, M. L. Niculescu, M. G. Cojocaru, D. Barsan, *Design, analysis and testing of small, affordable HAWT rotors*, Proceedings of the 10<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics ICNAAM 2012, Kos, Greece September 2012; published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1091-6, volume 1479, pp. 1646-1649, 2012
- V. M. Pricop, M. L. Niculescu, M. G. Cojocaru, D. Barsan, *Design, analysis and testing of small and efficient horizontal-axis wind turbine rotors*, Proceedings of Engineering Numerical Modeling and Simulation, ISBN 978-606-521-925-0, Sinaia, September 2012
- S. Dănilă, M. L. Niculescu, *Unsteady effects at the interface between impeller-vaned diffuser in a low pressure centrifugal compressor*, INCAS Bulletin, ISSN 2066-8201, Vol. 5, Issue 1, pp. 71-86, 2013

- A. Bobonea, A. Chelaru, F. Munteanu, M. L. Niculescu, M. G. Cojocaru, Experimental and Numerical Simulations for Transonic Flow over ONERA M4R Model, INCAS Bulletin, Volume 5, Issue 2, pg. 3-8, 2013
- M. L. Niculescu, S. Dănilă, Comparative study of upwind schemes for transonic and supersonic internal flows, Proceedings of the 11<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics ICNAAM 2013, Rodos, Greece, September 2013, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1184-5, volume 1558, pp. 116-119, 2013
- S. G. Constantinescu, M. L. Niculescu, Experimental and numerical research of lift force produced by Coanda effect, Proceedings of the 11<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics ICNAAM 2013, Rodos, Greece, September 2013, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1184-5, volume 1558, pp. 152-155, 2013
- S. G. Constantinescu, D. E. Crunteanu, M. L. Niculescu, Aerodynamic study of a stall regulated horizontal-axis wind turbine, Proceedings of the 11<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics ICNAAM 2013, Rodos, Greece, September 2013, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1184-5, volume 1558, pp. 1245-1248, 2013
- D. E. Crunteanu, S. G. Constantinescu, M. L. Niculescu, Aerodynamic study of a blade with sine variation of chord length along the height for Darrieus wind turbine, Proceedings of 11<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics ICNAAM 2013, Rodos, Greece, September 2013, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1184-5, volume 1558, pp. 1249-1252, 2013
- S. G. Constantinescu, M. L. Niculescu, C. Stoica, G. Balan, Parametric study of Coanda drone with transonic jet, BENA 2013, Alba Iulia, 2013
- S. G. Constantinescu, M. L. Niculescu, L. Deleanu, A model of an axisymmetrical Coanda profile with radial clearance, First International Conference Danube - Black Sea 3E - Energy, Environment & Efficiency, IWEEE 2013, Galati, September 2013
- A. Bobonea, C. Berbente, M. L. Niculescu, Horizontal Axis Wind Turbine Flow Field Analysis and Prospects for Performance Enhancement, U.P.B. Scientific Bulletin, Series D, ISSN 1454-2358, Vol. 76, Issue 1, pp. 45-54, 2014
- A. Bobonea, C. Berbente, M. L. Niculescu, Parametric Study of Active Flow Control on a High Lift Airfoil, U.P.B. Scientific Bulletin, Series D, ISSN 1454-2358, Vol. 76, Issue 2, pp. 3-10, 2014
- M. L. Niculescu, I. C. Andrei, M. V. Pricop, Numerical Simulations of a Small Ramjet, Second International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2014, May 2014, Bucharest, Romania, ISSN 2360-1809

- I. C. Andrei, M. L. Niculescu, M. V. Pricop, Numerical Analysis of a Nozzle for Orbital Rockets, Second International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2014, May 2014, Bucharest, Romania, ISSN 2360-1809
- M. G. Cojocaru, M. L. Niculescu, Hybrid Discretization of Convective Terms for High Order Direct Numerical Simulations, Second International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2014, May 2014, Bucharest, Romania, ISSN 2360-1809
- M. G. Cojocaru, M. V. Pricop, M. L. Niculescu, Store separation simulations of aircraft launched orbital missile, Second International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2014, May 2014, Bucharest, Romania, ISSN 2360-1809
- M. V. Pricop, I. C. Andrei, M. L. Niculescu, M. G. Cojocaru, M. C. Breaban, Small modular launchers, International Conference of Aerospace Sciences Aerospacial 2014, September 2014, Bucharest, Romania, ISSN 2067-8614
- M. V. Pricop, C. Stoica, F. Munteanu, M. L. Niculescu, M. G. Cojocaru, A. M. Panait, High speed testing for reentry vehicles, International Conference of Aerospace Sciences Aerospacial 2014, September 2014, Bucharest Romania, ISSN 2067-8614
- M. G. Cojocaru, M. L. Niculescu, M. V. Pricop, Aero-Acoustic Assessment of Installed Propellers, INCAS Bulletin, ISSN 2066–8201, Vol. 7, Issue 2, pp. 53-62, 2015
- M. V. Pricop, M. G. Cojocaru, M. L. Niculescu, M. Boscoianu, Earth Reentry Tool for Preliminary Mission Analysis, INCAS Bulletin, ISSN 2066–8201, Vol. 7, Issue 2, pp. 123-128, 2015
- M. L. Niculescu, M. G. Cojocaru, M. V. Pricop, D. Pepelea, Computations of the Shock Waves at Hypersonic Velocities Taken into Account the Chemical Reactions that Appear in the Air at High Temperatures, INCAS Bulletin, ISSN 2066–8201, Vol. 7, Issue 3, pp. 129-133, 2015
- M. G. Cojocaru, M. L. Niculescu, D. Pepelea, Leading Edge Device Aerodynamic Optimization, INCAS Bulletin, Volume 7, Issue 4, pg. 77-84, 2015
- I. C. Andrei, M. V. Pricop, M. L. Niculescu, A. Cernat, Issues and numerical approaches of shock waves with application to supersonic air intakes, NMAS 2015, Bucharest, Romania, 2015
- I. C. Andrei, M. V. Pricop, M. L. Niculescu, A. Cernat, The completion of the mathematical model by parameter identification for simulating a turbofan engine, NMAS 2015, Bucharest, Romania, 2015
- M. L. Niculescu, M. G. Cojocaru, M. V. Pricop, D. Pepelea, M. G. Stoican, M. C. Fadgyas, Computations of the Axisymmetric Flow with Shock Waves at Hypersonic Velocities Taken into Account the Chemical Reactions that Appear in the Air at High Temperatures, Caius Iacob 2015, Bucharest, Romania, 2015

- M. V. Pricop, M. G. Cojocaru, M. C. Fadgyas, M. L. Niculescu, M. G. Stoican, D. Pepelea, Parallel Trajectory Propagation Tool for Preliminary Mission Analysis, Caius Iacob 2015, Bucharest, Romania, 2015
- M. L. Niculescu, M. G. Cojocaru, D. E. Crunteanu, Aerodynamic Study of a Small Wind Turbine with Emphasis on Laminar and Transition Flows, Proceedings of the 13<sup>th</sup> International Conference of Numerical Analysis and Applied Mathematics ICNAAM 2015, Rodos, Greece, September 2015
- M. L. Niculescu, M. C. Fadgyas, M. G. Cojocaru, M. V. Pricop, M. G. Stoican and D. Pepelea, Computational Hypersonic Aerodynamics with Emphasis on Earth Reentry Capsules, INCAS Bulletin, Vol. 8, Issue 3, ISSN 2066-8201, pp. 55-64, 2016.
- M. L. Niculescu, M. C. Fadgyas, M. G. Stoican, M. V. Pricop, M. G. Cojocaru and D. Pepelea, Hypersonic Gas Dynamics of a Reentry Capsule Using Fluent, High Performance Engineering Solutions 2016, ISBN 978-973-0-22492-4, Sinaia, Romania, May 2016
- D. Pepelea, M. G. Cojocaru, A. Toader and M. L. Niculescu, CFD Analysis for UAV of Flying Wing, Scientific Research and Education in the Air Force – AFASES 2016, pp. 171-176, Brasov, Romania, May 2016
- I. C. Andrei, M. L. Niculescu, M. V. Pricop and A. Cernat, Study of the Turbojet Engines as Propulsion Systems for the Unmanned Aerial Vehicles, Scientific Research and Education in the Air Force – AFASES 2016, pp. 115-126, Brasov, Romania, May 2016
- M. L. Niculescu, M. C. Fadgyas, M. G. Cojocaru, M. V. Pricop, D. Pepelea and M. G. Stoican, Hypersonic Aerodynamics for Several Test Cases, Proceedings of International Conference of Aerospace Sciences AEROSPATIAL 2016, ISSN 2067-8622, Bucharest, Romania, October 2016
- M. L. Niculescu, M. G. Cojocaru, M. V. Pricop, M. C. Fadgyas, D. Pepelea and M. G. Stoican, A New Computational Method for Reacting Hypersonic Flows, ICNAAM 2016, Rhodes, Greece, 2016
- M. L. Niculescu, M. G. Cojocaru, M. V. Pricop, D. Pepelea, A. Dumitrache and D. E. Crunteanu, CFD analysis of a Darrieus wind turbine, ICNAAM 2016, Rhodes, Greece, 2016
- M. V. Pricop, M. G. Cojocaru, C. I. Stoica, M. L. Niculescu, A. M. Neculaescu, A. G. Persinaru and M. Boscoianu, Glide Back Booster Wind Tunnel Model Testing, ICNAAM 2016, Rhodes, Greece, 2016
- M. G. Cojocaru, M. L. Niculescu, D. Pepelea, M. G. Stoican and M. V. Pricop, Ice accretion prediction for 2D geometries in the presence of ice crystals, AEROSPATIAL 2016, ISSN 2067-8622, Bucharest, Romania, October 2016
- M. G. Cojocaru, M. Zhong, M. L. Niculescu, G. L. Wang, S. Zheng and C. Nae, Improvement of CFD-Wind Tunnel Correlation near Buffet Onset by Using Scale Resolving Simulations, Hybrid RANS-LES Symposium, Strasbourg, France, September 2016.



- E. A. Silber, W. K. Hocking, M. L. Niculescu, M. Gritsevich and R. E. Silber, On Shock Waves and the Role of Hyperthermal Chemistry in the Early Diffusion of Overdense Meteor Trains, Monthly Notices of the Royal Astronomical Society (**ISI impact factor: 5.194**), Vol. **469**, pp. 1869-1882, 2017
- M. C. Fadgyas, M. V. Pricop, M. L. Niculescu, M. G. Cojocaru, E. C. Boscoianu and A. Dumitrache, Comparison of different methods for fast computation of aerodynamic pressure coefficients and heat fluxes in hypersonic regime, 5th International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2017, ISSN 2360-1809, Bucharest, Romania, May 2017
- M. L. Niculescu, M. C. Fadgyas, M. G. Cojocaru, M. V. Pricop, M. G. Stoican, D. Pepelea, Aerodynamics and Chemistry for an Earth Reentry Capsule, The 37 "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, Bucharest, Romania, November 2017
- M. L. Niculescu, M. V. Pricop, M. G. Cojocaru, M. C. Fadgyas, CFD Based Wind Tunnel Solid Wall Corrections for 2D High Lift Configurations, The 37 "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, Bucharest, Romania, November 2017
- M. V. Pricop, M. L. Niculescu, M. G. Cojocaru, A. Mantighian, I. Bunescu, A. Dina, Low Fidelity Models Based Airfoil Optimization, The 37 "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, Bucharest, Romania, November 2017
- M. C. Fadgyas, M. V. Pricop, M. L. Niculescu, M. G. Cojocaru, A. Dumitrache, Semi-Empirical Relations for Pressure Distributions in Hypersonic Regime, ICNAAM 2017, Thessaloniki, Greece, 2017, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1690-1, volume 1978, 2018
- M. C. Fadgyas, M. V. Pricop, M. L. Niculescu, M. G. Cojocaru, A. Dumitrache, Fast Computational Hypersonic Heat Flux Estimation, ICNAAM 2017, Thessaloniki, Greece, 2017, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1690-1, volume 1978, 2018
- M. L. Niculescu, M. G. Cojocaru, M. V. Pricop, M. C. Fadgyas, M. G. Stoican, D. Pepelea, Hypersonic Gas Dynamics of a Marco Polo Reentry Capsule, ICNAAM 2017, Thessaloniki, Greece, 2017, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1690-1, volume 1978, 2018
- M. L. Niculescu, M. G. Cojocaru, M. V. Pricop, M. C. Fadgyas, M. G. Stoican, D. Pepelea, Hypersonic Axisymmetric CFD code, 6th International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2018, Bucharest, Romania, 2018
- D. Pepelea, M. G. Cojocaru, M. V. Pricop, M. L. Niculescu, Shock Control Bumps for Strut Braced Wings, 6th International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2018, Bucharest, Romania, 2018
- M. G. Cojocaru, M. Zhong, M. L. Niculescu, G. L. Wang, S. Zheng, C. Nae, Improvement of CFD-Wind Tunnel Correlation near Buffet Onset by Using Scale Resolving Simulations, Progress in hybrid RANS-LES modelling (book chapter),

Notes on Numerical Fluid Mechanics and Multidisciplinary Design 137, 417-429, 2018

- E. A. Silber, M. L. Niculescu, P. Butka, R. E. Silber, Nitric Oxide Production by Centimetre Sized Meteoroids and the Role of Linear and Nonlinear Processes in the Shock Bound Flow Fields, Atmosphere (**ISI impact factor: 1.704**), 9(5), 2018

- M. L. Niculescu, I. Bunescu, D. Pepelea, M. V. Pricop, Screen Induced Turbulence in a Low Speed Wind Tunnel, International Conference of Aerospace Sciences "Aerospatial 2018", Bucharest, Romania, 2018

- V. Prisacariu, C. Rotaru, I. Circiu, M. L. Niculescu, Numerical simulation and performances evaluation of the pulse detonation engine, 10th International Scientific Conference on Aeronautics, Automotive and Railway Engineering and Technologies, BulTrans 2018, Sozopol, Bulgaria, 2018, published in MATEC Web of Conferences, Volume 234, 01001, 2018, <https://doi.org/10.1051/matecconf/201823401001>

- M. L. Niculescu, M. V. Pricop, M. G. Cojocaru, M. C. Fadgyas, A. Dumitrache, Corrections for Wind Tunnel Results for 2D High Lift Configurations Using RANS Simulations, International Conference in Nonlinear Problems in Aviation and Aerospace ICNPAA World Congress 2018, Yerevan, Armenia, 2018, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1772-4, volume 2046, 2018

- D. Pepelea, M. G. Cojocaru, M. V. Pricop, M. L. Niculescu, M. G. Stoican, Dynamic Derivatives Assessment of Earth Re-entry Capsule in Low Supersonic Conditions, International Conference in Nonlinear Problems in Aviation and Aerospace ICNPAA World Congress 2018, Yerevan, Armenia, 2018, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1772-4, volume 2046, 2018

- A. I. Onel, A. Stavarescu, M. G. Cojocaru, M. V. Pricop, M. L. Niculescu, A. M. Neculaescu, T. P. Afilipoae, Computation of the Hypersonic heat flux with application to small launchers, International Conference in Nonlinear Problems in Aviation and Aerospace ICNPAA World Congress 2018, Yerevan, Armenia, 2018, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1772-4, volume 2046, 2018

- M. L. Niculescu, M. C. Fadgyas, D. Pepelea, Development of a Hypersonic Axisymmetric CFD Code Based on Chemical Equilibrium Hypothesis, ICNAAM 2018, Rhodes, Greece, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1854-7, volume 2116, 2019

- M. V. Pricop, M. G. Stoican, C. I. Stoica, M. Manea and M. L. Niculescu, Optimal Configuration of High Speed Wind Tunnel Campaign, ICNAAM 2018, Rhodes, Greece, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1854-7, volume 2116, 2019

- A. Dumitrache, T. C. Ionescu, M. V. Pricop and M. L. Niculescu, Model Reduction for Systems with Transfer Functions, ICNAAM 2018, Rhodes, Greece, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-1854-7, volume 2116, 2019

- M. L. Niculescu, A. Stavarescu and M. G. Stoican, NO Production by a Marco Polo Reentry Capsule, 7th International Workshop on Numerical Modelling in Aerospace Sciences NMAS 2019, Bucharest, Romania, 2019
- V. Prisacariu, C. Rotaru and M. L. Niculescu, Considerations and simulations about Pulse Detonation Engine, 9<sup>th</sup> International Conference on Manufacturing Science and Education – MSE 2019 “Trends in New Industrial Revolution”, Sibiu, Romania, 2019, published in MATEC Web of Conferences, Volume 290, 04009, 2019, <https://doi.org/10.1051/mateconf/201929004009->
- M. L. Niculescu, E. A. Silber and R. E. Silber, Production of nitric oxide by a fragmenting bolide: An exploratory numerical study, Mathematical Methods in the Applied Sciences (**ISI impact factor: 1.626**), **43**(13), Special Issue: ICNAAM 2018, pp. 7758-7773, 2020
- M. L. Niculescu, M. V. Pricop, R. M. I. Dusmanescu, A. Stavarescu and A. Dumitrache, CFD Analysis of a Propfan for Modern Airplanes, 9th International Conference of Aerospace Sciences “Aerospatial 2020”, Bucharest, Romania, 2020
- M. L. Niculescu, M. V. Pricop, D. Pepelea and M. G. Stoican, Development of a hypersonic CFD code up to 20 Mach number, ICNAAM 2019, Rhodes, Greece, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-4025-8, volume 2293, 2020
- A. Dumitrache, M. V. Pricop and M. L. Niculescu Bifurcations and flow instabilities in conjunction with jet flows, ICNAAM 2019, Rhodes, Greece, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-4025-8, volume 2293, 2020
- M. V. Pricop, A. Dumitrache, M. L. Niculescu and D. Pepelea, Design of horizontal-axis wind turbine using blade element momentum method, ICNAAM 2019, Rhodes, Greece, published in AIP (American Institute of Physics) Conference Proceedings, ISBN 978-0-7354-4025-8, volume 2293, 2020

M. L. Niculescu and R. M. I. Matei, Numerical Prediction of Transonic Airfoil Buffet, Numerical Prediction of Transonic Airfoil Buffet, 39th "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, pp. 34, ISSN 2067 – 4414, INCAS, Bucharest, Romania, 2021

- M. V. Pricop, M. G. Stoican, D. Pepelea, M. L. Niculescu, Exploring methods for supersonic ramp intake optimization with RANS cross checking, 11th EASN Virtual International Conference on Innovation in Aviation & Space to the satisfaction of the European Citizens, 2021
- M. L. Niculescu and A. Toader, Aerodynamic study of a small rocket engine, 10th International Conference of Aerospace Sciences "Aerospatial 2022", INCAS, Bucharest, Romania, 2022
- V. Prisacariu, I. C. Andrei, M. L. Niculescu and M. V. Pricop, Analysis of Pulse Detonation Engine Based on Numerical Simulations for Hypersonic Velocities, ICNAAM 2022, Heraklion, Crete, Greece, 2022
- M. L. Niculescu, Combustion of ethanol in a rocket engine, 9th International Workshop on Numerical Modelling in Aerospace Sciences "NMAAS 2023", ISSN 2360-1809, INCAS, Bucharest, Romania, 2023
- M. L. Niculescu and A. I. Onel, Gas dynamic study of a rocket nozzle, 40th "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, ISSN 2067-4414, INCAS, Bucharest, Romania, 2023
- M. L. Niculescu, I. Matei, L. Pădureanu, D. Pepelea and M. V. Pricop, CFD Analysis on Mars Re-entry Vehicle, 11th International Conference of Aerospace Sciences "Aerospatial 2024", ISSN 2067-8614, INCAS, Bucharest, Romania, 2024
- M. V. Pricop, I. C. Andrei, M. L. Niculescu, I. Bunesu, M. V. Hothazie, M. G. Stoican, Ș. Mihăilescu, Turbojet Performance in Calorically Perfect Gas versus Thermally Perfect Gas and its Impact on Flight Performance of a Supersonic Airplane, 11th International Conference of Aerospace Sciences "Aerospatial 2024", ISSN 2067-8614, INCAS, Bucharest, Romania, 2024
- I. C. Andrei, M. V. Pricop, M. L. Niculescu, G. L. Stroe, V. Prisacariu, O. I. Filipescu, A. Ionel and Ș. Palas, Comparative Analysis for Performance Prediction in Case of IAR 99 Aircraft Propulsion Systems, 25th edition of the International Conference AFASES 2024, Scientific Research and Education in the Air Force, Brașov, Romania, 2024
- M. V. Pricop, I. Bunesu, V. Hothazie, M. G. Stoican and M. L. Niculescu, Impact Theory Applied for Hypersonic Vehicles, 26th edition of the International Conference AFASES 2025, Scientific Research and Education in the Air Force, Brașov, Romania, 2025
- M. L. Niculescu, I. Matei and L. Pădureanu, Transonic Internal Flow of Déleré Bump Channel Test Case, 41th "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, pp. 7, ISSN 2067-4414, INCAS, Bucharest, Romania, 2025

**Brevet**

- V. Silivestru, M. L. Niculescu, G. Savu, Centrifugal Impeller, Brevet nr. 125398 din 14.10.2008 care a obtinut Medalia de Argint la Salon International des Inventions, Genève, 2011.