Curriculum vitae Europass

Informaţii personale

Nume / Prenume	**ILIE MARCEL**
E-mail:	
Naţionalitate:	Română
Data naşterii	

Locul de muncă

Domeniul ocupational

Assistent Professor

Educaţie şi formare

Perioada	**2008 -2009**
Calificarea / diploma obţinută	**Studii post-doctorale (Post-doctoral Fellow)**
Numele şi tipul instituţiei de învăţământ	University of California, San Diego (UCSD), Departamentul de Inginerie Aerospatială, San Diego, USA
Perioada	**2004 - 2008**
Calificarea / diploma obţinută	**Doctorat în Inginerie Aerospatială**
Numele şi tipul instituţiei de învăţământ	Carleton University Departamentul de Inginerie Aerospatială, Ottawa, Canada
Perioada	**2002 - 2004**
Calificarea / diploma obţinută	**Master în Inginerie Aerospatială**
Numele şi tipul instituţiei de învăţământ / furnizorului de formare	Concordia University Departamentul de Inginerie Aerospatială, Montreal, Canada
Perioada	**1989 - 1994**
Disciplinele principale studiate	**Licenţă în Ingineria Mecanică**
Numele şi tipul instituţiei de învăţământ	Universitatea Politehnica Bucureşti Facultatea Ingineria si Managementul Sistemelor Tehnologice, Specializarea, Tehnologia Constructiilor de Masini

Studii de scurtă durată	- Rocky Mountain Mathematics Consortium (RMMC) Fellowship, Parallel Numerical Methods for Partial Differential Equations, University of Wyoming 2008
Experința profesională	
Numele şi adresa angajatorului	Georgia Southern University 1332 Southern Dr, Statesboro, GA 30458, USA
Perioada	2016-prezent
Funcţia sau postul ocupat	Assistent Professor

Activităţi şi responsabilităţi principale	- Activităţi didactice; cursuri predate:
	   • Mecanica Fluidelor
	   • Termodinamica
	   • Metode Numerice
	   • Analiza sistemelor energetice (Master)
	   • Dinamica Fluidelor Computationala (Master)
	- Membru în Comisia Universitara pentru Studii de Master
	- Membru in Comisia de Acreditare Universitare a programului de Inginerie Mecanica

Numele şi adresa angajatorului	Gardner Denver, Peachtree City, GA, USA
Perioada	2014 - 2016
Funcţia sau postul ocupat	Coordonator al Serviciul de Cercetare si Dezvoltare (Aerodinamica si Rezistenta Materialelor)
Activităţi şi responsabilităţi principale	Responsabil pentru proiectarea aerodinamica si calcule de rezistenta pentru compresoare de mare turatie (60.000rpm), cu levitatie magnetica
Numele şi adresa angajatorului	University of Central Florida (UCF)
Perioada	2009 - 2014
Funcţia sau postul ocupat	Assistent Professor

Activităţi şi responsabilităţi principale	- Activităţi didactice; cursuri predate:
	   • Mecanica Fluidelor
	   • Termodinamica
	   • Aerodinamica I
	   • Aerodinamica II
	   • Aerodinamica III
	   • Turbulenta (Master)
	   • Propulsia Rachetelor (Master)

Numele şi adresa angajatorului	University of California, San Diego (UCSD)
Perioada	2008 - 2009
Funcţia sau postul ocupat	Cercetator
Activităţi şi responsabilităţi principale	- Activităţi de cercetare in domeniul Inginerie Aerospatiale - Dezvoltarea de metode computationale (C++) pentru calcule aerodinamice al fluidelor in regim supersonic
Numele şi adresa angajatorului	Universitatea Politehnica Bucuresti Facultatea de Electornica si Telecomunicatii
Perioada	1999 - 2001
Funcţia sau postul ocupat	Inginer
Activităţi şi responsabilităţi principale	- Pregătirea materialului didactic pentru laboratoarele de micro-electronică - Mentinerea laboratoarelor si platformelor didactice in stare operatională
Numele şi adresa angajatorului	Scoala Americană Bucuresti
Perioada	1998 - 2001
Funcţia sau postul ocupat	Profesor suplinitor si Meditator (Matematică si Chimie)
Activităţi şi responsabilităţi principale	- Predare Matematică si Chimie (in limba engleza) - Meditator al elevilor cu deficiente academice
Numele şi adresa angajatorului	IPRS Băneasa, Sos. Erou Iancu Nicolae
Perioada	1994 - 1999
Funcţia sau postul ocupat	Inginer Proiectant
Activităţi şi responsabilităţi principale	- Proiectare sisteme si dispozitive mecanice
Limba(i) străină(e) cunoscută(e)	Limba Engleză – excelent Limba Franceză– excelent
Permis de conducere	Categoria B
Informaţii suplimentare	
Programe cercetare / Granturi:	1. Marcel Ilie (PI), Investigation of Pressure Drop across a Bi-Rotor Pulse Flowmeter, Brodie International, 11/2019-7/2020 ($ 14.455) 2. Marcel Ilie (PI), Suhada Jayasuriya (Co-PI), A Novel Approach for Oceanographic Explorations: Multi-Scale Modeling and Simulation using CFD Enabled by AUVs Data, National Science Foundation, 2012-2015 ($ 462.577).

3

3. Marcel Ilie (PI), Ocean Energy Exploration, Extraction and Monitoring Systems, Phase II, Harris Co., 2012-2013, ($ 10.000).

4. Marcel Ilie (PI), 2013 NASA/USLI, Florida Space Grant Consortium, 2013 ($ 2.000).

5. Marcel Ilie (PI), Ocean Energy Exploration, Extraction and Monitoring Systems, Phase I, Harris Co., 2011-2012 ($ 10.000).

6. Marcel Ilie (PI), CFD Analysis Support to the Objective Helicopter Icing Spray System (OHISS-II), Phase II, US Army, 2011 ($ 20.731)

7. Marcel Ilie (PI), 2012 NASA/USLI, Florida Space Grant Consortium, 2012 ($ 2.000).

8. Marcel Ilie (PI), Numerical Computations of Turbulent Flows Using DDES, University of Central Florida, 2011, ($ 7.500).

9. Marcel Ilie (PI), 2011 NASA/USLI, Florida Space Grant Consortium, 2011, ($ 7.500).

10. Marcel Ilie (PI), Power-generation Buoy and Deep-sea Monitoring System, Harris Corporation, 2010—2011, ($ 10.000).

11. Marcel Ilie (PI), CFD Analysis Support to the Objective Helicopter Icing Spray System (OHISS-I), Phase I, US Army, 2010, ($ 19.223).

12. Marcel Ilie (PI), 2011 Hybrid Rocket Competition}, Florida Space Grant Consortium, 2011, ($ 2.000).

13. Marcel Ilie (PI), Numerical Computations of Particle-laden Flows using DES, University of Central Florida, 2010, ($ 7.500).

14. Marcel Ilie (PI), 2010 Hybrid Rocket Competition}, Florida Space Grant Consortium, 2010 ($ 1.750).

15. Marcel Ilie, 2009 NASA/USLI, Florida Space Grant Consortium, 2009, ($ 1.000)

16. Marcel Ilie, Numerical Computations of Turbulent Flows Using Hybrids RANS/LES, University of Central Florida, 2009, ($ 7.500)

Publicaţii	**Articole publicate în reviste cotate ISI cu factor de impact**

Articole publicate în reviste cotate ISI cu factor de impact

1. **M. Ilie**, Fluid-structure interaction in turbulent flows; a CFD based aeroelastic algorithm using LES, Applied Mathematics and Computation 342 (2019) 309–321

2. **M. Ilie**, A fully-coupled CFD/CSD computational approach for aeroelastic studies of helicopter blade-vortex interaction, Applied Mathematics and Computation 347 (2019) 122–142

3. **M. Ilie**, Numerical studies of turbulent swirling reacting flows using LES and URANS, International Journal of Thermal Sciences, 134 (2018) 89-100

4. **M. Ilie**, Particulate transport through heterogeneous porous media; numerical studies using finite element method, The International Journal of Multiphysics, Vol. 7, No. 3, 245-258, 2013

5. Coronado, P. and **M. Ilie**, Numerical studies of helicopter blade-vortex interaction using potential flow theory, Journal of Mathematical Modeling and Applied Mathematics, Vol. 35, 346-357, 2012.

6. **M. Ilie**, Nitzsche, F. and Matida, E., Influence of vortex characteristics on the blade-vortex mechanism of interaction using large-eddy simulation, Royal Aeronautical Society, Vol. 115, No. 1173, 703-711, 2011

7. **M. Ilie**, Numerical study of helicopter blade-vortex mechanism of interaction using large-eddy simulation,} Journal of Computers & Structures, Vol. 87, 758-768, 2009.

8. **M. Ilie**, Matida, E.A, Finlay W.H., Asymmetrical Aerosol Deposition in an Idealized Mouth with a DPI Mouthpiece Inlet using LES, Journal of Aerosol Science and Technology, Vol. 42, 10-17, 2008.

Articole publicate în volumele „proceedings" cu Peer-Review ale conferinţelor internaţionale indexate ISI Thomson

1. **M. Ilie** and G. Sullivan, Aerodynamics and aeroacoustics studies of supersonic flow past wing, doi.org/10.2514/6.2020-2602

2. **M. Ilie**, M. Chan, G. Sullivan and J. Kaplan, The effect of impinging jets on the turbulent mixing of cavity flows; numerical studies using LES and IDDES, doi.org/10.2514/6.2020-2688

3. **M. Ilie** and John McAfee, Aerodynamics and design of vertical-axis wind turbine; numerical studies using LES and IDDES , doi.org/10.2514/6.2020-2693

4. **M. Ilie**, C. Dao, The effect of pulsatile flow on the fluid dynamics of aorta; numerical studies using LES and IDDES, (AIAA-2018-2918), doi.org/10.2514/6.2018-2918

5. **M. Ilie**, K. Harris, Flow past circular cylinders in tandem: a comparison between LES and IDDES, (AIAA-2018-3234), doi.org/10.2514/6.2018-3234

6. C. Dao, **M. Ilie**, Aerodynamics and aeroacoustics of two HAWT array; numerical studies using LES and IDDES, (AIAA-2018-3234) doi.org/10.2514/6.2018-3823

7. C. Dao, **M. Ilie**, Numerical studies of three and four HAWT array using LES and IDDES, (AIAA-2018-4022), doi.org/10.2514/6.2018-4022

8. **M. Ilie**, M. White, V. Soloiu, M. Rahman, The effect of winglets on the aircraft wing aerodynamics; numerical studies using LES,(AIAA-2019-1308), doi.org/10.2514/6.2019-1308

9. I. Riley, **M. Ilie**, M. Rahman, Computational and experimental studies of point absorber wave energy converter, (AIAA-2019-1674), doi.org/10.2514/6.2019-1674

10. Curtis, G., **M. Ilie**, Schallhorn, P.,Interpolation Method needed for Numerical Uncertainty Analysis of Computational Fluid Dynamics, (AIAA 2014-1433), doi.org/10.2514/6.2014-1433

11. Curtis, G., **M. Ilie**, Schallhorn, P., Computational Fluid Dynamics Uncertainty Analysis for Payload Fairing Spacecraft Environmental Control Systems, (AIAA 2014-0440), doi.org/10.2514/6.2014-0440

12. Curtis, G., **M. Ilie**, Schallhorn, P., Comprehensive Approach to Verification and Validation of CFD Simulations Applied to Backward Facing Step-Application of CFD Uncertainty Analysis, (AIAA 2013-258), doi.org/10.2514/6.2013-258

13. Velez, C., **M. Ilie**, Flow past flat plate at angle of attack; numerical studies using S-A, LES and IDDES, (AIAA 2013-0240), doi.org/10.2514/6.2013-240

14. Velez, C., **M. Ilie**, Aerodynamic aspects of helicopter blade-vortex interaction; the interaction with vortex streets considering the icing effect, (AIAA 2013-0243), doi.org/10.2514/6.2013-243

15. **M. Ilie**, Numerical studies of turbulent separation in forward facing step flows using $k - \varepsilon$, SST, S-A and LES, (AIAA 2013-0390), doi.org/10.2514/6.2013-390

16. **M.Ilie**, Rotorcraft blade-vortex street interactions; critical aerodynamic aspects, (AIAA 2013-0805), doi.org/10.2514/6.2013-805

17. **M. Ilie**, Reduction of helicopter BVI noise using synthetic jets; a numerical study using large-eddy simulation, (AIAA 2013-0804), doi.org/10.2514/6.2013-804

18. Rodriguez, G., Velez, C., **M. Ilie**, Numerical studies of high-speed cavity flows using LES, DDES and IDDES, (AIAA 2013-0982), doi.org/10.2514/6.2013-982

19. Arshad, M., **M. Ilie**, Analysis of Reduced Order Chemical Mechanisms for Oxygen-enriched Combustion of Methane and n-decane, (AIAA 2012-4110), doi.org/10.2514/6.2012-4110

20. Velez, C., Coronado, P., **M. Ilie**, Reduction of helicopter BVI noise using active flow control; the case of vortex street interactions, (AIAA 2012-2141), doi.org/10.2514/6.2012-2141

21. Velez, C., B. Papesh, **M. Ilie**, Qu, Z., Three--dimensional LES of bi-direcional turbine for wave energy conservation, 30th International Conference on Ocean, Offshore and Arctic Engineering Volume 5: Ocean Space Utilization; Ocean Renewable Energy Rotterdam, The Netherlands, June 19–24, 2011

22. Coronado, P., Velez, C., **M. Ilie**, Zha, G., High angle of attack helicopter blade-vortex interaction; numerical studies using LES, (AIAA 2011-55), doi.org/10.2514/6.2011-3208

23. **M. Ilie**, H. Al-Kuran, Coronado, P., Velez, C., Aerodynamic aspects and cooling techniques of turbine blade; numerical studies using URANS and LES, (AIAA 2011-3360) doi.org/10.2514/6.2011-3360

24. **M. Ilie**, H. Al-Kuran, Velez, C., Coronado, P., Numerical computations of turbine blade aerodynamics; comparison of SAS and LES, (AIAA 2011-3093), doi.org/10.2514/6.2011-3093

25. Coronado, P., Velez, C., **M. Ilie**, Zha, G., Numerical Investigations of Vortex-Cylinder Mechanism of Interaction using LES and URANS, (AIAA 2011-57), doi.org/10.2514/6.2011-57

26. Velez, C., Coronado, P., Al-Kuran, H., DePerta, A., **M. Ilie**, Experimental and Numerical Studies of Active Flow Control Technique for the Reduction of Helicopter BVI Noise, (AIAA 2011-1183), doi.org/10.2514/6.2011-1183

27. Cousin, D., Morikone, M., Hirst, S., Elder, J., **M. Ilie**, Experimental studies of tip-vortex formation; influence of blade-tip geometry on thevortex characteristics,(AIAA 2011-1183), doi.org/10.2514/6.2011-1253

28. Velez, C., Coronado, P., Al-Kuran, H., **M. Ilie**, Aerodynamic Aspects and Cooling Techniques of Turbine Blade; Numerical Studies using LES, SAS, SST, SA and $k - \varepsilon$, (AIAA 2011-5817), doi.org/10.2514/6.2011-5817

29. Al-Kuran, H., **M. Ilie**, Reynolds number effect on the turbulent mixing; numerical studies using DNS with adaptive mesh refinement, (AIAA 2011-6128), doi.org/10.2514/6.2011-6128

30. **M. Ilie**, Active Flow Control Technique for the Reduction of Helicopter BVI Noise: A Numerical Study Using LES, (AIAA 2010-1411), doi.org/10.2514/6.2010-1411

31. **M. Ilie**, Critical Aspects in the Aerodynamics of Helicopter Blade-Vortex Interaction: A Numerical Study Using LES, (AIAA 2010-677), doi.org/10.2514/6.2010-4555

32. **M. Ilie**, LES Studies of Helicopter Blade-Vortex Mechanism of Interaction: The Icing Effect, (AIAA 2010-680), doi.org/10.2514/6.2010-680

33. **M. Ilie**, Numerical Computations of Particle-Laden Turbulent Reacting Flows: A Large-Eddy Simulation Approach, (AIAA 2010-6742), doi.org/10.2514/6.2010-6742

34. **M. Ilie**, Icing Effect on the Aeroacoustics of Helicopter Blade-Vortex Interaction: A Numerical Study Using Large-Eddy Simulation, (AIAA 2010-3855), doi.org/10.2514/6.2010-4233

35. **M. Ilie**, Nitzsche, F., Matida, E. , Influence of vortex characteristics on the blade-vortex mechanism of interaction using large-eddy simulation, (AIAA 2009-1282), doi.org/10.2514/6.2009-1282

36. **M. Ilie**, Fully-Coupled Aeroelastic Computations of High Reynolds Number Flows: An Approach Using Large-Eddy Simulation, (AIAA 2009-3675), doi.org/10.2514/6.2009-3675

37. **M. Ilie**, Numerical Computations of Turbulent Swirling Reacting Flows Using URANS and LES, (AIAA 2009-5407), doi.org/10.2514/6.2009-5407

38. **M. Ilie**, Nitzsche, F., Matida, E. , Study of the Aeroelastic Response of an Airfoil to Blade-Vortex Interaction Using Large-Eddy Simulation, (AIAA 2009-2600) doi.org/10.2514/6.2009-2600

39. **M. Ilie**, Nitzsche, F., Matida, E. , Aeroelastic Response of an Idealized Airfoil to Blade-Vortex Interaction: A CFD Approach Using Large Eddy Simulation, (AIAA 2008-2180), doi.org/10.2514/6.2008-2180

40. **M. Ilie**, Nitzsche, F., Matida, E. , Influence of Angle of Attack on the Helicopter Blade-Vortex Mechanism of Interaction Using Large Eddy Simulation, (AIAA 2008-551)doi.org/10.2514/6.2008-551

41. **M. Ilie**, Parametric Studies of Blade-Vortex Mechanism of Interaction Using Large-Eddy Simulation, (AIAA 2008-4164), doi.org/10.2514/6.2008-4164

42. **M. Ilie**, Nitzsche, F., Matida, E. , Aeroacoustic investigations of Blade-Vortex Interaction using Large Eddy Simulation, (AIAA 2008-3072), doi.org/10.2514/6.2008-3072

43. **M. Ilie**, Nitzsche, F., Matida, E. , Two-Dimensional Blade-Vortex Interaction using Large Eddy Simulation, (AIAA 2007-2066), doi.org/10.2514/6.2007-2066

Invitat Special - Seminarii

- Northeastern University
  Department of Mechanical Engineering
  Boston, April 2012

- von Karman Institute for Fluid Mechanics
  Department of Aeronautical Engineering,
  Brussels, Belgium, November 2011

- University of California, Berkeley
  Department of Mechanical Engineering,
  Berkeley, CA, May 2011

- University of California, Davis
  Department of Mechanical and Aeronautical Engineering
  Davis, CA, May 2010

- Massachusetts Institute of Technology
  Department of Aeronautics and Astronautics,
  Cambridge, MA, June 2009

- California Institute of Technology
  Department of Mechanical Engineering
  Pasadena, CA, April 2009

- University of California, Los Angeles
  Department of Mechanical Engineering
  Los Angeles, CA, April 2009

Afiliere	- University of California, Davis Department of Mechanical and Aeronautical Engineering Davis, CA, May 2008
	- Stanford University Center for Turbulence Research Palo Alto, CA, April 2008.
	- Clarkson University Department of Mechanical and Aerospace Engineering Postdam, NY, Nov. 2007
	- American Institute for Aeronautics and Astronautics (AIAA)
	- American Helicopter Society (AHS)
	- American Mathematical Society (AMS)
	- American Physical Society (APS)
	- American Society of Mechanical Engineering (ASME)
	- Society for Industrial and Applied Mathematics (SIAM)
Premii	- Excellence Teaching Award, University of Central Florida, 2010
	- ASHRAE Rising Star Award for Team Faculty Advisor, 2012
	- ASHRAE Award for Team Faculty Advisor, 2012
	- ASHRAE Award for Team Faculty Advisor, 2011
	- ASHRAE Award for Team Faculty Advisor 2010
	- Third Place ASHRAE Student Competition 2012
	- First Place ASHRAE Student Competition 2011
	- First Place ASHRAE Student Competition 2010
	- First Place NASA/USLI Rocket Design Student Competition 2011
	- Rocky Mountain Mathematics Consortium (RMMC) Fellowship, Parallel Numerical Methods for Partial Differential Equations, University of Wyoming 2008
	- Sun Microsystems of Canada Scholarship in Computational, Sciences and Engineering, Sun Microsystems 2005-2006

Activitati Stiintifice Internationale	- Membru al Comsiei Editoriale al Journal of Aeronautics and Aerospace Engineering
	- Membru al Comsiei Editoriale al Journal of Modeling and Simulations
	- Membru al Comsiei Editoriale al Fundamental Journal of Applied Sciences
	- Member al Comisiei Tehnice al American Institute for Aeronautics and Astronautics, Gas Turbine Engines, 2008-2013.
	- Memberu al Comisiei Stiintifice Internationale al „7th Subrata Chakrabarti International Conference on Fluid Structure Interaction", 10-12 April 2013, Gran Canaria, Spain.
	- Organizator al Symposionului "Advances in Turbulence Modeling", for the 10th International Conference of Numerical Analysis and Applied Mathematics 2012 (ICNAAM 2012), Kos, Greece, 19-25 September, 2012.
	- Organizator al Symposionului "Advances in Turbulence Modeling", for the 9th International Conference of Numerical Analysis and Applied Mathematics 2011 (ICNAAM 2011), Halkidiki, Greece, 19-25 September, 2011.
	- Organizator al Symposionului "Advances in Turbulence Modeling", for the 8th International Conference of Numerical Analysis and Applied Mathematics 2010 (ICNAAM 2010), Rhodos, Greece, 19-25 September, 2010.
	- Organizator al Symposionului "Advances in Turbulence Modeling", for the 7th International Conference of Numerical Analysis and Applied Mathematics 2009 (ICNAAM 2009), Crete, Greece, 18-22 September, 2009.
	- Organizator al Sectiunii de Dinamic Fluidelor pentru March Meeting of American Physical Society, March 15-19, 2010; Portland, Oregon.
	- Session Chair for the AIAA Fluid Dynamics Meeting (2011), AIAA Joint Propulsion Conference (2010, 2011, 2012)
Colaborari Internationale	- Ecole Nationale Superieure des Mines de Douai, France - ICAM, Toulouse, France - Supmeca, Institute of Mechanics, Paris, France