

# WAGDI GEORGE HABASHI JOURNALS AND CONFERENCES PUBLICATIONS

## REFEREED JOURNALS PUBLICATIONS

Some of the publications that follow (Journals and Conferences) have been in collaboration with industrial researchers from 3 continents:

Agusta-Westland (Now Leonardo, Cascina Costa, Italy), ANSYS (Montreal and Lebanon, NH), Aviadvigatel (Perm, Russia), Bell Helicopter (Fort Worth, USA), Bombardier Aerospace (Montreal), CAE Inc. (Montreal), CERTIF-ICE (Montreal), Computer Dynamics Inc. (Hampton, USA), Dow International LLP (Kansas City, USA), General Electric Research Center (Albany, USA), Korean Aerospace Industries (Sacheon, South Korea), Lockheed Martin (Redondo Beach, USA), Meteorological Services Canada (Toronto), Mitsubishi Aircraft Corporation (Nagoya, Japan), NASA-Langley Research Center (Hampton, USA), Newmerical Technologies International (Montreal), Northrop Grumman (Los Angeles, USA), Pratt & Whitney Canada (Longueuil), RUAG Aerospace (Emmen, Switzerland), Shanghai Aircraft Design & Research Institute (Shanghai, China), Shanghai Xian Dai Architectural Design Group (Shanghai, China), Tupolev (Moscow, Russia) and others.

And with Professors from the following Universities:

École de Technologie Supérieure (Montréal), École Nationale Supérieure des Ingénieurs de Tunis (Tunis, Tunisia), École Polytechnique de Montréal, Embry Riddle Aeronautical University (Daytona Beach, USA), ETH (Zurich, Switzerland), George Washington University (Washington, USA), Gyeongsang National University (Jinju, South Korea), McGill University (Montreal), University of California (Davis, USA), Université Laval (Quebec City, Canada), Tongji University (Shanghai, China), Università degli Studi di Bergamo (Bergamo, Italy), Università degli Studi di Udine (Udine, Italy), Università di Milano (Milano, Italy), Vrije Universiteit Brussel (Brussels, Belgium), York University (Toronto).

### Interpretation of colors:

Student from the CFD Lab

Industrial Collaborator / Industrial Collaborator, and former student from the CFD Lab

Professors from the same or other University

1. **S. Mallikarjun**, **V. Casseau**, **G. Yang**, **J.Y. Huang**, W.G. Habashi, **S. Gao** and **A. Karchani**, "HALO3D: An All-Mach Approach to Hypersonic Flows Simulation, Part 2", International Journal of Computational Fluid Dynamics, Vol. 37, No. 5, pp. 333-366, March 2024. doi.org/10.1080/10618562.2024.2306946
2. **S. Mallikarjun**, **V. Casseau**, W.G. Habashi, **S. Gao** and **A. Karchani**, "Hybrid Navier-Stokes-DSMC Automatic Mesh Optimization in Hypersonics", AIAA Journal of Thermophysics and Heat Transfer, Vol. 37, No. 4, pp. 779-806, August 2023. doi.org/10.2514/1.T6770
3. W.G. Habashi, "A Path to Enabling a Wider Use of Controlled-Accuracy 3D CFD in Industry and Academia", Invited Paper to Special Issue Titled "Crossing Computing Frontiers" of the International Journal of Unconventional Computation, Vol. 18, pp.15-48, February 2023.
4. **X. Cui** and W.G. Habashi, "A Dendritic Freezing Model for In-Flight Supercooled Large Droplets Impingement and Solidification", Computers & Fluids, Vol. 254, Issue: 105778, January 2023. doi.org/10.1016/j.compfluid.2023.105778

5. **S. Mallikarjun**, **V. Casseau**, W.G. Habashi, **S. Gao** and **A. Karchani**, "Direct Simulation Monte Carlo Methods for Hypersonic Flows with Automatic Mesh Optimization", AIAA Journal, Vol. 61, No. 1, pp. 5-22, November 2022.  
[doi.org/10.2514/1.J061971](https://doi.org/10.2514/1.J061971)
6. W.G. Habashi and **A. Yassin**, "Modelling of Iced Rotor Dynamics via CFD/CSD Coupling", International Journal of Numerical Methods for Heat and Fluid Flow, Vol. 32, No. 12, pp. 3848-3862, November 2022.  
[doi.org/HFF-06-2021-0418](https://doi.org/HFF-06-2021-0418)
7. **V. Casseau**, **W. Zhang**, **S. Mallikarjun**, W.G. Habashi, **S. Gao** and **A. Karchani**, "HALO3D: An All-Mach Approach to Hypersonic Flows Simulation, Part 1", International Journal of Computational Fluid Dynamics, Vol. 36, No. 3, pp. 187-206, July 2022.  
[doi.org/10.1080/10618562.2022.2094917](https://doi.org/10.1080/10618562.2022.2094917)
8. **A. Targui** and W.G. Habashi, "On a Reduced Order Model-Based Optimization of Rotor Electro-Thermal Anti-Icing Systems", International Journal of Numerical Methods for Heat and Fluid Flow, Vol. 32, No. 8, pp. 2885-2913, June 2022.  
[doi.org/10.1108/HFF-06-2021-0417](https://doi.org/10.1108/HFF-06-2021-0417)
9. **X. Cui** and W.G. Habashi, "SPH Simulation of Supercooled Large Droplets Impacting Hydrophobic and Superhydrophobic Surfaces", Computers & Fluids, Vol. 229, Issue: 105055, October 2021.  
[doi.org/10.1016/j.compfluid.2021.105055](https://doi.org/10.1016/j.compfluid.2021.105055)
10. **W. Zhang**, W.G. Habashi, **G.S. Baruzzi** and **N. Ben Salah**, "Edge-Based Finite Element Formulation of Magnetohydrodynamics at High Mach Numbers", International Journal of Computational Fluid Dynamics, Special Issue on Advances in the Numerical Simulation of Hypersonic Flows, Vol. 35, No. 5, pp. 349-372, June 2021.  
[doi.org/10.1080/10618562.2021-1929938](https://doi.org/10.1080/10618562.2021-1929938)
11. **J. Anthony** and W.G. Habashi, "Helicopter Rotor Ice Shedding and Trajectory Analyses in Forward Flight", AIAA Journal of Aircraft, Vol. 58, No. 5, pp. 1051-1067, September–April 2021.  
[doi.org/10.2514/1.C036043](https://doi.org/10.2514/1.C036043)
12. **A. Kaveh** and W.G. Habashi, "Combining CFD-EFD-FFD Data via Gappy Proper Orthogonal Decomposition", International Journal of Computational Fluid Dynamics, Vol. 34, No. 2, pp.93-107, February 20, 2020.  
[doi.org/10.1080/10618562.2020.1724973](https://doi.org/10.1080/10618562.2020.1724973)
13. **D. Caraeni**, **V. Casseau** and W.G. Habashi, "Fluid-Structure Interaction: Extended-FEM Approach to Solidification", Finite Elements in Analysis & Design, Vol. 177, 103425, pp. 1-14, September 2020.  
[doi.org/10.1016/j.finel.2020.103425](https://doi.org/10.1016/j.finel.2020.103425)
14. **X. Cui**, W.G. Habashi and **V. Casseau**, "Multiphase SPH Modelling of Supercooled Large Droplets Freezing on Aircraft Surfaces", Invited Paper to Special Issue on "Smooth Particle Hydrodynamics Applications in CFD", International Journal of Computational Fluid Dynamics, Vol. 35, Nos. 1-2, pp. 79-92, September 2020.  
[doi.org/10.1080/10618562.2020.1817401](https://doi.org/10.1080/10618562.2020.1817401)

15. **X. Cui**, W.G. Habashi and **V. Casseau**, "MPI Parallelisation of 3D Multiphase Smoothed Particle Hydrodynamics", Invited Paper to Special Issue on "High Performance Computing in CFD", International Journal of Computational Fluid Dynamics, Houzeaux and Garcia-Gasulla (Guest Editors), Vol. 34, Nos. 7-8, pp. 610-621, June 2020. doi.org/10.1080/10618562.2020.1785436
16. W.G. Habashi and **M. Yassin**, "Modeling of Iced Rotor Dynamics via CFD/CSD Coupling", International Journal of Numerical Methods in Heat & Fluid Flow, Vol. 22, No. 12, pp. 3848-3862, June 2020. doi.org/0.2514/6.2018-3483
17. **A.A. Aly** and W.G. Habashi, "Accurate Marine Propellers Flow Field CFD Through Anisotropic Mesh Optimization", International Journal of Numerical Methods in Heat & Fluid Flow, Vol. 29, No. 9, pp. 3148-3168, September 2019. doi.org/10.1108/HFF-09-2018-0538
18. **S. Gao**, **J. Seguin**, W.G. Habashi, **D. Isola** and **G.S. Baruzzi**, "A Finite Element Solver for Hypersonic Flows in Thermo-Chemical Non-Equilibrium, Part 2", Invited Paper to Special Issue of the International Journal of Numerical Methods in Heat & Fluid Flow, Vol. 30, No. 2, pp. 575-606, September 2019. doi.org/10.1108/HFF-12-2018-0725
19. **X. Cui**, **A. Bakkar** and W.G. Habashi, "A Multiphase SPH Modeling of Supercooled Large Droplets Dynamics", International Journal of Numerical Methods in Heat & Fluid Flow, Vol. 29, No. 7, pp. 2434-2449, August 2019. doi.org/10.1108/HFF-10-2018-0547
20. **W. Zhang**, W.G. Habashi, **N. Ben Salah**, **D. Isola** and **G.S. Baruzzi**, "Edge-Based Finite Element Modeling of Magnetogasdynamic-Based Propulsion Systems", AIAA Journal, Vol. 57, No. 7, pp. 3003-3013, July 2019. doi.org/10.2514/1.J058171
21. **J. Seguin**, **S. Gao**, W.G. Habashi, **D. Isola** and **G.S. Baruzzi**, "A Finite Element Solver for Hypersonic Flows in Thermo-Chemical Non-Equilibrium, Part I", Invited Paper to Special Issue of the International Journal of Numerical Methods in Heat & Fluid Flow, Vol. 29, No. 7, pp. 2352-2388, July 2019. doi.org/10.1108/HFF-09-2018-0498
22. **V. Abdollahi**, W.G. Habashi and **M. Fossati**, "Multi-Phase Smoothed Particle Hydrodynamics Modeling of Supercooled Large Droplet Dynamics for In-Flight Icing Conditions", Vol. 82-83, No. 7, pp. 252-261, Aerospace Science and Technology, November 2018. doi.org/10.1016/j.ast.2018.09.009
23. **W. Zhang**, W.G. Habashi, **N. Ben Salah**, **D. Isola** and **G.S. Baruzzi**, "Edge-Based Finite Element Formulation of Hypersonic Flows Under an Imposed Magnetic Field", AIAA Journal, Vol. 56, No. 7, pp. 2756-2768, August 2018. doi.org/10.2514/1.J058171
24. **D. Kelly**, W.G. Habashi, **G. Quaranta**, **M. Fossati** and P. Masarati, "Ice Accretion Effects on Helicopter Rotor Performance, via Multi-body and CFD Approaches", AIAA Journal of Aircraft, Vol. 55, No. 3, pp. 1165-1176, December 2017. doi.org/10.2514/1.C033962

25. **S. Gao**, W.G. Habashi, **D. Isola**, **G.S. Baruzzi** and **M. Fossati**, "A Jacobian-Free Edge-Based Galerkin Formulation for Compressible Flows" Computers & Fluids, Vol. 143 pp. 141-156, January 2017.  
doi.org/10.1016/j.compfluid.2016.10.026
26. W.G. Habashi and **J.P. Dow, Sr.**, "Icing Certification: Time to Consider 3D CFD", Invited Paper, International Civil Aviation Journal (ICAO) Journal, Vol. 72, No.1, pp. 38-40, June 2017.
27. **M-E. Dumas**, W.G. Habashi, **G.S. Baruzzi**, **D. Isola** and **M. Fossati**, "Finite Element Modeling of Non-Equilibrium Fluid-Wall Interaction at High-Mach Regime", AIAA Journal of Aircraft, Vol. 54, No. 6, pp. 2231-2339, May 2017.  
doi.org/10.2514/1.C034211
28. **Z. Zhan**, W.G. Habashi and **M. Fossati**, "Real-Time Regional Jet Comprehensive Aero-Icing Analysis via Reduced-Order Modeling", AIAA Journal, Vol. 54, No. 12, pp. 3787-3802, July 2016.  
doi.org/10.2514/1.J055013
29. **V. Abdollahi**, W.G. Habashi, **M. Fossati**, and **G.S. Baruzzi**, "Quasi-Molecular Modeling of a Single Supercooled Large Droplet Impact", Applied Mathematical Modelling, Vol. 40, Issues 7-8, pp. 4560-4571, April 2016.  
doi.org/10.1016/j.apm.2015.11.043
30. **A. Bakkar**, W.G. Habashi, **M. Fossati** and **G.S. Baruzzi**, "A Hybrid Taylor-Galerkin Variational Multi-Scale Stabilization Method for the Level Set Equation", Computers & Fluids, Vol. 121, pp. 192-205, October 2015.  
doi.org/10.1016/j.compfluid.2015.08.008
31. **Z. Zhan**, W.G. Habashi and **M. Fossati**, "Local Reduced Order Modeling and Iterative Sampling for Extensive Parametric Analyses of Aero-Icing Problems", AIAA Journal, Vol. 53, No. 8, pp. 2174-2185, August 2015.  
doi.org/10.2514/1.J053755
32. **G.B. Ahn**, **K.Y. Jung**, **R.S. Myong**, **H.B. Shin** and W.G. Habashi, "Numerical and Experimental Investigation of Ice Accretion on a Rotorcraft Engine Air Intake", AIAA Journal of Aircraft, Vol. 52, No. 3, pp. 903-909, January 2015.  
doi.org/10.2514/1.C032839
33. **Y. Zhang**, W.G. Habashi and **R.A. Khurram**, "Predicting Wind-Induced Vibrations of High-Rise Buildings using Unsteady CFD and Modal Analysis", Journal of Wind Engineering and Industrial Aerodynamics, Vol. 136, pp. 165-179, January 2015.  
doi.org/10.1016/j.jweia.2014.11.008
34. **M. Pourbagian** and W.G. Habashi, "Aero-Thermal Optimization of In-Flight Electro-Thermal Ice Protection Systems in Transient De-Icing Mode", International Journal of Heat & Fluid Flow, Vol. 54, pp. 167-182, August 2015.  
doi.org:10.1016/j.ijheatfluidflow.2015.05.012
35. **M. Fossati** and W.G. Habashi, "Evaluation of Aerodynamic Loads via Reduced Order Methodology", Computers & Fluids- Vol. 53, No. 8, pp.2389-2405, August 2015  
doi.org/10.2514/1.J053755

36. **A. Pendenza**, **M. Fossati** and W.G. Habashi, "A 3D Mesh Deformation Technique for Irregular In-Flight Ice Accretion", International Journal for Numerical Methods in Fluids, Vol. 79, No. 5, pp. 215-242, May 2015.  
doi.org/10.1002/fld.4049
37. **D.R. Bilodeau**, W.G. Habashi, **M. Fossati** and **G.S. Baruzzi**, "Eulerian Modeling of SLD Splashing and Bouncing", AIAA Journal of Aircraft, Vol. 52, No. 5, pp. 1611-1624, March 2015.  
doi.org/10.2514/1.C033023
38. **M. Pourbagian**, **B. Talgorn**, W.G. Habashi, **M. Kokkalaras**, and **S. Le Digabel**, "Constrained Problem Formulations for Power Optimization of Aircraft Electro-Thermal Anti-Icing Systems", Journal of Optimization and Engineering, Vol. 16, No. 4, pp. 663-693, July 2015.  
doi.org/10.1007/s11081-015-9282-1
39. **M. Fossati** and W.G. Habashi, "Multi-parameter Analysis of Aero-Icing Problems using Proper Orthogonal Decomposition and Multidimensional Interpolation", AIAA Journal, Vol. 51, No. 4, pp. 946-960, March 2013.  
doi.org/10.2514/1.J051877
40. **M. Pourbagian** and W.G. Habashi, "Surrogate-Based Optimization of Electro-Thermal Airfoil Anti-Icing Systems", AIAA Journal of Aircraft, Vol. 50, No. 5, pp. 1555-1563, September 2013.  
doi.org/10.2514/1.C032072
41. **Y. Zhang**, **R.A. Khurram** and W.G. Habashi, "Multiscale Finite Element Method Applied to Detached-Eddy Simulation for Computational Wind Engineering", Journal of Wind and Structures, Vol. 17, No. 1, pp. 1-19, July 2013.  
doi.org/10.12989/was.2013.17.1.001
42. **H. Fouladi**, W.G. Habashi and **I.A. Ozcer**, "Quasi-Steady Modeling of Ice Accretion on a Helicopter Fuselage in Forward Flight", AIAA Journal of Aircraft, Vol. 50, No. 4, pp. 1169-1178, July 2013.  
doi.org/10.2514/1.C032096
43. **H. Keyhan**, **G. McClure** and W.G. Habashi, "Dynamic Analysis of an Overhead Transmission Line Subject to Gusty Wind Loading Predicted by Wind-Conductor Interaction", Computers & Structures, Vol. 122, pp. 135-144, June 2013.  
doi.org/10.1016/j.compstruc.2012.12.02
44. **A. Borna**, W.G. Habashi, **G. McClure** and **S. Nadarajah**, "CFD-CSD Simulation of Vortex-Induced Vibration of a Circular Cylinder with Low Mass-Damping", Journal of Wind & Structures, Vol. 16, No. 5, pp. 411-431, May 2013.  
doi.org/10.12989/was.2013.16.5.411
45. **S. Zhang**, **R.A. Khurram**, **O. El-Kerdi** and W.G. Habashi, "FEM Analysis of In-Flight Ice Break-up", Finite Elements in Analysis and Design, Vol. 57, pp. 55-66, September 2012.  
doi.org/10.1016/j.finel.2012.03.005
46. **Y. Zhang**, **R.A. Khurram** and W.G. Habashi, "Multiscale Finite Element Method Applied to Detached-Eddy Simulation for Computational Wind Engineering", Notes on Numerical

Fluid Mechanics and Multidisciplinary Design, Springer-Verlag, Vol. 117, pp. 483-492, April 2012.  
doi:<http://dx.doi.org/10.12989/was.2013.17.1.001>

47. **R.A. Khurram**, **Y. Zhang** and W.G. Habashi, "Multiscale Finite Element Method Applied to the Spalart-Allmaras Turbulence Model for 3D Detached-Eddy Simulation", Computer Methods in Applied Mechanics and Engineering, Vol. 233-236, pp. 180-193, August 2012.  
doi.org/10.1016/j.cma.2012.01.007
48. **T. Reid**, **G.S. Baruzzi**, **C.N. Aliaga** and W.G. Habashi, "FENSAP-ICE: Unsteady Conjugate Heat Transfer Simulation of Electrothermal De-Icing", AIAA Journal of Aircraft, Vol. 49, No. 4, pp. 1101-1109, July-August 2012.  
doi.org/10.2514/1.C032839
49. **M. Fossati**, W.G. Habashi and **G.S. Baruzzi**, "FENSAP-ICE: "Simulation of Supercooled Large Droplets Impingement via Reduced Order Technology", AIAA Journal of Aircraft, Vol. 49, No. 2, pp. 600-610, March-April 2012.  
doi.org/10.2514/1.C031608
50. **D. Zeppetelli** and W.G. Habashi, "In-Flight Icing Risk Management Through Computational Fluid Dynamics-Icing Analysis", AIAA Journal of Aircraft, Vol. 49, No. 2, pp. 611-621, March-April 2012.  
doi.org/10.2514/1.C031609
51. **M. Fossati**, **R.A. Khurram** and W.G. Habashi, "An Arbitrary Lagrangian-Eulerian Mesh Movement Scheme for Long-term In-Flight Ice Accretion", International Journal of Numerical Methods in Fluids, Vol. 68, No. 8, pp. 958-976, March 2012.  
doi.org/10.1002/fld.2588
52. **X. Veillard**, W.G. Habashi and **G.S. Baruzzi**, "Icing Simulation in Multistage Jet Engines", AIAA Journal of Propulsion and Power, Vol. 27, No. 6, pp. 1231-1237, November/December 2011.  
doi.org/10.2514/1.B34060
53. **S. Nilamdeen** and W.G. Habashi, "A Multiphase Approach for Simulating Ice Crystals Ingestion in Jet Engines", AIAA Journal of Propulsion and Power, Vol. 27, No. 5, pp. 959-969, September/October 2011.  
doi.org/10.2514/1.55280
54. **H. Keyhan**, **G. McClure** and W.G. Habashi, "Computational Study of Surface Roughness and Ice Accumulation Effects on Wind Loading of Overhead Line Conductors", International Review of Civil Engineering Journal, Vol. 2, No. 4, pp. 208-214, July 2011.
55. **D. Zeppetelli** and W.G. Habashi, "In-Flight Icing Safety Management, A More Fluid Approach", International Civil Aviation Journal (ICAO) Journal, Vol. 66, No. 2, pp. 18-23, April 2011.  
[https://www.icao.int/environmental-protection/Documents/Publications/6602\\_en.pdf](https://www.icao.int/environmental-protection/Documents/Publications/6602_en.pdf)
56. **M.P. Pellissier**, W.G. Habashi and **A. Pueyo**, "Optimization via FENSAP-ICE of Hot Air Anti-Icing Systems", AIAA Journal of Aircraft, Vol. 48, No. 1, pp. 265-276, January-February 2011.  
doi.org/10.2514/1.C031095

57. **C.N. Aliaga**, **M.S. Aubé**, **G.S. Baruzzi** and W.G. Habashi, "FENSAP-ICE UNSTEADY: A Unified In-Flight Icing Simulation Methodology for Aircraft, Rotorcraft and Jet Engines", AIAA Journal of Aircraft, Vol. 48, No. 1, pp. 119-126, January-February 2011.  
doi.org/10.2514/1.C000327
58. **G. Croce**, **E. De Candido**, W.G. Habashi, **J. Munzar**, **M.S. Aubé**, **G.S. Baruzzi** and **C.N. Aliaga**, "FENSAP-ICE: Analytical Model for Spatial and Temporal Evolution of In-Flight Icing Roughness", AIAA Journal of Aircraft, Vol. 47, No. 4, pp. 1283-1289, July-August 2010.  
doi.org/10.2514/1.47143
59. **K. Nakakita**, **S. Nadarajah** and W.G. Habashi, "Toward Real-Time Aero-Icing Simulation of Complete Aircraft via FENSAP-ICE", AIAA Journal of Aircraft, Vol. 27, No. 1, pp. 96-109, January 2010.  
doi.org/10.2514/1.44077
60. **M.S. Aubé**, W.G. Habashi, **H.Z. Wang** and **D. Torok**, "On the Impact of Anisotropic Mesh Adaptation on Computational Wind Engineering", International Journal of Numerical Methods in Fluids, Vol. 63, No. 7, pp. 877-886, July 2010.  
doi.org/10.1002/fld.2109
61. **L. Remaki** and W.G. Habashi, "Hermite-Based Mesh Adaptation for CFD Functional Output", AIAA Journal, Vol. 47, No. 8, pp. 1965-1976, August 2009.  
doi.org/10.2514/1.33437
62. W.G. Habashi, Invited Article, "Recent Advances in CFD for In-Flight Icing Simulation", Journal of Japan Society of Fluid Mechanics, Vol. 28, No. 2, pp. 99-118, April 2009.  
<https://www.nagare.or.jp/download/noauth.html?d=28-2tokushu02.pdf&dir=84>
63. **F. Taghaddosi** and W.G. Habashi, "3D Parallel Computation of Engine Noise Radiation using an Iterative Method", Journal of Sound and Vibration, August 2009.
64. **L. Remaki** and W.G. Habashi, "A Posteriori Error Estimate Improvement in Mesh Adaptation for Computational Fluid Dynamics Applications", Proc. IMechE, Part C: J. Mechanical Engineering Science, Vol. 223(C5), pp. 1117-1126, December 2008.  
doi.org/10.1243/09544062JMES1165
65. **R. Honsek**, W.G. Habashi and **M.S. Aubé**, "Eulerian Modeling of In-Flight Icing due to Supercooled Large Droplets", AIAA Journal of Aircraft, Vol. 45, No. 4, pp. 1290-1296, August 2008.  
doi.org/10.2514/1.34541
66. **C.N. Aliaga**, W.G. Habashi, **M.S. Aubé**, **G.S. Baruzzi** and **S. Nadarajah**, "A Third-Generation In-Flight Icing Code: FENSAP-ICE-Unsteady", SAE Transactions, Journal of Aerospace, Vol. 116, pp. 697-703, September 2007.  
doi.org/10.4271/2007-01-3339.
67. **H. Wang**, **P. Tran**, W.G. Habashi, **Y. Chen**, **M. Zhang** and **L. Feng**, "Anti-Icing Simulation in Wet Air of a Piccolo System using FENSAP-ICE", SAE Transactions, Journal of Aerospace, Vol. 116, pp. 715-723, September 2007.  
doi.org/10.4271/2007-01-3357

68. **L. Remaki** and W.G. Habashi, "3D Mesh Adaptation on Multiple Discontinuities and Boundary Layers", SIAM Journal, Vol. 28, No. 4, pp. 1379–1397, September 2006.  
[doi.org/10.1137/S10648275034298](https://doi.org/10.1137/S10648275034298)
69. **H. Beaugendre**, **F. Morency** and W.G. Habashi, "Development of a Second-Generation In-Flight Icing Code", ASME Transactions, Journal of Fluids Engineering, Vol. 128, No.2 pp. 378-387, March 2006.  
[doi.org/10.1115/1.2169807](https://doi.org/10.1115/1.2169807)
70. **L. Remaki** and W.G. Habashi, "Pacing CFD: Automatic Mesh Adaptation as an Efficient Tool to Improve CFD Accuracy", International Journal of Computational Fluid Dynamics (Special Issue in honor of Antony Jameson's 70th Birthday), Vol. 19, No. 8, pp. 571-580, November 2005.  
[doi.org/10.1080/10618560500508383](https://doi.org/10.1080/10618560500508383)
71. **P. Tran**, **G.S. Baruzzi**, **I. Akel**, W.G. Habashi and **J.C. Narramore**, "FENSAP-ICE Applications to Complete Rotorcraft Configurations", SAE Transactions, Journal of Aerospace, pp. 1-13, June 2004.  
[doi.org/10.4271/2003-01-2105](https://doi.org/10.4271/2003-01-2105)
72. **D. Stanescu**, **D. Ait-Ali-Yahia**, W.G. Habashi and **M. Robichaud**, "Spectral Element Method for Linear Fan Tone Noise Radiation", AIAA Journal, Vol. 42, No. 4, April 2004.  
[doi.org/10.2514/1.9554](https://doi.org/10.2514/1.9554)
73. **M. Remaki** and W.G. Habashi, "A Discontinuous Galerkin/HLLC Solver for the Euler Equations", International Journal for Numerical Methods in Fluids, Vol. 43, pp. 1391-1405, December 2003.  
[doi.org/10.1002/fld.625](https://doi.org/10.1002/fld.625)
74. **H. Beaugendre**, **F. Morency**, W.G. Habashi and **P. Benquet**, "Roughness Implementation: Model Calibration and Influence on Ice Shapes", AIAA Journal of Aircraft, Vol. 40, No. 6, pp. 1212-1215, November/December 2003.  
[doi.org/10.2514/1.2318](https://doi.org/10.2514/1.2318)
75. **L. Remaki**, **H. Beaugendre** and W.G. Habashi, "ISOD-An Anisotropic Isovalue-Oriented Artificial Viscosity for the Euler and Navier-Stokes Equations", Journal of Computational Physics, Vol. 186, No. 1, pp. 279-294, March 2003.  
[doi.org/10.1016/S0021-9991\(03\)00066-4](https://doi.org/10.1016/S0021-9991(03)00066-4)
76. **H. Beaugendre**, **F. Morency** and W.G. Habashi, "ICE3D, FENSAP-ICE's 3D In-Flight Ice Accretion Module", AIAA Journal of Aircraft, Vol. 40, No. 2, pp. 239-247, March-April 2003.  
[doi.org/10.2514/2.3113](https://doi.org/10.2514/2.3113)
77. **I. Akel**, W.G. Habashi and **H.S. Moustapha**, "Toward CFD-Based Correlations for Single-Stage High-pressure Transonic Turbine Stage", International Journal of Rotating Machinery, Vol. 8, No. 5, pp. 337-352, October 2002.  
[doi.org/10.1080/1023-620291910761](https://doi.org/10.1080/1023-620291910761)
78. **G. Croce**, **H. Beaugendre** and W.G. Habashi, "Numerical Simulation of Heat Transfer in Mist Flow, Using FENSAP-ICE", Invited Paper to Special Issue of Journal of Numerical Heat Transfer, Part A, Vol. 42 No. 1, pp. 1-14, November 2002.  
[doi.org/10.1080/10407780290059477](https://doi.org/10.1080/10407780290059477)

79. M.C. Bogstad, W.G. Habashi, D. Ait-Ali-Yahia, I. Akel, N. Giannias and V. Longo, "A CFD-Based Advanced Ship-Airwake Database for Helicopter Flight Simulators", AIAA Journal of Aircraft, Vol. 39, No. 5, pp. 830-839, October 2002.  
doi.org/10.2514/2.3003
80. D. Ait-Ali-Yahia, G.S. Baruzzi, W.G. Habashi, M. Fortin, J. Dompierre and M-G. Vallet, "Anisotropic Mesh Adaptation: Towards User-Independent, Mesh-Independent and Solver-Independent CFD Solutions: Part II: Structured Grids", International Journal for Numerical Methods in Fluids, Vol. 39, No. 8, pp. 657-674, June 2002.  
doi.org/10.1002/fld.356
81. J. Dompierre, M-G. Vallet, Y. Bourgault, M. Fortin and W.G. Habashi, "Anisotropic Mesh Adaptation: Towards User-Independent, Mesh-Independent and Solver-Independent CFD Solutions: Part III: Unstructured Meshes", International Journal for Numerical Methods in Fluids, Vol. 39, No. 8, pp. 675-702, June 2002.  
doi.org/10.1002/fld.357
82. N. Ben Salah, A. Soulaïmani and W.G. Habashi, "A Finite Element Method for Magnetohydrodynamics", Computer Methods in Applied Mechanics and Engineering, Vol. 190, Issues 43-44, pp. 5867-5892, August 2001.  
doi.org/10.1016/S0045-7825(01)00196-7
83. G. Croce, H. Beaugendre and W.G. Habashi, "FENSAP-ICE: Numerical Simulation of Heat Transfer in Mist Flows", Journal of Numerical Heat Transfer, Part A, Vol. 42, pp. 139-152, May 2001.  
doi.org/10.1080/10407780290059477
84. W.G. Habashi, J. Dompierre, Y. Bourgault, D. Ait-Ali-Yahia, M. Fortin and M-G. Vallet, "Anisotropic Mesh Adaptation: Towards User-Independent, Mesh-Independent and Solver-Independent CFD Solutions: Part I: General Principles", International Journal for Numerical Methods in Fluids, Vol. 32, No. 6, pp. 725-744, March 2000.  
doi.org/10.1002/(SICI)1097-0363(20000330)32:6<725:AID-FLD935>3.0.CO;2-4
85. Y. Bourgault, H. Beaugendre and W.G. Habashi, "Development of a Shallow Water Icing Model in FENSAP-ICE", AIAA Journal of Aircraft, Vol. 37, No. 4, pp. 640-646, July-August 2000.  
doi.org/10.2514/2.2646
86. Y. Bourgault, Z. Boutanios and W.G. Habashi, "3D Eulerian Droplets Impingement Using FENSAP-ICE, Part I: Model, Algorithms and Validation", AIAA Journal of Aircraft, Vol. 37, No. 1, pp. 95-103, February 2000.  
doi.org/10.2514/2.2566
87. L.C. Dutto, C.Y. Lepage and W.G. Habashi, "Effect of the Storage Format of Sparse Linear Systems on Parallel CFD Computations", Computer Methods in Applied Mechanics and Engineering, Vol. 188, Issues. 1-3, pp. 441-453, July 2000.  
doi.org/10.1016/S0045-7825(99)00166-8
88. A. Tam, D. Ait-Ali-Yahia, M.P. Robichaud, M. Moore, V. Kozel and W.G. Habashi, "Anisotropic Mesh Adaptation for 3D Flows on Structured and Unstructured Grids", Invited Paper in Special Issue of Computer Methods in Applied Mechanics and Engineering, Vol. 189, No. 4, pp. 1205-1230, September 2000.

doi.org/10.1016/S0045-7825(99)00374-6

89. **F. Taghaddosi**, W.G. Habashi, **G.J. Guèvremont** and **D. Ait-Ali-Yahia**, "An Adaptive Approach Least-squares Method for the Compressible Euler Equations", International Journal for Numerical Methods in Fluids, Vol. 31, No. 7, pp. 1121-1139, December 1999.  
doi.org/10.1002/(SICI)1097-0363(19991215)31:7<1121::AID-FLD913>3.0.CO;2-R
90. **L.C. Dutto** and W.G. Habashi, "Parallelization of the ILU(0) Preconditioner for CFD Problems on Shared Memory Computers", International Journal for Numerical Methods in Fluids, Vol. 30, No. 8, pp. 995-1008, August 1999.  
doi.org/10.1002/(SICI)1097-0363(19990830)30:8<995::AID-FLD874>3.0.CO;2-K
91. **N. Ben Salah**, **A. Soulaïmani**, W.G. Habashi and **M. Fortin**, "A Conservative Stabilized Finite Element Method for the Magneto-Hydrodynamics Equations", International Journal for Numerical Methods in Fluids, Vol. 29, No. 5, pp. 535-554, March 1999.  
doi.org/10.1002/(SICI)1097-0363(19990315)29:5<535::AID-FLD799>3.0.CO;2-D
92. **M. Sleiman**, **A. Tam**, **M.P. Robichaud**, **M.F. Peeters** and W.G. Habashi, "Turbomachinery Multistage Simulation by a Finite Element Adaptive Approach", ASME Journal of Fluids Engineering, Vol. 121, No. 2, pp. 450-459, June 1999.  
doi.org/10.1115/96-GT-418
93. **Y. Bourgault**, W.G. Habashi, **J. Dompierre** and **G.S. Baruzzi**, "A Finite Element Method Study of Eulerian Droplets Impingement Models", International Journal for Numerical Methods in Fluids, Vol. 29, No. 4, pp. 429-449, March 1999.  
doi.org/10.1002/(SICI)1097-0363(19990228)29:4<429::AID-FLD795>3.0.CO;2-F
94. **D. Stanescu**, **D. Ait-Ali-Yahia**, W.G. Habashi and **M.P. Robichaud**, "Multidomain Spectral Computations of Ducted Sound Fields", AIAA Journal, Vol. 37, No. 3, pp. 296-302, March 1999.  
doi.org/10.2514/6.2000-1912
95. **D. Stanescu** and W.G. Habashi, "2N-Storage Low Dissipation and Dispersion Runge-Kutta Schemes for Computational Acoustics", Journal of Computational Physics, Vol. 143, No. 2, pp. 674-681, July 1998.  
doi.org/10.1006/jcph.1998.5986
96. **D. Stanescu** and W.G. Habashi, "Essentially Non-Oscillatory Euler Solutions on Unstructured Meshes Using Extrapolation", AIAA Journal, Vol. 36, No. 8, pp. 1413-1416, August 1998.  
doi.org/10.2514/2.562
97. W.G. Habashi, **J. Dompierre**, **Y. Bourgault**, **M. Fortin** and **M-G. Vallet**, "Certifiable Computational Fluid Dynamics Through Mesh Optimization", Special Issue on Credible Computational Fluid Dynamics Simulation", AIAA Journal, Vol. 36, No. 5, pp. 703-711, May 1998.  
doi.org/10.2514/2.458
98. **L.C. Dutto**, W.G. Habashi and **M. Fortin**, "An Algebraic Multilevel Parallelizable Preconditioner for Large-Scale CFD Problems", Invited Paper in Special Issue of Computer Methods in Applied Mechanics and Engineering, Vol. 149, Issues 1-4, pp. 303-318, January 1997.  
doi.org/10.1016/S0045-7825(97)00049-2

99. **D. Ait-Ali-Yahia** and W.G. Habashi, "Finite Element Adaptive Method for Hypersonic Thermochemical Nonequilibrium Flows", AIAA Journal, Vol. 35, No. 8, pp. 1294-1302, August 1997.  
[doi.org/10.2514/2.260](https://doi.org/10.2514/2.260)
100. **D. Ait-Ali-Yahia**, **M.-G. Vallet**, **A. Tam**, W.G. Habashi and **M. Fortin**, "A Directionally-Adaptive Methodology Using an Edge-Based Error Estimate on Quadrilateral Grids", International Journal for Numerical Methods in Fluids, Vol. 23, No. 7, pp. 673-690, October 1996.  
[doi.org/10.1002/\(SICI\)1097-0363\(19961015\)23:7<673::AID-FLD471>3.0.CO;2-P](https://doi.org/10.1002/(SICI)1097-0363(19961015)23:7<673::AID-FLD471>3.0.CO;2-P)
101. W.G. Habashi, "Putting Computers on Ice", ICAO Journal, Vol. 50, No. 7, pp. 14-17, October 1995.
102. **G.S. Baruzzi**, W.G. Habashi, **G.J. Guèvremont** and **M.M. Hafez**, "A Second Order Finite Element Method for the Solution of the Transonic Euler and Navier-Stokes Equations", Invited paper in special issue of the International Journal for Numerical Methods in Fluids, Vol. 20, Nos. 8-9, pp. 671-693, May 1995.  
[doi.org/10.1002/fld.1650200802](https://doi.org/10.1002/fld.1650200802)
103. **L.C. Dutto**, W.G. Habashi, **M.P. Robichaud** and **M. Fortin**, "A Method for Finite Element Parallel Viscous Compressible Flow Calculations", International Journal for Numerical Methods in Fluids, Vol. 19, No. 4, pp. 275-294, August 1994.  
[doi.org/10.1002/fld.1650190402](https://doi.org/10.1002/fld.1650190402)
104. W.G. Habashi, **M.P. Robichaud**, **V-N. Nguyen**, **W.S. Ghaly**, **M. Fortin** and **J.W.H. Liu**, "Large-Scale Computational Fluid Dynamics by the Finite Element Method", International Journal for Numerical Methods in Fluids, Vol. 18, No. 11, pp. 1083-1105, June 1994.  
[doi.org/10.1002/fld.1650181106](https://doi.org/10.1002/fld.1650181106)
105. **L.C. Dutto**, W.G. Habashi and **M. Fortin**, "Parallelizable Block Diagonal Preconditioners for the Compressible Navier-Stokes Equations", Computer Methods in Applied Mechanics and Engineering, Vol. 117, Issues 1-2, pp. 15-47, June 1994.  
[doi.org/10.1016/0045-7825\(94\)90075-2](https://doi.org/10.1016/0045-7825(94)90075-2)
106. **G.J. Guèvremont**, W.G. Habashi, **P.L. Kotiuga** and **M.M. Hafez**, "Finite Element Solution of the 3-D Compressible Navier-Stokes Equations by a Velocity-Vorticity Method", Journal of Computational Physics, Vol. 107, Issue 1, pp. 176-187, June 1993.  
[doi.org/10.1006/jcph.1993.1134](https://doi.org/10.1006/jcph.1993.1134)
107. **J. Strigberger**, **G.S. Baruzzi** and W.G. Habashi, "Some Special Purpose Preconditioners for Conjugate Gradient-Like Methods Applied to CFD", International Journal for Numerical Methods in Fluids, Vol. 16, No. 7, pp. 581-596, April 1993.  
[doi.org/10.1002/fld.1650160703](https://doi.org/10.1002/fld.1650160703)
108. **M.V. Bhat**, W.G. Habashi, **V-N. Nguyen**, **J.W.H. Liu** and **M.F. Peeters**, "A Note on Nested Dissection for Rectangular Grids", SIAM Journal on Matrix Analysis and Applications, Vol. 14, No. 1, pp. 253-258, January 1993.  
[doi.org/10.1137/0614020](https://doi.org/10.1137/0614020)

109. **M.F. Peeters**, W.G. Habashi, **B.Q. Nguyen** and **P.L. Kotiuga**, "Finite Element Solutions of the Navier-Stokes Equations for Compressible Internal Flows", AIAA Journal of Propulsion and Power, Vol. 8, No. 1, pp. 192-198, January 1992.  
[doi.org/10.2514/3.9726](https://doi.org/10.2514/3.9726)
110. **G.S. Baruzzi**, W.G. Habashi and **M.M. Hafez**, "Finite Element Solutions of the Euler Equations for Transonic External Flows", AIAA Journal, Vol. 29, No. 11, pp. 1886-1893, November 1991.  
[doi.org/10.2514/3.10814](https://doi.org/10.2514/3.10814)
111. **M.M. Hafez**, W.G. Habashi and **S.M. Przybytkowski**, "Transonic Viscous-Inviscid Interaction by a Finite Element Method", International Journal for Numerical Methods in Fluids, Vol. 13, No. 3, pp. 309-319, July 1991.  
[doi.org/10.1002/fld.1650130304](https://doi.org/10.1002/fld.1650130304)
112. W.G. Habashi, **V-N. Nguyen** and **M.V. Bhat**, "Efficient Direct Solvers for Large-Scale Computational Fluid Dynamics Problems", Computer Methods in Applied Mechanics and Engineering, Vol. 87, Issues 2-3, pp. 253-265, June 1991.  
[doi.org/10.1016/0045-7825\(91\)90007-S](https://doi.org/10.1016/0045-7825(91)90007-S)
113. **M.F. Peeters**, W.G. Habashi and **B.Q. Nguyen**, "Finite Element Solution of the Incompressible Navier-Stokes Equations by a Helmholtz Velocity Decomposition", International Journal for Numerical Methods in Fluids, Vol. 13, No. 2, pp. 135-144, July 1991.  
[doi.org/10.1002/fld.1650130202](https://doi.org/10.1002/fld.1650130202)
114. W.G. Habashi, **G.S. Baruzzi**, **M.F. Peeters** and **M.M. Hafez**, "Finite Element Method in the Solution of the Euler and Navier-Stokes Equations for Internal Flow", Journal of Numerical Methods for Partial Differential Equations, Vol. 7, No. 2, pp. 193-207, July 1991.  
[doi.org/10.1002/num.1690070207](https://doi.org/10.1002/num.1690070207)
115. **G.J. Guèvremont**, W.G. Habashi and **M.M. Hafez**, "Finite Element Solution of the Navier-Stokes Equations by a Velocity-Vorticity Method", International Journal for Numerical Methods in Fluids, Vol. 10, No. 4, pp. 461-475, March 1990.  
[doi.org/10.1002/fld.1650100408](https://doi.org/10.1002/fld.1650100408)
116. W.G. Habashi, **M.F. Peeters**, **G.J. Guèvremont** and **M.M. Hafez**, "Finite Element Solutions of the Compressible Navier-Stokes Equations", AIAA Journal, Vol. 25, No. 7, pp. 944-948, July 1987.  
[doi.org/10.2514/3.9726](https://doi.org/10.2514/3.9726)
117. **M.F. Peeters**, W.G. Habashi and **E.G. Dueck**, "Finite Element Stream Function-Vorticity Solutions of the Incompressible Navier-Stokes Equations", International Journal for Numerical Methods in Fluids, Vol. 7, No. 1, pp. 17-27, January 1987.  
[doi.org/10.1002/fld.1650070103](https://doi.org/10.1002/fld.1650070103)
118. **M.M. Hafez**, W.G. Habashi and **P.L. Kotiuga**, "Conservative Calculations of Non-Isentropic Transonic Flows", International Journal for Numerical Methods in Fluids, Vol. 5, No. 12, pp. 1047-1057, December 1985.  
[doi.org/10.1002/fld.1650051204](https://doi.org/10.1002/fld.1650051204)

119. W.G. Habashi, [P.L. Kotiuga](#) and [L. McLean](#), "Finite Element Simulation of Transonic Flows by Modified Potential and Stream Function Methods", Journal of Engineering Analysis, Vol. 2, No. 3, pp. 150-154, September 1985.  
[doi.org/10.1016/0264-682X\(85\)90020-6](https://doi.org/10.1016/0264-682X(85)90020-6)
120. W.G. Habashi and [M.M. Hafez](#), "Finite Element Stream Function Solutions of Transonic Rotational Internal and External Flows", Journal of Numerical Methods for Partial Differential Equations, Vol. 1, No. 2, pp. 127-144, June 1985.  
[doi.org/10.1002/num.1690010204](https://doi.org/10.1002/num.1690010204)
121. W.G. Habashi, [M.M. Hafez](#) and [P.L. Kotiuga](#), "Computation of Choked and Supersonic Turbomachinery Flows by a Modified Potential Method", AIAA Journal, Vol. 23, No. 2, pp. 214-220, February 1985.  
[doi.org/10.2514/3.8897](https://doi.org/10.2514/3.8897)
122. [D.S. Breitman](#), [E.G. Dueck](#) and W.G. Habashi, "Analysis of a Split-Flow Inertial Particle Separator by Finite Elements", AIAA Journal of Aircraft, Vol. 22, No. 2, pp. 135-140, February 1985.  
[doi.org/10.2514/3.45097](https://doi.org/10.2514/3.45097)
123. W.G. Habashi and [P.L. Kotiuga](#), "The Cylinder in the Wind Tunnel, Revisited", International Journal for Numerical Methods in Engineering, Vol. 20, No. 7, pp. 1261-1271, July 1984.  
[doi.org/10.1002/nme.1620200707](https://doi.org/10.1002/nme.1620200707)
124. W.G. Habashi and [G.G. Youngson](#), "A Transonic Quasi-3D Analysis for Gas Turbine Engines including Split-Flow Capability for Turbofans", International Journal for Numerical Methods in Fluids, Vol. 3, No. 1, pp. 1-22, January 1983.  
[doi.org/10.1002/fld.1650030103](https://doi.org/10.1002/fld.1650030103)
125. W.G. Habashi and [P.L. Kotiuga](#), "Numerical Solution of Subsonic and Transonic Cascade Flows", International Journal for Numerical Methods in Fluids, Vol. 2, No. 4, pp. 317-330, October 1982.  
[doi.org/10.1002/fld.1650020402](https://doi.org/10.1002/fld.1650020402)
126. W.G. Habashi and [M.M. Hafez](#), "Finite Element Solution of Transonic Flow Problems", AIAA Journal, Vol. 20, No. 10, pp. 1368-1376, October 1982.  
[doi.org/10.2514/3.51197](https://doi.org/10.2514/3.51197)
127. [S.V. Patankar](#), [S. Ramadhyani](#) and W.G. Habashi, "Letter to the Editor", International Journal for Numerical Methods in Engineering, Vol. 17, pp. 1740-1742, 1981.
128. W.G. Habashi, [E.G. Dueck](#) and [D.P. Kenny](#), "A Finite Element Approach to Compressor Blade-to-Blade Cascade Analysis", AIAA Journal, Vol. 17, No. 7, pp. 693-698, July 1979.  
[doi.org/10.2514/3.61205](https://doi.org/10.2514/3.61205)
129. W.G. Habashi, "The Finite Element Method in the Solution of Unbounded Potential Flows", International Journal for Numerical Methods in Engineering, Vol. 14, No. 9, pp. 1347-1358, July 1979.  
[doi.org/10.2514/3.61205](https://doi.org/10.2514/3.61205)
130. W.G. Habashi, "A Finite Element Approach to Subsonic Aerodynamics", International Journal for Numerical Methods in Engineering, Vol. 14, No. 5, pp. 665-680, July 1979.

doi.org/10.1002/nme.1620140504

131. [S.F. Shen](#) and W.G. Habashi, "FEM Local Linearization for Compressible Flows", International Journal for Numerical Methods in Engineering, Vol. 10, pp. 565-577, 1976.

## REFEREED CONFERENCE PUBLICATIONS

### **Interpretation of colors:**

[Student from the CFD Lab](#)

[Industrial Collaborator](#)

[Industrial Collaborator / Former student from the CFD Lab](#)

[Professors from the same, or other Universities](#)

1. W.G. Habashi, "The Slow, but Inexorable, Move Toward in-Flight Icing Certification by Analysis (CbA)", Invited Keynote Lecture by the Japan Society for Aeronautical and Space Sciences (JSASS) and the Japan Aerospace Exploration Agency (JAXA), 56<sup>th</sup> Fluid Dynamics Conference and 42<sup>nd</sup> Aerospace Numerical Simulation Symposium (FDC/ANSS), Kagoshima, Japan, July 3-5, 2024.
2. W.G. Habashi, "Artificial Intelligence for CFD in Industry is Starting: Machine Learning and Automatic Mesh Optimization", Keynote Lecture, Second International Conference on Aircraft Technology (ICACT'23), Gyeongsang University, Jinju, South Korea, August 30, 2023.
3. W.G. Habashi, "Machine Learning and Automatic Mesh Optimization: Watershed Methodologies for Heat Transfer and Fluid Flow Optimal Numerical (*and Experimental*) Simulations", Keynote Lecture, 10<sup>th</sup> International Conference on Heat Transfer and Fluid Flow (HTFF'23), Brunel U., London, U.K., August 7, 2023.
4. W.G. Habashi, "A Path Toward Enabling fully-3D Calculations in all Aspects of In-Flight Icing Simulation", Keynote Lecture, International Conference on Icing of Aircraft, Engines, and Structures 2023, Vienna, Austria, June 16-24, 2023.
5. W.G. Habashi, "Machine Learning and the Inexorable Path to the Desktop CFD Simulator", Keynote Lecture, 14<sup>th</sup> International Conference on Thermal Engineering: Theory and Applications (ICTEA 2023), Yalova, Turkey, May 25-27, 2023.
6. [M. Pourbagian](#) and W.G. Habashi, "CFD Model Order Reduction for Optimizing Ice Protection Systems", 22<sup>nd</sup> IACM Computational Fluids Conference (CFC 2023), Cannes, France, April 25-28, 2023.
7. W.G. Habashi, "A Path to Enabling a Wider Use of Controlled-Accuracy 3D CFD In Industry and Academia", Invited Keynote Lecture, 22<sup>nd</sup> IACM Computational Fluids Conference (CFC 2023), Cannes, France, April 25-28, 2023.
8. [S. Mallikarjun](#), [V. Casseau](#), W.G. Habashi and [A. Karchani](#), "Automatic Mesh Optimization of Direct Simulation Monte Carlo Methods for Hypersonic Flows", CASI AERO 2021 65<sup>th</sup> Aeronautics Conference of the Canadian Aeronautics and Space Institute, Virtual online June 14-18, 2021.

9. G. Liu, S. Gao, V. Casseau and W.G. Habashi, "Towards a Numerical Model of Ablative Thermal Protection Systems in Hypersonic Vehicles", CASI AERO 2021 65<sup>th</sup> Aeronautics Conference of the Canadian Aeronautics and Space Institute, Virtual online June 14-18, 2021.
10. J.Y. Huang, V. Casseau, S. Gao and W.G. Habashi, "Finite Element Modeling of Gas-Surface Interactions in Hypersonic Flight", CASI AERO 2021 65<sup>th</sup> Aeronautics Conference of the Canadian Aeronautics and Space Institute, Virtual online June 14-18, 2021.
11. A. Targui and W.G. Habashi, "CFD-Based Optimization of Rotor Electro-Thermal Ice Protection Systems, Proceedings of the Canadian Society for Mechanical Engineering International Congress, Charlottetown, June 2020.
12. W.G. Habashi, "Reduced Order Modeling: An Enabling Technology for Massive Parametric Explorations in Fluid Flow and Heat Transfer", Invited Plenary Lecture, 7<sup>th</sup> International Conference of Fluid Flow, Heat and Mass Transfer (postponed due to Covid-19), Niagara Falls, Canada, June 2020. Virtual online delivery November 15-17, 2020.
13. J.Y. Huang, V. Casseau, W.G. Habashi and G.S. Baruzzi, "Finite Element Modeling of Gas-Surface Interaction at Hypersonic Speed", 23<sup>rd</sup> AIAA International Space Planes and Hypersonics Systems and Technologies Conference (canceled due to Covid-19), Montreal, Manuscript ID 3271742, March 2020.
14. W. Zhang, W.G. Habashi, N.B. Salah and G.S. Baruzzi, "Edge-Based Finite Element Formulation of Magnetohydrodynamics at High Mach Numbers", 23<sup>rd</sup> AIAA International Space Planes and Hypersonics Systems and Technologies Conference (canceled due to Covid-19), Manuscript ID 3272214, Montreal, March 2020.
15. X. Cui and W.G. Habashi, "SPH Modeling of Supercooled Large Droplets Impacting Hydrophobic Surfaces", Proceedings of the 2020 SPHERIC Harbin International Workshop, pp. 71-78, Harbin, January 2020.
16. W.G. Habashi, "Reduced Order Modeling, A Crucial Technology for In-Flight Icing Certification by Analysis", Invited Lecture, NRC-APDC Certification by Analysis International Workshop, Montreal, October 2019.
17. W.G. Habashi, "Reduced Order Modeling is the Road to Faster and Safer In-Flight Icing Certification", Plenary Lecture, 5<sup>th</sup> International Conference on Aircraft Core Technology, Gyeongsang National University, Jinju, South Korea, June 4-5, 2019.
18. X. Cui, W.G. Habashi and A. Bakkar, "Multiphase SPH Modeling of Supercooled Large Droplets Impingement and Solidification", Paper 11, 14<sup>th</sup> International SPHERIC SPH Workshop, Exeter, June 2019.
19. W.G. Habashi, "Towards Real-Time CFD Simulation of In-Flight Icing", Paper TFEC-2019-27866, 4<sup>th</sup> Thermal and Fluids Engineering Conference, Las Vegas, April 2019.
20. W. Zhang, N. Ben Salah, G.S. Baruzzi, D. Isola and W.G. Habashi, "Edge-Based Finite Element Formulation of Hypersonic Flows Under an External Magnetic Field", AIAA Paper 2019-0350, AIAA Science and Technology Forum 2019, San Diego, January 2019.

21. D. Caraeni, A. Bakkar and W.G. Habashi, "Fluid-Structure Interaction Extended-FEM Approach to Air-Ice Solidification", AIAA Paper 2019-0641, AIAA Science and Technology Forum 2019, San Diego, January 2019. DOI:[10.2514/6.2019-0641](https://doi.org/10.2514/6.2019-0641)
22. X. Cui, A. Bakkar and W.G. Habashi "A Multiphase SPH Modeling of Supercooled Large Droplets Dynamics", Paper 12, 13<sup>th</sup> SPHERIC International Workshop, Galway, June 2018.
23. M. Yassin, M. Nathoo, Z. Zhan, W.G. Habashi and M. Fossati, "Modeling of Iced Rotor Dynamics via CFD-CSD Coupling", AIAA Paper 2018-3483, 10<sup>th</sup> Applied Aerodynamics Conference, AIAA Aviation and Aeronautics Forum, Atlanta, June 2018.
24. J. Anthony, M. Nathoo, Z. Zhan, W.G. Habashi and M. Fossati, "Rotor Ice Shedding and Trajectory Analyses in Forward Flight", AIAA Paper 2018-3659, 10<sup>th</sup> AIAA Atmospheric and Space Environments Conference, AIAA Aviation and Aeronautics Forum, Atlanta, June 2018.
25. A. Kaveh, W.G. Habashi, Z. Zhan and M. Fossati "Combining CFD, EFD and FFD Data via Gappy Proper Orthogonal Decomposition", AIAA Paper 2018-3169, 10<sup>th</sup> Applied Aerodynamics Conference, AIAA Aviation and Aeronautics Forum, Atlanta, June 2018.
26. M. Yassin and W.G. Habashi, "Evaluating Performance Degradation of Iced Rotorcraft", Paper MS-410, 26<sup>th</sup> Annual Conference of the Computational Fluid Dynamics Society of Canada, Winnipeg, June 2018.
27. X. Cui, W.G. Habashi and A. Bakkar, "A Multiphase SPH Modeling of Supercooled Large Droplets Dynamics", Paper MS-413, 26<sup>th</sup> Annual Conference of the Computational Fluid Dynamics Society of Canada, Winnipeg, June 2018.
28. J. Anthony, M. Nathoo and W.G. Habashi, "Rotor Ice Shedding and Trajectory Analyses in Hover", Paper MS-412, 26<sup>th</sup> Annual Conference of the Computational Fluid Dynamics Society of Canada, Winnipeg, June 2018.
29. A. Kaveh, W.G. Habashi and A. Bakkar, "Combining CFD, EFD and FFD data via Gappy Proper Orthogonal Decomposition", Paper MS-406, 26<sup>th</sup> Annual Conference of the Computational Fluid Dynamics Society of Canada, Winnipeg, June 2018.
30. S. Gao, J. Seguin, W.G. Habashi, D. Isola and G.S. Baruzzi, "A Finite Element Solver for Hypersonic Flows in Thermo-Chemical Non-Equilibrium", Paper MS-423, 26<sup>th</sup> Annual Conference of the Computational Fluid Dynamics Society of Canada, Winnipeg, June 2018.
31. J. Seguin, S. Gao, W.G. Habashi, G.S. Baruzzi, D. Isola and L. Uribarri, "An Edge-Based Segregated Methodology for Hypersonic Flows in Thermo-Chemical Non-Equilibrium", AIAA Paper 2018-5269, 22<sup>nd</sup> AIAA International Space Planes and Hypersonic Systems and Technologies Conference, Orlando, September 2018. [doi.org/10.2514/6.2018-5269](https://doi.org/10.2514/6.2018-5269)
32. S. Gao, J. Seguin, W. Zhang, W.G. Habashi, D. Isola, G.S. Baruzzi and M. Fossati, "A Loosely-Coupled Multi-Physics FEM Solver for Hypersonic Flows", Paper MS-141-2198, 7<sup>th</sup> European Conference on Computational Fluid Dynamics, Glasgow, June 2018.

33. W.G. Habashi, "Optimization of In-Flight Ice Protection Systems", ASTFE Paper TFEC-2018-25143, American Society of Thermal and Fluids Engineers Conference, Fort Lauderdale, March 2018.
34. S. Gao, W.G. Habashi, D. Isola, G.S. Baruzzi, M. Fossati and L. Uribarri, "An Edge-Based Galerkin Formulation for Thermal Non-Equilibrium Flows", AIAA Paper 2018-0064, 2018 AIAA SciTechForum, Kissimmee, January 2018.
35. J. Seguin, W.G. Habashi, M. Fossati, G.S. Baruzzi, D. Isola and L. Uribarri, "Finite-Element Approach for High-Mach Flows with Finite-Rate Chemistry", AIAA Paper 2018-0979, 2018 AIAA SciTechForum, Kissimmee, Florida, January 2018.
36. W. Zhang, W.G. Habashi, M. Fossati, N. Ben Salah, G.S. Baruzzi and D. Isola "Edge-Based FEM of Electromagnetic Effects in Hypersonic Flows", Paper CFD 2017-408, 25<sup>th</sup> Annual Conference of the CFD Society of Canada, Windsor, June 2017.
37. S. Gao, W.G. Habashi, M. Fossati, D. Isola and G.S. Baruzzi, "Finite-Element Formulation of a Jacobian-free Solver for Supersonic Viscous Flows on Hybrid Grids", AIAA Paper 2017-0085, 55<sup>th</sup> AIAA Aerospace Sciences Meeting, Grapevine, January 2017.
38. M. Nathoo, W.G. Habashi and M. Fossati, "Stitching and Deformation of Non-Overlapping Meshes for Unsteady Rotorcraft Aerodynamics", AIAA Paper 2017-0085, 55<sup>th</sup> AIAA Aerospace Sciences Meeting, Grapevine, January 2017.
39. W.G. Habashi, Z. Zhan, M. Fossati and J. Dow, Sr., "Toward A New Paradigm for Natural Icing Campaigns and Pilot Training", Civil Aviation Flight Test Forum, Airshow China 2016, Zhuhai/Guangdong, China, October 31, 2016.
40. V. Abdollahi, W.G. Habashi, and M. Fossati, "Smoothed Particle Hydrodynamics Modeling of Supercooled Large Droplet Dynamics for In-Flight Icing Conditions", CSME International Congress 2016, Kelowna, Canada, June 2016.
41. D.R. Bilodeau, W.G. Habashi and M. Fossati, "Numerical Modeling of First and Second Order SLD Effects on 3D Geometries", AIAA Paper 2016-3280, 8<sup>th</sup> AIAA Atmospheric and Space Environments Conference, Washington, D.C., June 13-17, 2016
42. Z. Zhan and W.G. Habashi, "Towards Real-Time CFD Simulation of In-Flight Icing", IACM 19<sup>th</sup> International Conference on Finite Elements in Flow Problems - FEF 2017, Rome, Italy, April 5-7, 2016
43. W.G. Habashi and M. Pourbagian, "Optimization of In-Flight Electro-Thermal Ice Protection Systems via Conjugate Heat Transfer and Reduced Order Modeling", Keynote Address, 9<sup>th</sup> International Conference on Thermal Engineering Theory and Applications, ICTEA 2016, March 24-26, 2016, Abu Dhabi-UAE.
44. M-E. Dumas, W.G. Habashi, M. Fossati, G.S. Baruzzi and D. Isola, "Finite Element Modeling of Non-Equilibrium Fluid-Wall Interaction Beyond the Continuum Regime", AIAA Paper 2016-1585, 54<sup>th</sup> AIAA Aerospace Sciences Meeting, San Diego, January 2016.
45. V. Abdollahi, W.G. Habashi and M. Fossati, "Hybrid Quasi Molecular-Continuum Modeling of Supercooled Large Droplet Dynamics for In-Flight Icing Condition", AIAA Paper 2016-0061, 54<sup>th</sup> AIAA Aerospace Sciences Meeting, San Diego, January 2016. [doi.org/10.2514/6.2016-0061](https://doi.org/10.2514/6.2016-0061)

46. **A. Bakkar**, W.G. Habashi and **M. Fossati**, "Modeling of Large Droplets Impingement Using a Hybrid Taylor-Galerkin Variational Multi-Scale Stabilized Level Set Method", AIAA Paper 2016-1139, 54<sup>th</sup> AIAA Aerospace Sciences Meeting, San Diego, January 2016. [doi.org/10.2514/6.2016-1339](https://doi.org/10.2514/6.2016-1339)
47. **Z. Zhan** and W.G. Habashi, "Towards Real-Time CFD Simulation of In-Flight Icing, Paper 15ICE-0014, SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
48. **I.A. Ozcer**, **P. Lagacé**, **D. Switchenko**, **G.S. Baruzzi**, **C.N. Aliaga**, **J.P. Dow, Sr.** and W.G. Habashi, "Numerical Analysis for the Placement of a Pitot Tube Using Optimized Grids", Paper 15ICE-0107, SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
49. **A.P. Paduchev**, **G.S. Baruzzi** and W.G. Habashi, "3D CFD Comparison of Two Nacelle Ice Protection Systems", Paper 15ICE-0117, SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
50. **Y. Indrulenayte**, W.G. Habashi, **M. Fossati** and **G.S. Baruzzi**, "Comparison of Natural Icing Flights Test Results with CFD Simulation, using FENSAP-ICE", SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
51. **D. Kelly**, **M. Fossati**, **G. Quaranta** and W.G. Habashi, "Ice Accretion Effects on Fully-Articulated Rotors in Forward Flight", Paper 15ICE-0137, SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
52. **S. Nilamdeen**, **I.A. Ozcer**, **G.S. Baruzzi** and W.G. Habashi, "Ice Crystal ingestion in Turbofan Engines", SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
53. **Z. Zhan**, W.G. Habashi and **M. Fossati**, "A Reduced Order Modeling Approach for Exploring Appendix C", Paper 15ICE-0014, SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
54. **D. Bilodeau**, W.G. Habashi **G.S. Baruzzi**, **I.A. Ozcer** and **J.P. Dow, Sr.**, "Three-Dimensional Eulerian Modeling of Secondary Droplet Flows", Paper 15ICE-0045, SAE 2015 International Conference on Icing of Aircraft, Engines and Structures, Prague, June 2015.
55. **M. Butnarusu**, W.G. Habashi and **M. Fossati**, "Optimization of the Morphogenetic Approach for In-Flight Icing", AIAA Paper 2015-0034, SciTech Forum, 53<sup>rd</sup> AIAA Aerospace Sciences Meeting, Kissimmee, Florida, 5-9 January 2015.
56. **S. Gao**, W.G. Habashi, **M. Fossati**, **D. Isola**, **G.S. Baruzzi** and **I.A. Ozcer**, "Development of a Jacobian-Free Finite Element Solver for Aerothermodynamic Design", AIAA Paper 2015-1261, SciTech Forum, 53<sup>rd</sup> AIAA Aerospace Sciences Meeting, Kissimmee, Florida, 5-9 January 2015 [doi:10.2514/6.2015-1261](https://doi.org/10.2514/6.2015-1261)
57. **H. Fouladi**, **C. Aliaga** and W.G. Habashi "Quasi-Unsteady Icing Simulation of an Oscillating Airfoil", AIAA Paper 2015-3020, AIAA Aviation, 7<sup>th</sup> AIAA Atmospheric and Space Environments Conference, Dallas, 22-26 June 2015. [doi.org/10.2514/6.2015-3020](https://doi.org/10.2514/6.2015-3020)
58. B. Talgorn, S. Le Digabel, **M. Kokkolaras**, **M. Pourbagian** and W.G. Habashi, "Optimization of an Aircraft Anti-Icing System Using Statistical Surrogates and Direct Search", CORS/INFORMS International Conference, Montreal, Canada, June 2015.

59. S. Gao, W.G. Habashi, M. Fossati, G.S. Baruzzi, I.A. Ozcer and D. Isola, "A PETSc-MPI Implementation of a Jacobian-Free SGS-GMRES Approach for High-Mach Flows", pp. 94-97, 27<sup>th</sup> International Conference on Parallel Computational Fluid Dynamics, ParCFD 27, Montreal, Quebec, Canada, May 2015.
60. D.R. Bilodeau, W.G. Habashi, G.S. Baruzzi and M. Fossati, "Parallel Computation of SLD Splashing and Bouncing", pp. 172-173, 27<sup>th</sup> International Conference on Parallel Computational Fluid Dynamics, Montreal, Canada, May 2015.
61. S. Gao, W.G. Habashi, M. Fossati, D. Isola, G.S. Baruzzi and I.A. Ozcer, "Parallel JFNK Solver for Hypersonic Viscous Flows", 23<sup>rd</sup> Annual Conference of the CFD Society of Canada, Waterloo, Canada, June 7-10, 2015.
62. A. Pendenza, W.G. Habashi and M. Fossati, "A 3D Mesh Deformation Technique for Irregular In-Flight Ice Accretion Shapes", AIAA Paper 2014-3072, 44<sup>th</sup> AIAA Fluid Dynamics Conference, Atlanta, June 2014.
63. D. Bilodeau, W.G. Habashi, G.S. Baruzzi and M. Fossati, "An Eulerian Detachment Model for Water Droplets in Proximity of Sharp Corners", 22<sup>nd</sup> Annual Conference of the CFD Society of Canada, Toronto, Canada, June 2014.
64. Y. Zhang, W.G. Habashi and R.A. Khurram, "Predicting Wind-Induced Vibrations of High-Rise Buildings using Unsteady CFD and Modal Analysis", 22<sup>nd</sup> Annual Conference of the CFD Society of Canada, Toronto, Canada, June 2014.
65. M. Pourbagian, B. Talgorn, W.G. Habashi, M. Kokkalaras, and S. Le Digabel, "Design Optimization of an Electro-Thermal Anti-icing System Using Statistical Surrogates and Direct Search" 22<sup>nd</sup> Annual Conference of the CFD Society of Canada, Toronto, Canada, June 2014.
66. H. Keyhan, G. McClure and W.G. Habashi, "A Simplified Procedure for Modeling Gusty Wind Effects on Overhead Transmission Lines Using CFD", EURODYN 2014, Porto, June 2014.
67. D. Kelly, H. Fouladi, M. Fossati, W.G. Habashi, R. Alicino, G. Quaranta and P. Masarati, "Assessment of Ice Accretion Effects on Rotor Dynamics via Multi-Body and CFD Approaches", Proceedings of the 70<sup>th</sup> American Helicopter Society International Annual Forum, Vol. 3, pp. 1840-1851, Montreal, Canada, May 2014.
68. M. Fossati, F. Beaucaire, J. Wright and W.G. Habashi, "Evaluation of Reduced Order Modeling Approach for Aerodynamic Loads Prediction", 70<sup>th</sup> American Helicopter Society International Annual Forum, Montreal, Canada, May 2014.
69. D. Switchenko, W.G. Habashi, G.S. Baruzzi and I. Ozcer, "FENSAP-ICE Simulation of Complex Wind Turbine Icing Events, and Comparison to Observed Performance Data", AIAA Paper 2014-1399, AIAA SciTech+32<sup>nd</sup> ASME Wind Energy Symposium, National Harbor, USA, January 2014. DOI: [10.2514/6.2014-1399](https://doi.org/10.2514/6.2014-1399)
70. M. Fossati, S. Nilamdeen, H. Moustapha and W.G. Habashi, "Parametric Analysis of 3D Turbomachinery flows via Reduced Order Modeling", 20<sup>th</sup> International Symposium on Air Breathing Engines, Busan, Korea, September 2013.
71. M. Fossati and W.G. Habashi, "Evaluation of Aerodynamic Loads via POD-based Reduced Order Methodology", SAE 13-ATC-0351, SAE 2013 AeroTech Congress and Exhibition, Montreal, September 2013.

72. Z. Zhan, W.G. Habashi and M. Fossati, "Exploration of Icing Envelopes using Reduced Order Modeling and Iterative Sampling", SAE 13-ATC-0349, SAE AeroTech Congress & Exhibition, Montreal, September 2013.
73. M. Pourbagian and W.G. Habashi, "Optimal Adjustment of Electro-Thermal Wing Ice Protection Systems in Different Operating Regimes", SAE 13-ATC-0350, SAE 2013 AeroTech Congress and Exhibition, Montreal, September 2013.
74. Y. Zhang, W.G. Habashi and R.A. Khurram, "Performance of Iced Airfoils via Hybrid RANS/LES", SAE 13-ATC-0352, SAE 2013 AeroTech Congress and Exhibition, Montreal, September 2013.
75. H. Fouladi, I.A. Ozcer, G.S. Baruzzi and W.G. Habashi, "FENSAP-ICE: 3D Icing Simulation of Helicopter Rotor Blade in Hover", SAE 13-ATC-0354, SAE 2013 AeroTech Congress and Exhibition, Montreal, September 2013.
76. W.G. Habashi, "FENSAP-ICE Applications to UAVs", Russian-Japanese Conference on Extreme and Record-Breaking Flights by UAV and Aircraft with Electric Power Plants: ERBA 2013, MAKS/MIPT/ISTC, August 26, 2013.
77. V. Abdollahi, W.G. Habashi and M. Fossati, "Quasi-Molecular Modeling of Supercooled Large Droplets Dynamics for In-Flight Icing Simulations", AIAA Paper 2013-3057, AIAA 43<sup>rd</sup> Fluid Dynamics Conference, San Diego, USA, June 2013. [doi.org/10.2514/6.2013-3057](https://doi.org/10.2514/6.2013-3057)
78. D. Bilodeau, G.S. Baruzzi, W.G. Habashi and M. Fossati, "Numerical Modeling of Post-Splashing and Bouncing Droplets in the Supercooled Large Droplet Regime", AIAA Paper 2013-3058, AIAA 43<sup>rd</sup> Fluid Dynamics Conference, San Diego, USA, June 2013. [doi.org/10.2514/6.2013-3058](https://doi.org/10.2514/6.2013-3058)
79. M. Pourbagian and W.G. Habashi, "On Optimal Design of Electro-Thermal In-Flight Ice Protection Systems", AIAA Paper 2013-2937, AIAA 43<sup>rd</sup> Fluid Dynamics Conference, San Diego, USA, June 2013.
80. N. Nagappan, V. Golubev and W.G. Habashi, "Parametric Analysis of Icing Control Using Synthetic Jet Actuators", AIAA Paper 2013-2453, AIAA 43<sup>rd</sup> Fluid Dynamics Conference, San Diego, USA, June 2013.
81. D. Bilodeau, W.G. Habashi and M. Fossati, "Numerical Modeling of Supercooled Large Droplets Re-Impingement", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.
82. A. Bakkar, W.G. Habashi and M. Fossati, "A Hybrid Taylor-Galerkin Variational Multi-Scale Stabilization Method for the Level Set Equation", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.
83. Z. Zhan, W.G. Habashi and M. Fossati, "Exploration of the Aero-Icing Envelopes via Reduced Order Modeling and Iterative", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.
84. H. Fouladi and W.G. Habashi, "FENSAP-ICE: Quasi-3D Simulation of Helicopter Rotor Blade Icing in Hover", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.
85. Y. Zhang, W.G. Habashi and R.A. Khurram, "A Hybrid RANS/LES Method for Turbulent Flow over Iced Wings", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.

86. A. Borna, W.G. Habashi and G. McClure, "Computational Aeroelastic Modeling of Transmission Line Galloping", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.
87. V. Abdollahi, W.G. Habashi and M. Fossati, "Quasi-molecular Modeling of Supercooled Large Droplets Dynamics for In-Flight Icing Simulations", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.
88. N. Nagappan, V. Golubev and W.G. Habashi, "Numerical Modeling of Anti-Icing Using an Array of Heated Synthetic Jets", 21<sup>st</sup> Annual Conference of the CFD Society of Canada, Sherbrooke, Canada, May 2013.
89. W.G. Habashi, Keynote Lecture, "The Role of Finite Element Methods in In-Flight Icing Simulation", Advances in Computational Mechanics-17th International Conference on Finite Elements in Flow Problems, San Diego, USA, February 2013.
90. T. Reid, G.S. Baruzzi, I.A. Ozcer, D. Switchenko and W.G. Habashi, "CFD Simulation of Icing on Wind Turbine Blades, Part 1: Performance Degradation", AIAA Paper 2013-0750, 51<sup>st</sup> AIAA Aerospace Sciences Meeting, Grapevine, USA, January 2013.
91. T. Reid, G.S. Baruzzi, I.A. Ozcer, D. Switchenko and W.G. Habashi, "CFD Simulation of Icing on Wind Turbine Blades, Part 2: Ice Protection System Design", AIAA Paper 2013-0751, 51<sup>st</sup> AIAA Aerospace Sciences Meeting, Grapevine, USA, January 2013.
92. M. Pourbagian and W.G. Habashi, "Multidisciplinary Optimization of Electro-Thermal In-Flight Ice Protection Systems in De-Icing Mode", AIAA Paper 2013-0654, 51<sup>st</sup> AIAA Aerospace Sciences Meeting, Grapevine, USA, January 2013.
93. N. Nagappan, V. Golubev, H. Nakhla and W.G. Habashi, "On Icing Control Using Thermally Activated Synthetic Jets", AIAA Paper 2013-0093, 51<sup>st</sup> AIAA Aerospace Sciences Meeting, Grapevine, USA, January 2013. [doi.org/10.2514/6.2013-93](https://doi.org/10.2514/6.2013-93)
94. G.B. Ahn, K.Y. Jung, R.S. Myong, H.B. Shin and W.G. Habashi, "Computational and Experimental Simulation of Ice Accretion on the Surface of Rotorcraft Air Intake Anti-Icing System", AIAA Paper 2013-1077, 51<sup>st</sup> AIAA Aerospace Sciences Meeting, Grapevine, USA, January 2013.
95. W.G. Habashi, A. Borna and G. McClure, "Towards Numerical Prediction of Galloping Events of Iced Conductors", Keynote Lecture, Proceedings of the 8<sup>th</sup> International Conference on Engineering Computational Technology, B.H.V. Topping, (Editor), "Computational Methods for Engineering Science", Saxe-Coburg Publications, Stirlingshire, UK, Chapter 6, pp. 139-165, Dubrovnik, Croatia, September 2012.
96. M. Fossati, W.G. Habashi, L. Vigeveno and M. Biava, "A Reduced Order Methodology for the Parametric Analysis of Rotor Aerodynamics", Paper 2012-129, 38<sup>th</sup> European Rotorcraft Forum, Amsterdam, The Netherlands, September 2012.
97. H. Keyhan, G. McClure and W.G. Habashi, "Advances in Wind Load Modelling on Overhead Transmission Lines", 2012 CIGRÉ Canada Conference, Montreal, September 24-26, 2012.
98. A. Borna, W.G. Habashi and G. McClure, "Towards Numerical Prediction of Overhead Line Instabilities due to Icing", 2012 CIGRÉ Canada Conference, Montreal, September 24-26, 2012.
99. H. Keyhan, G. McClure and W.G. Habashi, "On the Influence of Wind-Conductor Interactions in Stress Analysis of Overhead Transmission Line Towers", 2012 World Congress on Advances in Civil, Environmental, and Materials Research (ACEM12), Seoul, South Korea, August 2012.

100. Y. Zhang, R.A. Khurram and W.G. Habashi, "Hybrid RANS/LES Method for FSI Simulations of Tall Buildings", 2012 World Congress on Advances in Civil, Environmental, and Materials Research (ACEM12), Volume of Abstracts, page 310 (ed. Chang-Koon Choi), Techno-Press, Seoul, Korea, August 2012.
101. A. Borna, W.G. Habashi and G. McClure, "Numerical Study of Influence of Ice Location on Galloping of an Iced Conductor", 2012 World Congress on Advances in Civil, Environmental, and Materials Research (ACEM12), Volume of Abstracts, page 310 (ed. Chang-Koon Choi), Techno-Press, Seoul, Korea, August 2012.
102. S. Zhang, R.A. Khurram and W.G. Habashi, "3D Modeling of In-Flight Ice Break-Up", Paper FS02-050, 23<sup>rd</sup> International Congress of Theoretical and Applied Mechanics (ICTAM12), Abstract Book page 94 (eds. Yilong Bai, Jianxiang Wang, Daining Fang), Beijing, China, August 2012.
103. Y. Zhang, R.A. Khurram, A. Borna and W.G. Habashi, "Fluid-Structure Interaction of Tandem Cylinders, Using Delayed Detached-Eddy Simulation", Paper FS06-030, 23<sup>rd</sup> International Congress of Theoretical and Applied Mechanics (ICTAM12), Abstract Book (eds. Yilong Bai, Jianxiang Wang, Daining Fang), Beijing, China, August 2012.
104. S. Zhang, R.A. Khurram and W.G. Habashi, "FENSAP-ICE: Computational Modeling of Ice Cracking and Break-Up from Helicopter Blades", AIAA Paper 2012-2675, 42<sup>nd</sup> AIAA Fluid Dynamics Conference, New Orleans, June 2012.
105. M. Pourbagian and W.G. Habashi, "Power and Design Optimization of Electro-Thermal Anti-Icing Systems", AIAA Paper 2012-2677, 4<sup>th</sup> AIAA Atmospheric and Space Environments Conference, New Orleans, June 2012. [doi.org/10.2514/6.2012-2677](https://doi.org/10.2514/6.2012-2677)
106. H. Fouladi and W.G. Habashi, "FENSAP-ICE Modeling of Ice Accretion on a Helicopter Fuselage in Forward Flight", AIAA Paper 2012-2674, 4<sup>th</sup> AIAA Atmospheric and Space Environments Conference, New Orleans, June 2012. [doi.org/10.2514/6.2012-2674](https://doi.org/10.2514/6.2012-2674)
107. D. Switchenko, T. Reid, G.S. Baruzzi, W.G. Habashi, M. Fossati, I. Ozcer, "Wind Power Resource Assessment and Performance Prediction Considering Icing using CFD and Reduced Order Modelling", American Wind Energy Association Wind Power Conference (AWEA'2012), Atlanta, June 3-6, 2012.
108. M. Pourbagian and W.G. Habashi, "Parametric Analysis of Energy Requirements of In-Flight Ice Protection Systems", 20<sup>th</sup> Conference of the CFD Society of Canada, Calgary, May 2012.
109. W.G. Habashi, "Simulation of In-Flight Icing and De-Icing by Conjugate Heat Transfer Methods", Keynote Lecture, 6<sup>th</sup> International Conference on Thermal Engineering Theory and Applications, Istanbul, Turkey, May 2012.
110. H. Keyhan, G. McClure and W.G. Habashi, "A Fluid-Structure Interaction (FSI)-Based Wind Load Model for Dynamic Analysis of Overhead Transmission Lines", International Symposium of Cable Dynamics, Shanghai, China, October 18-20, 2011.
111. W.G. Habashi, G. McClure and S. Nadarajah, "Numerical Modeling of Ice Accretion Effects on Galloping of Transmission Line Conductors", Proceedings of the International Symposium of Cable Dynamics, pp. 135-142, Shanghai, China, October 18-20, 2011.
112. Y. Zhang, R.A. Khurram and W.G. Habashi, "Multiscale Finite Element Method applied to Detached Eddy Simulation for Computational Wind Engineering", Proceedings of the 4<sup>th</sup> Symposium on Hybrid RANS-LES Methods, S. Fu et al. (eds.): Progress in Hybrid RANS-LES Modeling, Notes on

Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 117, pp. 483-492, Beijing, September 2011.

113. **M. Fossati**, **M. Najafiyazdi** and W.G. Habashi, "Mesh Adaptation for Unsteady Problems via Reduced Order Modeling", AIAA Paper 2011-3692, 20<sup>th</sup> AIAA Computational Fluid Dynamics Conference, Honolulu, Hawaii, July 2011.
114. **M. Najafiyazdi**, **M. Fossati** and W.G. Habashi, "Improved Transient-Fixed-Point Mesh Adaptation Using Orthogonality-Preserving Metric Intersection", AIAA Paper 2011-3691, 20<sup>th</sup> AIAA Computational Fluid Dynamics Conference, Honolulu, July 2011. DOI:[10.2514/6.2011-3691](https://doi.org/10.2514/6.2011-3691)
115. **H. Keyhan**, **G. McClure** and W.G. Habashi, "Fluid-Structure Interaction Load Model for Dynamic Analysis of Overhead Transmission Lines Subjected to Glaze Icing and Gusty Winds", Book of Abstracts 6<sup>th</sup> M.I.T. Conference on Computational Fluid and Solid Mechanics, Boston, June 15-17, 2011.
116. **H. Keyhan**, **G. McClure** and W.G. Habashi, "Dynamic Analysis of Overhead Transmission Lines Subject to Wind-Conductor Interaction", Book of Abstracts 6<sup>th</sup> M.I.T. Conference on Computational Fluid and Solid Mechanics, Boston, June 15-17, 2011.
117. **A. Borna**, W.G. Habashi, **G. McClure** and **S. Nadarajah**, "Numerical Investigation of Iced-Conductors Oscillations in the Wake of Windward Conductors", Book of Abstracts 6<sup>th</sup> M.I.T. Conference on Computational Fluid and Solid Mechanics, p. 14, Boston, June 15-17, 2011.
118. **T. Reid**, **G.S. Baruzzi**, **C.N. Aliaga**, **M.S. Aubé** and W.G. Habashi, "FENSAP-ICE: 3D Simulation and Validation of De-Icing with Inter-Cycle Ice Accretion", SAE Paper 2011-38-0102, SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, June 13-17, 2011.
119. **J.P. Dow, Sr.**, **M.S. Aubé**, **C.N. Aliaga**, **S. Shah**, **J. Chen**, W.G. Habashi and J.L. Siemens, "FENSAP-ICE in Aid of Certification: From CFD to Flight Testing", SAE Paper 2011-38-0082, SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, June 13-17, 2011.
120. **M.P. Pellissier**, W.G. Habashi and **A. Pueyo**, "Optimized Hot-Air Ice Protection Systems via FENSAP-ICE" (Oral Presentation), SAE 2011 INTERNATIONAL CONFERENCE ON AIRCRAFT AND ENGINE ICING AND GROUND DEICING, Chicago, June 13-17, 2011.
121. **M. Fossati**, **G.S. Baruzzi** and W.G. Habashi, "Impingement of Supercooled Large Droplets via Reduced Order Models", SAE Paper 2011-38-0013, SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, June 13-17, 2011.
122. **I.A. Ozcer**, **G.S. Baruzzi**, **T. Reid**, W.G. Habashi, **M. Fossati** and **G. Croce**, "FENSAP-ICE: Numerical Prediction of Ice Roughness Evolution and its Effect on Ice Shapes", SAE paper 2011-38-0024, SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, June 13-17, 2011.
123. **M. Fossati**, **R.A. Khurram** and W.G. Habashi, "Robust Moving Meshes for The Prediction of Aerodynamic Degradation during In-Flight Icing", SAE Paper 2011-38-0022, SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, June 13-17, 2011.

124. J-M. Deschênes, G.S. Baruzzi, P. Lagacé and W.G. Habashi, "FENSAP-ICE: A CFD Monte Carlo Approach to Shed-Ice Trajectory and Impact", SAE Paper 2011-38-0089, SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, June 13-17, 2011.
125. D. Zeppetelli and W.G. Habashi, "CFD-Icing: A Predictive Tool for In-Flight Icing Risk Management", SAE Paper 2011-38-0031, SAE 2011 International Conference on Aircraft and Engine Icing and Ground Deicing, Chicago, June 13-17, 2011.
126. M. Najafiyazdi, P. Lagacé and W.G. Habashi, "Massively Anisotropic Mesh Adaptation using Space Partition Assisted Rebalancing", 23<sup>rd</sup> International Conference on Parallel Computational Fluid Dynamics, ParCFD 23, Barcelona, Spain, May 16-20, 2011.
127. W.G. Habashi and G. McClure, "Cross-fertilizing the Technologies of Atmospheric Icing on Structures and In-Flight Structural Icing", Keynote Address, 14<sup>th</sup> International Workshop on Atmospheric Icing of Structures, Chongqing, China, May 8-13, 2011.
128. H. Keyhan, G. McClure and W.G. Habashi, "On Computational Modeling of Interactive Wind and Icing Effects on Overhead Line Conductors", Paper B5\_1\_ID28, 14<sup>th</sup> International Workshop on Atmospheric Icing of Structures, Chongqing, China, May 8-13, 2011.
129. A. Borna, W.G. Habashi and G. McClure, "Numerical Investigation of Iced-Conductors Oscillations in the Wake of Windward Conductors", Paper Z\_09\_ID130, 14<sup>th</sup> International Workshop on Atmospheric Icing of Structures, Chongqing, China, May 8-13, 2011.
130. A. Borna, W.G. Habashi, S. Nadarajah and G. McClure, "A Computational Aeroelastic Approach to Predict Galloping of Iced Conductors with Three Degrees of Freedom", Paper B2\_5\_ID163, 14<sup>th</sup> International Workshop on Atmospheric Icing of Structures, Chongqing, China, May 8-13, 2011.
131. R.A. Khurram and W.G. Habashi, "Multiscale/Stabilized Finite Element Method for Spalart-Allmaras Turbulence Model", 16<sup>th</sup> International Conference on Finite Elements in Flow Problems - FEF 2011, W.A. Wall and V. Gravemeier (Eds), Munich, p. 120, March 2011.
132. W.G. Habashi, Keynote Lecture, "Recent Progress in Unifying CFD and In-Flight Icing Simulation", 10<sup>th</sup> International ASME Congress of Fluid Mechanics, Ain Soukhna, Egypt, December 2010.
133. T. Reid, G.S. Baruzzi, C.N. Aliaga, M.S. Aubé and W.G. Habashi, "FENSAP-ICE: Application of Unsteady CHT to De-icing Simulations on a Wing with Inter-cycle Ice Formation", AIAA Paper 2010-4158, 2<sup>nd</sup> AIAA Atmospheric and Space Environments Conference, Toronto, Ontario, August 2010. [doi.org/10.2514/6.2010-7835](https://doi.org/10.2514/6.2010-7835)
134. W.G. Habashi, Invited Panel Speaker at "3-D Ice Accretion Codes Workshop", Organized by the Aircraft Icing Research Alliance (AIRA), 2<sup>nd</sup> AIAA Atmospheric and Space Environments Conference, Toronto, August 2010.
135. W.G. Habashi, "Recent Advances in the Simulation of In-Flight Icing", Invited Paper, Proceedings of the 7<sup>th</sup> International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT'2010), Antalya, Turkey, 19-20 July 2010.
136. M. Fossati, R.A. Khurram and W.G. Habashi, "An Arbitrary Lagrangian-Eulerian Mesh Movement Scheme for Long-Term In-Flight Ice Accretion", Proceedings of the 18<sup>th</sup> Conference of the CFD Society of Canada, London, June 2010.

137. W.G. Habashi, Keynote Lecture, "A Frontier of Parallel CFD: Real-Time In-Flight Icing Simulation Over Complete Aircraft", Proceedings of the 10<sup>th</sup> Annual Conference of the Korean Society of Computational Fluids Engineering, p. 14, Jeju, Korea, May 2010.
138. M.P. Pellissier, W.G. Habashi and A. Pueyo, "Design Optimization of Hot Air Anti-icing Systems", AIAA Paper 2010-1238, 40<sup>th</sup> AIAA Fluid Dynamics Conference, Orlando, USA, January 2010. [doi.org/10.2514/6.2010-1238](https://doi.org/10.2514/6.2010-1238)
139. V. Lappo and W.G. Habashi, "Reduced Order POD/Kriging Modeling for Real-Time 3D CFD", Paper PAC-0089, 11<sup>th</sup> Pan American Congress of Applied Mechanics (PACAM XI), pp. 42-47, Foz do Iguaçu, Brazil, January 4-8, 2010.
140. G. Croce, E. De Candido, W.G. Habashi, M.S. Aubé and G.S. Baruzzi, "Numerical Simulation of Ice Roughness Growth", AIAA Paper 2009-4126, 1<sup>st</sup> AIAA Atmospheric and Space Environments Conference, San Antonio, Texas, June 2009.
141. X. Veillard, W.G. Habashi, M.S. Aubé and G.S. Baruzzi, "Ice Accretion in Multistage Engines", AIAA Paper 2009-4158, 1<sup>st</sup> AIAA Atmospheric and Space Environments Conference, San Antonio, Texas, June 2009.
142. S. Nilamdeen, W.G. Habashi, M.S. Aubé and G.S. Baruzzi, FENSAP-ICE, "Modeling of Water Droplets and Ice Crystals", AIAA Paper 2009-4128, 1<sup>st</sup> AIAA Atmospheric and Space Environments Conference, San Antonio, Texas, June 2009.
143. W.G. Habashi, Keynote Lecture, "Mesh Adaptation for Integrated Quantities", 11<sup>th</sup> Numerical Grid Conference, École Polytechnique, Montréal, Canada, May 25-28, 2009.
144. W.G. Habashi, Keynote Lecture, "A Frontier of Parallel CFD: Real-Time In-Flight Icing Simulation Over Complete Aircraft", 21<sup>st</sup> International Conference on Parallel Computational Fluid Dynamics, ParCFD 21, NASA Ames, Moffett Field, May 2009.
145. W.G. Habashi, Keynote Lecture, "Impact of High-Performance Computing on Canadian CFD", 2009 SHARCNET Day, University of Waterloo, Waterloo, May 2009.
146. W.G. Habashi, Keynote Lecture, "CFD of In-Flight Icing: A Frontier of CFD", Grand Review in the Numerical Simulation of Fluid Flow 2, Institution of Mechanical Engineers, London, April 2009.
147. V. Lappo and W.G. Habashi, "POD/Kriging Approximations of Multi-Disciplinary CFD Simulation, with Application to In-Flight Icing", 17<sup>th</sup> Conference of the CFD Society of Canada, Kanata, May 2009.
148. S. Nilamdeen and W.G. Habashi, "FENSAP-ICE: Toward the Modeling of the Ice Crystals Ingestion in Jet Engines", 17<sup>th</sup> Conference of the CFD Society of Canada, Kanata, May 2009.

149. W.G. Habashi, Keynote Lecture, "Advances in Simulation of In-Flight Icing", 22<sup>nd</sup> Conference of the Japanese Society of Fluid Mechanics, Olympic Center, Tokyo, December 2008.
150. C.N. Aliaga, W.G. Habashi, S. Nadarajah, M.S. Aubé and G.S. Baruzzi, "FENSAP-ICE-Unsteady: Rime and Glaze Icing Prediction", 16<sup>th</sup> Conference of the CFD Society of Canada, University of Saskatchewan, Saskatoon, June 2008.
151. G. Croce, E. De Candido, W.G. Habashi and M.S. Aubé, "Numerical Simulation of Ice Roughness Growth", Proceedings of the 5<sup>th</sup> European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), June 2008, Venice, Italy.
152. W.G. Habashi, M.S. Aubé, G.S. Baruzzi and C.N. Aliaga, "Advances in FENSAP-ICE for Simulation of Aircraft, Rotorcraft, UAVs and Jet Engine In-Flight Icing: A Frontier of CFD", Proceedings of the 5<sup>th</sup> European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), June 2008, Venice, Italy.
153. W.G. Habashi and M.S. Aubé, "In-Flight Icing: A Frontier of CFD", Proceedings of the 10<sup>th</sup> Pan American Congress of Applied Mechanics (PACAM X), January 2008, Cancun, Mexico.
154. K. Nakakita, W.G. Habashi and S. Nadarajah, "Toward Real-Time Aero-Icing Simulation using Reduced Order Models", Paper 07ICE-125, SAE Aircraft and Engine Icing International Conference, Seville, September 2007.
155. M.S. Aubé, C.N. Aliaga, W.G. Habashi and G.S. Baruzzi, "Application of FENSAP-ICE-Unsteady to Helicopter Icing", SAE Paper 07ICE-148, SAE Aircraft and Engine Icing International Conference, Seville, September 2007.
156. K. Togami, M. Tsujita, M.S. Aubé and W.G. Habashi, "Validation Results of FENSAP-ICE", SAE Paper 07ICE-56, SAE Aircraft and Engine Icing International Conference, Seville, September 2007.
157. X. Veillard, C.N. Aliaga and W.G. Habashi, "FENSAP-ICE Modeling of the Ice Particle Threat to Engines in Flight", SAE Paper 07ICE-132, SAE Aircraft and Engine Icing International Conference, Seville, September 2007.
158. C.N. Aliaga, W.G. Habashi, M.S. Aubé and G.S. Baruzzi, "A Third-Generation In-Flight Icing Code: FENSAP-ICE-Unsteady", SAE Paper 07ICE-33, SAE Aircraft and Engine Icing International Conference, Seville, September 2007.
159. H. Wang, P. Tran, W.G. Habashi, Y. Chen, M. Zhang and L. Feng, "Anti-Icing Simulation in Wet Air of a Piccolo System using FENSAP-ICE", SAE Paper 07ICE-60, SAE Aircraft and Engine Icing International Conference, Seville, September 2007.
160. G.S. Baruzzi, P. Lagacé, W.G. Habashi and M.S. Aubé, "FENSAP-ICE: A Computational Approach to Shed-Ice Trajectory Simulation", SAE Paper 07ICE-34, SAE Aircraft and Engine Icing International Conference, Seville, September 2007.

161. K. Nakakita, W.G. Habashi and S. Nadarajah, "Toward Real-Time Aero-Icing Simulation using Reduced Order Models", AIAA Paper 2007-4281, 37<sup>th</sup> AIAA Fluid Dynamics Conference, Miami, June 2007. [doi.org/10.2514/1.44077](https://doi.org/10.2514/1.44077)
162. K. Nakakita, W.G. Habashi and S. Nadarajah, "Toward Real-Time Aero-Icing Simulation: A Feasibility Study", CASI Conference, Montreal, June 2007.
163. L. Remaki, W.G. Habashi and S. Nadarajah, "Functional Output Error-Based Mesh Adaptation", AIAA Paper 2007-1297, 45<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, Nevada, January 2007. [doi.org/10.2514/6.2007-1297](https://doi.org/10.2514/6.2007-1297)
164. F. Taghaddosi and W.G. Habashi, "3D Parallel Spectral Computations of Fan Noise", ECCOMAS CFD 2006 Conference, Egmond aan Zee, The Netherlands, September 2006.
165. J.P. Dow, Sr., P. Tran, N. Ben Abdallah and W.G. Habashi, "Strategy for Overcoming Limitations of Ice Shape Prediction and Shape Criticality", 2<sup>nd</sup> International Conference on Icing Technology, Rome, September 2006.
166. W.G. Habashi, "Toward Virtual Certification of In-Flight Icing: A Pacing Item for CFD, Keynote Lecture, 5<sup>th</sup> International Conference on Engineering Computational Technology, University of Las Palmas de Gran Canaria, Canary Islands, September 2006.
167. F. Tremblay, W.G. Habashi, M.S. Aubé, C. Wang, B. Huang and G. Wang, "A CWE/WT Study of the Flow over High-Rise Buildings, Using Anisotropic Mesh Optimization", Proceedings of the 4<sup>th</sup> International Symposium on Computational Wind Engineering, pp. 789-792, Yokohama, July 2006.
168. W.G. Habashi, "In-Flight Icing Simulation and Certification, A Frontier of CFD", Keynote Lecture, 14<sup>th</sup> Conference of the CFD Society of Canada (CFD2006), Kingston, July 2006.
169. C. Bucur, L. Remaki, S. Nadarajah and W.G. Habashi, "Mesh Adaptation for Transonic Viscous Flows", 14<sup>th</sup> Conference of the CFD Society of Canada (CFD2006), Kingston, July 2006.
170. F. Taghaddosi and W.G. Habashi, "3D Fan Noise Simulations Using a Spectral Element Method", 14<sup>th</sup> Conference of the CFD Society of Canada (CFD2006), Kingston, July 2006.

171. C. Bucur, L. Remaki, S. Nadarajah and W.G. Habashi, "Mesh Adaptation and Shock Detectors for Transonic Viscous Flows using SUPG-FEM", AIAA Paper 2006-3163, 25<sup>th</sup> AIAA CFD Conference, San Francisco, May 2006.
172. R. Honsek and W.G. Habashi, "FENSAP-ICE Modeling of Droplet Impingement in the SLD Regime of Aircraft Icing", AIAA Paper 2006-0465, 44<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 2006. [doi.org/10.2514/6.2006-465](https://doi.org/10.2514/6.2006-465)
173. L. Remaki, S. Nadarajah, W.G. Habashi, M.C. Bogstad, C. Kho and F. Mokhtarian, "On the A-Posteriori Error Estimation in Mesh Adaptation to Improve CFD Solutions", AIAA Paper 2006-0890, 44<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 2006. [doi.org/10.2514/6.2006-890](https://doi.org/10.2514/6.2006-890)
174. F. Morency, H.Z. Wang, W.G. Habashi, S. Nadarajah, A. Pueyo and F. Kafyeke, "Thermal Validation of FENSAP-ICE Anti-Icing Procedure", 11<sup>th</sup> CASI Aerodynamics Symposium, Toronto, April 2005.
175. L. Remaki, S. Nadarajah, W.G. Habashi, M.C. Bogstad, C. Kho and F. Mokhtarian, "Mesh Adaptation Impact on Lift and Drag Coefficients", 11<sup>th</sup> CASI Aerodynamics Symposium, Toronto, April 2005.
176. L. Remaki and W.G. Habashi, "Toward an Optimal Initial Grid for CFD", AIAA Paper 2005-0494, 43<sup>rd</sup> AIAA Aerospace Sciences Meeting, Reno, January 2005.
177. W.G. Habashi, Keynote Lecture, "Mesh Adaptation, from Qualitative to Quantitative CFD", Pacing CFD, Stanford University, November 2004.
178. W.G. Habashi, Keynote Lecture, "In-Flight Icing, Pacing CFD", Pacing CFD, Stanford University, November 2004.
179. F. Suerich-Gulick, C.Y. Lepage and W.G. Habashi, "Automatic Mesh Adaptation: Towards User-Independent CFD", Keynote Lecture, 4<sup>th</sup> International Conference on Engineering Computational Technology, Lisbon, Portugal, September 2004.
180. W.G. Habashi, M.S. Aubé, G.S. Baruzzi, F. Morency, P. Tran, J.C. Narramore, P. Petersen and M. Liggett, "FENSAP-ICE: Full-3D In-Flight Icing Simulation System for Aircraft, Rotorcraft and UAVs", 24<sup>th</sup> International Conference for the Aeronautical Sciences (ICAS), Yokohama, Japan, August 2004.

181. F. Suerich-Gulick, C.Y. Lepage and W.G. Habashi, "Anisotropic 3-D Mesh Adaptation for Turbulent Flows, AIAA Paper 2004-2533, 34<sup>th</sup> AIAA Fluid Dynamics Conference, Portland, July 2004. [doi.org/10.2514/6.2004-2533](https://doi.org/10.2514/6.2004-2533)
182. F. Morency and W.G. Habashi, "Low-Water Concentration Zone Prediction with a 3D Eulerian Droplet Impingement Icing Code", European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2004), P. Neittaanmäki, T. Rossi, K. Majava, O. Pironneau (eds.), Jyväskylä, Finland, 24-28 July 2004.
183. C.Y. Lepage, A. St-Cyr and W.G. Habashi, "Parallel Unstructured Mesh Adaptation on Distributed Memory Systems", AIAA Paper 2004-2532, 34<sup>th</sup> AIAA Fluid Dynamics Conference, Portland, July 2004. [doi.org/10.2514/6.2004-2532](https://doi.org/10.2514/6.2004-2532)
184. C.Y. Lepage, A. St-Cyr and W.G. Habashi, "MPI Parallelization of Unstructured Mesh Adaptation", 3<sup>rd</sup> International Conference on CFD (ICCFD3), Toronto, July 2004.
185. L. Remaki and W.G. Habashi, "Optimal Initial Grid Generation for Subsonic and Transonic Viscous Flows", CFD 2004, Ottawa, June 2004.
186. F. Suerich-Gulick, C.Y. Lepage and W.G. Habashi, "Anisotropic Adaptation for 3-D Unstructured Meshes for Turbulent Flows", CFD 2004, Ottawa, June 2004.
187. W.G. Habashi, "Le Maillage Adaptatif: vers une CFD de Qualité", Keynote Lecture, Colloque Franco-Tunisien sur les Méthodes Numériques Appliquées aux Écoulements et aux Transferts (CFT'04), pp. 1-8, 23-24, Monastir, Tunisie, avril 2004.
188. W.G. Habashi, "Rôle de la CFD dans la Simulation du Givrage en Vol", Keynote Lecture, Colloque Franco-Tunisien sur les Méthodes Numériques Appliquées aux Écoulements et aux Transferts (CFT'04), pp. 15-22, 23-24, Monastir, Tunisie, avril 2006.
189. F. Taghaddosi, W.G. Habashi, G.J. Guèvremont and A. St-Cyr, "3D Computation of Noise Propagation from Ducted Fans, using a Spectral Element Method", AIAA Paper 2004-0520, 42<sup>nd</sup> AIAA Aerospace Sciences Meeting, Reno, January 2004.
190. L. Remaki, C.Y. Lepage and W.G. Habashi, "Efficient Anisotropic Mesh Adaptation on Weak and Multiple Shocks", AIAA Paper 2004-0084, 42<sup>nd</sup> AIAA Aerospace Sciences Meeting, Reno, January 2004.

191. [P. Tran](#), [G.S. Baruzzi](#), [F. Tremblay](#), W.G. Habashi, [P. Petersen](#), [M. Liggett](#) and [J. Vos](#), "FENSAP-ICE Applications to Unmanned Aerial Vehicles (UAV)", AIAA Paper 2004-0402, [42<sup>nd</sup> AIAA Aerospace Sciences Meeting](#), Reno, January 2004.
192. [P. Lagacé](#), [C.Y. Lepage](#), W.G. Habashi and [M. Fortin](#), "Automatic CAD Reconstruction for CAD-Based Anisotropic Mesh Smoothing and Adaptation", AIAA Paper 2004-0085, [42<sup>nd</sup> AIAA Aerospace Sciences Meeting](#), Reno, January 2004.
193. W.G. Habashi, [H. Beaugendre](#) and [F. Morency](#), "Development of a Second-Generation In-Flight Icing Simulation Code", FEDSM 2003-45816, Keynote Lecture, Proceedings of the [4<sup>th</sup> ASME-JSME Joint Fluids Engineering Conference](#), Honolulu, USA, July 6–11, 2003.
194. [P. Tran](#), [G.S. Baruzzi](#), [I. Akel](#), W.G. Habashi and [J.C. Narramore](#), "FENSAP-ICE Applications to Complete Rotorcraft Configurations", Paper 03FAAID-49, [FAA In-Flight Icing/Ground De-icing International Conference & Exhibition](#), Washington, June 2003.
195. W.G. Habashi, [F. Morency](#) and [H. Beaugendre](#), "FENSAP-ICE: A Second-Generation 3D CFD In-Flight Icing Simulation System", Paper 03FAAID-50, [FAA In-Flight Icing/Ground De-icing International Conference & Exhibition](#), Washington, June 2003.
196. [J.C. Narramore](#) [P. Tran](#), [G.S. Baruzzi](#), W.G. Habashi, [I. Akel](#) and [S. Balage](#), "ICE Accretion Computations for Full Tiltrotor Configurations", [American Helicopter Society 59<sup>th</sup> Annual Forum](#), Phoenix, Arizona, May 6 – 8, 2003.
197. [M.C. Bogstad](#), [C. Kho](#), [F. Mokhtarian](#), [C.Y. Lepage](#), [L. Remaki](#) and W.G. Habashi, "Geometrical and Solution-Based Mesh Adaptation on a NASA Semi-Span Flap", Proceedings of the [CASI Aerospace Symposium](#), Montreal, May 2003.
198. [C.Y. Lepage](#), [L. Remaki](#) and W.G. Habashi, "Advances in CFD Mesh Optimization", Invited paper, Proceedings of the ["Grand Review of the State-of-the-Art in the Numerical Simulation of Fluid Flow, 2"](#), I. Mech. E., London, December 2002.
199. [G. Croce](#), W.G. Habashi and [H. Beaugendre](#), "Conjugate Heat Transfer Computations of Flows with Droplet Impingement", TED-J03-125, [6<sup>th</sup> ASME-JSME Thermal Engineering Joint Conference](#), Hawaii, March 2003.
200. [L. Remaki](#), [H. Beaugendre](#) and W.G. Habashi, "An Anisotropic Isovalue-Oriented Artificial Viscosity Method", AIAA Paper 2003-0073, [41<sup>st</sup> AIAA Aerospace Sciences Meeting](#), Reno, January 2003.
201. [F. Morency](#), [H. Beaugendre](#) and W.G. Habashi, "FENSAP-ICE: Effect of Pressure Gradient on 3D Eulerian Droplet Impingement", AIAA Paper 2003-1222, [41<sup>st</sup> AIAA Aerospace Sciences Meeting](#), Reno, January 2003. DOI:[10.2514/6.2003-1223](#)

202. [H. Beaugendre](#), [F. Morency](#) and W.G. Habashi, "FENSAP-ICE: A Study of the Effect of Ice Shapes on Droplet Impingement", AIAA Paper 2003-1223, 41<sup>st</sup> AIAA Aerospace Sciences Meeting, Reno, January 2003.
203. [G.S. Baruzzi](#), [P. Tran](#), W.G. Habashi and [J.C. Narramore](#), "Actuator Disk Implementation in FENSAP-ICE, a 3D Navier-Stokes In-Flight Simulation System", AIAA Paper 2003-0619, 41<sup>st</sup> AIAA Aerospace Sciences Meeting, Reno, January 2003.
204. [J.C. Narramore](#), [G.S. Baruzzi](#), [P. Tran](#) and W.G. Habashi, "FENSAP-ICE: Progress Towards a Rotorcraft Full-3D In-Flight Icing Simulation System", AIAA Paper 2003-0024, 41<sup>st</sup> AIAA Aerospace Sciences Meeting, Reno, January 2003.
205. [P. Tran](#), [S. Balage](#), [G. Croce](#), F. Lafond and W.G. Habashi, "FENSAP-ICE: A Multi-Disciplinary, Multi-Component, Integrated Design Tool, and its Application to Ice Protection Systems", ASME International Design Engineering Conference, Montreal, September 2002.
206. W.G. Habashi, [C.Y. Lepage](#), [G.S. Baruzzi](#) and [I. Akel](#), "OPTIMESH: Anisotropic Mesh Adaptation with CAD Integrity for Verifiably Accurate CFD Solutions Over Complete Aircraft", NATO Applied Vehicle Technology Panel Symposium, Paris, April 2002.
207. W.G. Habashi, [P. Tran](#), [G.S. Baruzzi](#), [M.S. Aubé](#) and [P. Benquet](#), "Design of Ice Protection Systems and Icing Certification through the FENSAP-ICE System", NATO Applied Vehicle Technology Panel Symposium, Paris, April 2002.
208. [F. Morency](#), [H. Beaugendre](#) and W.G. Habashi, "Effect of Pressure Gradient on Droplet Impingement and Ice Shape Calculations", Proceedings of the CFD Society of Canada Conference, Windsor, ON, pp. 299-304, June 2002.
209. [M. Remaki](#), W.G. Habashi, [D. Ait-Ali-Yahia](#) and [A. Jay](#), "Discontinuous Galerkin Method for 3-D Buzz-Saw Noise Propagation", Proceedings of the CFD Society of Canada Conference, Windsor, ON, pp. 234-239, June 2002.
210. [L. Remaki](#), [H. Beaugendre](#) and W.G. Habashi, "An Anisotropic Isovalue-Oriented Artificial Viscosity Method for CFD", Proceedings of the CFD Society of Canada Conference, Windsor, ON, pp. 222-227, June 2002.
211. [J.C. Narramore](#), [P. Tran](#), W.G. Habashi [S. Balage](#) and [G.S. Baruzzi](#), "Reducing Icing Certification Flight Tests through Second Generation 3-D CFD-Based Technologies", Abstract (58-06), 58<sup>th</sup> American Helicopter Society International Forum, Montreal, Quebec, Canada, June 2002.
212. [G.S. Baruzzi](#), [P. Tran](#), W.G. Habashi and [J.C. Narramore](#), "A New Actuator Disk FEM Model for Propellers", 58<sup>th</sup> American Helicopter Society International Forum, Montreal, Quebec, Canada, June 2002.
213. [C.Y. Lepage](#), [L. Remaki](#) and W.G. Habashi, "Anisotropic 3-D Mesh Adaptation on Unstructured Hybrid Meshes", AIAA Paper 2002-0859, 40<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 2002.
214. [H. Beaugendre](#), [F. Morency](#) and W.G. Habashi, "ICE3D, FENSAP-ICE's 3D In-Flight Ice Accretion Module", AIAA Paper 2002-0385, 40<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 2002.

215. G. Croce, H. Beaugendre and W.G. Habashi, "CHT3D, FENSAP-ICE Conjugate Heat Transfer Computations with Droplet Impingement and Runback Effects", AIAA Paper 2002-0386, 40<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 2002.
216. P. Tran, P. Benquet, G.S. Baruzzi and W.G. Habashi, "Design of Ice Protection Systems and Icing Certification Through Cost-Effective Use of CFD", AIAA Paper 2002-0382, 40<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 2002.
217. M. Remaki, W.G. Habashi, D. Ait-Ali-Yahia and A. Jay, "A Discontinuous Galerkin Method for Multiple Pure Tone Noise in Gas Turbines", AIAA Paper 2002-0229, 40<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 2002.
218. M. Remaki and W.G. Habashi, "Discontinuous Galerkin Method for 3-D Computational Aero-Acoustics", CFD2001, Waterloo, June 2001.
219. F. Morency, H. Beaugendre, G.S. Baruzzi and W.G. Habashi, "FENSAP-ICE: A Comprehensive 3D Simulation Tool for In-Flight Icing", AIAA Paper 2001-2566, 15<sup>th</sup> AIAA Computational Fluid Dynamics Conference, Anaheim, CA, June 2001.
220. G. Croce, H. Beaugendre and W.G. Habashi, "FENSAP-ICE: Numerical Simulation of Heat Transfer in Mist Flows", Proceedings of the International Center for Heat and Mass Transfer Computational Heat Transfer Conference, pp. 1283-1290, Palm Cove, Australia, May 2001.
221. F. Morency, H. Beaugendre and W.G. Habashi, "FENSAP-ICE: A Navier-Stokes Eulerian Droplet Impingement Approach for High-lift Devices", 8<sup>th</sup> Aerodynamics Symposium, CASI, Toronto, April 2001.
222. H. Beaugendre, F. Morency and W.G. Habashi, "ICE3D, FENSAP-ICE's 3D In-Flight Ice Accretion Module", 8<sup>th</sup> Aerodynamics Symposium, CASI, Toronto, April 2001.
223. G.S. Baruzzi, C.Y. Lepage, I. Akel and W.G. Habashi, "MOM3D: CAD-Based Mesh Adaptation for CFD Solutions over Complete Aircraft", 8<sup>th</sup> Aerodynamics Symposium, CASI, Toronto, April 2001.
224. M.P. Robichaud, D. Ait-Ali-Yahia, G.S. Baruzzi, M.F. Peeters, V. Kozel and W.G. Habashi, "3-D Anisotropic Adaptation for External and Turbomachinery Flows on Hybrid Unstructured Grids", AIAA Paper 2000-2248, AIAA Fluids 2000, Denver, June 2000.
225. D. Stanescu, D. Ait-Ali-Yahia, W.G. Habashi and M.P. Robichaud, "Galerkin Spectral Element Method for Fan Tone Radiation Computations", AIAA Paper 2000-1912, 6<sup>th</sup> AIAA/CEAS Aeroacoustics Conference, Hawaii, June 2000.
226. C.Y. Lepage and W.G. Habashi, "Conservative Interpolation of Aerodynamic Loads for Aero-Elastic Computations", AIAA Paper 2000-1449, 41<sup>st</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Atlanta, April 2000.  
[doi.org/10.2514/6.2000-1449](https://doi.org/10.2514/6.2000-1449)
227. I. Akel, W.G. Habashi and H.S. Moustapha, "Toward CFD-Based Correlations for Single-Stage High-Pressure Transonic Turbine Stage", Proceedings of the 8<sup>th</sup> International Symposium on Transport Phenomena and Dynamics of Rotating Machinery (ISROMAC-8), Honolulu, Hawaii, March 2000.

228. "A fully-coupled Finite Element Method for the Solution of the 3D MHD Equations with a GMRES-based Algorithm", AIAA Paper 99-3322, 14<sup>th</sup> Computational Fluid Dynamics Conference, Norfolk, November 1-5, 1999.
229. D. Ait-Ali-Yahia, D. Stanescu, M.P. Robichaud and W.G. Habashi, "Spectral Element Grid Generation and Nonlinear Computations from Noise Radiation from Aircraft Engines", AIAA Paper 99-1832, 5<sup>th</sup> AIAA/CEAS Aeroacoustics Conference, Bellevue, May 1999.
230. M.C. Bogstad, W.G. Habashi, D. Ait-Ali-Yahia, L. Metcalfe, N. Giannias and V. Longo, "CFD Navy Ships Airwake Analysis for a Helicopter Flight Simulator", AIAA Paper 99-0996, 37<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1999.
231. Y. Bourgault, W.G. Habashi and H. Beaugendre, "Development of a Shallow-Water Icing Model in FENSAP-ICE", AIAA Paper 99-0246, 37<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1999.
232. C.Y. Lepage and W.G. Habashi, "Fluid-Structure Interactions Using the ALE Formulation", AIAA Paper 99-0660, 37<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1999.
233. W.G. Habashi, M.P., H.S. Moustapha, G.J. Guèvremont and M.F. Peeters, "A Practical and Effective Approach to CFD Education, Through a University-Industry Technology Exchange Perspective", AIAA Paper 99-1056, Invited Paper at 37<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1999.
234. D. Ait-Ali-Yahia, D. Stanescu, W.G. Habashi and M.P. Robichaud, "Axisymmetric Computations of Fan Noise Radiation from the PW545 Turbofan Inlet", AIAA Paper 99-0483, 37<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1999.
235. L.C. Dutto, C.Y. Lepage and W.G. Habashi, "Impact of Storage of Sparse Linear Systems in CFD Computations", AIAA Paper 99-0298, 37<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1999.
236. M.P. Robichaud, M.F. Peeters and W.G. Habashi, "Recent CFD Multidisciplinary Applications at Pratt & Whitney Canada", Invited presentation at Special Technological Session on CFD in Turbomachinery, Complementary Proceedings of the 4<sup>th</sup> European Computational Fluid Dynamics Conference (ECCOMAS 4), Paper 16, Athens, September 1998.
237. V. Kozel, W.G. Habashi, A. Tam, M.P. Robichaud, M.C. Bogstad, A. Wulf and M. Hohmeyer, "Mesh Optimization: Tight Coupling of Mesh Generation and Solver, with CAD Integrity", Proceedings of the 4<sup>th</sup> European Computational Fluid Dynamics Conference (ECCOMAS 4), Athens, pp. 114-118, Vol. 1, part 1, September 1998.
238. W.G. Habashi, Y. Bourgault, G.S. Baruzzi, Z. Boutanios, G. Croce and G.A. Wagner, "FENSAP-ICE: An Integrated CFD Approach to the In-Flight Icing Problem", Invited paper at Special Technological Session on Icing and De-Icing, Proceedings of the 4<sup>th</sup> European Computational Fluid Dynamics Conference (ECCOMAS 4), Athens, pp. 512-517, Vol. 2, September 1998.
239. Y. Bourgault, H. Beaugendre, W.G. Habashi, C.Y. Lepage and G. Croce, "FENSAP-ICE: A New Equilibrium Model for Ice Accretion, including Film Runback and Conjugate Heat Transfer", Proceedings of the 4<sup>th</sup> European Computational Fluid Dynamics Conference (ECCOMAS), Athens, pp. 723-728, Vol. 1, Part 2, September 1998.

240. A. Tam, M.P. Robichaud, P. Tremblay, W.G. Habashi, M. Hohmeyer, G.J. Guèvremont, M.F. Peeters and D. Ait-Ali-Yahia, "A 3-D Adaptive Finite Element Method for Aerodynamic Flows", Proceedings of the 6<sup>th</sup> Conference of the CFD Society of Canada (CFD'98), Quebec City, pp. II-63-II-68, June 1998.
241. W.G. Habashi and A. Wulf, "3D Mesh Adaptation, with CAD Integrity", Invited Paper, Proceedings of the World User Association in Applied CFD Conference, Freiburg, Germany, pp. 22.1-22.6, June 1998.
242. G. Ouimet, M.P. Robichaud, M.F. Peeters and W.G. Habashi, "Multi-disciplinary Applications of CFD in Gas Turbine Engines", Invited Paper, Proceedings of the World User Association in Applied CFD Conference, Freiburg, Germany, pp. 22.1-22.6, June 1998.
243. D. Stanescu and W.G. Habashi, "Validation of a Multi-Domain Spectral Method for Fan Noise Prediction", AIAA Paper 98-2266, 4<sup>th</sup> AIAA/CEAS Aeroacoustics Conference, Toulouse, June 1998. [doi.org/10.2514/6.1998-2266](https://doi.org/10.2514/6.1998-2266)
244. W.G. Habashi, "Putting Computer on Ice: A CFD Integrated Approach to the In-Flight Icing Problem, Keynote Lecture, 13<sup>th</sup> Canadian Symposium on Fluid Dynamics (CSFD-98) 19<sup>th</sup> Annual Meeting of the Canadian Applied and Industrial Mathematics Society (CAIMS-98), pp. 58-59, Simon Fraser University, Vancouver, May 1998.
245. Z. Boutanios, Y. Bourgault, W.G. Habashi, G.A. Isaac and S.G. Cober, "3D Droplets Impingement Analysis Around an Aircraft's Nose and Cockpit Using FENSAP-ICE", AIAA Paper 98-0200, 36<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1998. [doi.org/10.2514/6.1998-200](https://doi.org/10.2514/6.1998-200)
246. G. Croce, W.G. Habashi, G.J. Guèvremont and F. Tezok, "3D Thermal Analysis of an Anti-Icing Device Using FENSAP-ICE", AIAA Paper 98-0193, 36<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1998.
247. A. Tam, M.P. Robichaud, P. Tremblay, W.G. Habashi, M. Hohmeyer, G.J. Guèvremont, M.F. Peeters and P. Germain, "A 3D Adaptive Anisotropic Method for External and Internal Flows", AIAA Paper 98-0771, 36<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1998. [doi.org/10.2514/6.1998-771](https://doi.org/10.2514/6.1998-771)
248. W.G. Habashi, Y. Bourgault, J. Dompierre, G.S. Baruzzi and D. Cronin, "A Modern CFD Look at In-Flight Icing Phenomena", Proceedings of the 16<sup>th</sup> Canadian Congress of Applied Mechanics, pp. 309-310, Quebec City, June 1997.
249. D. Ait-Ali-Yahia and W.G. Habashi, "Computation of Non-Equilibrium Hypersonic Flows over Blunt Bodies", Proceedings of the 16<sup>th</sup> Canadian Congress of Applied Mechanics, pp. 317-318, Quebec City, June 1997.
250. J. Dompierre, D. Cronin, Y. Bourgault, G.S. Baruzzi, W.G. Habashi and G.A. Wagner, "Numerical Simulation of Performance Degradation of Ice Contaminated Airfoils", AIAA Paper 97-2235, 15<sup>th</sup> AIAA Applied Aerodynamics Conference, Atlanta, June 1997. <https://doi.org/10.2514/6.1997-2235>

251. **F. Taghaddosi**, W.G. Habashi, **G.J. Guèvremont** and **D. Ait-Ali-Yahia**, "An Adaptive Least-Squares Method for the Compressible Euler Equations", AIAA Paper 97-2097, 13<sup>th</sup> AIAA Computational Fluid Dynamics Conference, Snowmass, June 1997.
252. **D. Stanescu** and W.G. Habashi, "Two-Dimensional Shock-Sound Interaction on Unstructured Meshes", AIAA Paper 97-1606, 18<sup>th</sup> AIAA Aeroacoustics Conference, Atlanta, May 1997.[doi.org/10.2514/6.1997-1606](https://doi.org/10.2514/6.1997-1606)
253. **N. Ben Salah**, **A. Soulaïmani**, W.G. Habashi and **M. Fortin**, "A Conservative Stabilized Finite Element Method for the Magneto-Hydrodynamics Equations", Proceedings of Advances in Computational Engineering Science, ICES'97, N. Atluri and G. Yagawa (Eds), Tech Science Press, pp. 269-276, Costa Rica, May 1997.
254. **L.C. Dutto**, W.G. Habashi and **M. Fortin**, "An Algebraic Multilevel Parallelizable Preconditioner for Large-Scale Computations", 8<sup>th</sup> Copper Mountain Conference on Multigrid Methods, April 1997.
255. W.G. Habashi and **Y. Bourgault**, "Une Approche Moderne pour la Simulation Numérique des Problèmes du Givrage en Vol", Canada-France Aerospace Workshop, Concordia University, Montréal, May 1997.
256. W.G. Habashi, "Anisotropic Mesh Optimization: Toward Mesh-User, and Solver-Independent CFD, Invited Lecture, Proceedings of the CFD'97 Conference of the Canadian Society for CFD, pp. 5.3-5.6, Victoria, British Columbia, May 1997.
257. **J. Dompierre**, **D. Cronin**, **Y. Bourgault**, **G.S. Baruzzi** and W.G. Habashi, "Numerical Simulation of Performance Degradation due to Small-Scale Roughness", 6<sup>th</sup> Canadian Aeronautics and Space Institute Aerodynamics Symposium, Toronto, April 1997.
258. W.G. Habashi, **Y. Bourgault**, **J. Dompierre**, **G.S. Baruzzi** and **D. Cronin**, "Putting Computers on Ice: A CFD Integrated Approach to the In-Flight Icing Problem", 6<sup>th</sup> Canadian Aeronautics and Space Institute Aerodynamics Symposium, Toronto, April 1997.
259. W.G. Habashi, **M. Fortin**, **J. Dompierre**, **M-G. Vallet**, **D. Ait-Ali-Yehia**, **Y. Bourgault**, **M.P. Robichaud**, **A. Tam**, **S. Boivin**, "Anisotropic Mesh Optimization for Structured and Unstructured Meshes", von Karman Institute for Fluid Dynamics, Lecture Series 1997-02, 53 pages, Montreal, March 1997.
260. **D. Stanescu** and W.G. Habashi, "Essentially Non-Oscillatory Euler Solutions on Unstructured Meshes Using Extrapolation", AIAA Paper 97-0539, 35<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1997.
261. **L.C. Dutto**, W.G. Habashi and **M. Fortin**, "An Algebraic Two-Level Parallelizable Preconditioner for the Compressible Navier-Stokes Equations", AIAA Paper 97-0448, 35<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1997.
262. **Y. Bourgault**, W.G. Habashi, **J. Dompierre**, **G.S. Baruzzi** and **G. Chevalier**, "An Eulerian Approach to Supercooled Droplets Impingement Calculations", AIAA Paper 97-0176, 35<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1997.

263. [D. Ait-Ali-Yahia](#) and W.G. Habashi, "A Segregated Finite Element Method for Hypersonic Thermo-Chemical Non-Equilibrium Flows, Using Adaptive Grids", AIAA Paper 97-0981, 35<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1997.
264. [M.P. Robichaud](#), [W. Di Bartolomeo](#), [K. Heikurinen](#) and W.G. Habashi, "Turboprop Air Intake Design Using 3-D Viscous Analysis", AIAA Paper 97-0171, 35<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1997.
265. [J. Dompierre](#), [M.-G. Vallet](#), [M. Fortin](#) and W.G. Habashi, "Anisotropic Mesh Adaptation: Towards a Solver and User Independent CFD", AIAA Paper 97-0861, 35<sup>th</sup> AIAA Aerospace Sciences Meeting, Reno, January 1997.
266. W.G. Habashi, [M. Fortin](#), [J. Dompierre](#), [M.-G. Vallet](#) and [Y. Bourgault](#), "A Mesh Optimizer for CFD", Proceedings of the 6<sup>th</sup> ASME International Congress on Fluid Dynamics & Propulsion, pp. 1-8, Cairo, December 1996.
267. [D. Ait-Ali-Yahia](#) and W.G. Habashi, "A Loosely-Coupled Approach for Equilibrium and Non-Equilibrium Hypersonic Flows on Optimized Quadrilateral Meshes", Invited Paper, Proceedings of the 6<sup>th</sup> ASME International Congress on Fluid Dynamics & Propulsion, pp. 19-29, Cairo, December 1996.
268. [D. Stanescu](#) and W.G. Habashi, "Numerical Experiments with Algebraic Multigrid Using Non-Stationary Relaxation", 5<sup>th</sup> European Multigrid Conference '96, Stuttgart, October 1-4, 1996.
269. [G. Houzeaux](#), W.G. Habashi, [G.J. Guèvremont](#) and [G.S. Baruzzi](#), "k- $\omega$  Turbulence Model for the Solution of 2-D Internal Flows by the FEM", Proceedings of the 3<sup>rd</sup> European Computational Fluid Dynamics Conference (ECCOMAS 3), Paris, John Wiley, pp. 359-365, September 1996.
270. [Y. Bourgault](#), W.G. Habashi, [J. Dompierre](#), [G.S. Baruzzi](#), [G. Chevalier](#) and [W. Di Bartolomeo](#), "An Eulerian Computational Approach to Ice Droplets Impingement", Proceedings of the 3<sup>rd</sup> European Computational Fluid Dynamics Conference (ECCOMAS 3), Paris, John Wiley, pp. 827-833, September 1996.
271. W.G. Habashi and [M. Fortin](#), "Anisotropic Mesh Adaptation: A Step Towards a Grid-Independent and User-Independent CFD", Invited Keynote Lecture at ICASE-NASA Langley Research Center Workshop on Barriers and Challenges in CFD, Hampton, VA, Klüger Academic, pp. 99-117, August 1996.
272. [D. Ait-Ali-Yahia](#) and W.G. Habashi "A Directionally-Adaptive Finite Element Method for High-Speed Flows", AIAA Paper 96-2553, 32<sup>ND</sup> AIAA/ASME/SAE/ASEE Joint Propulsion Conference, Lake Buena Vista, July 1996.
273. [A. Tam](#), W.G. Habashi, [D. Ait-Ali-Yahia](#), [M.P. Robichaud](#) and [M. Fortin](#) "A 3-D Adaptive Finite Element Method for Turbomachinery", AIAA Paper 96-2659, 32<sup>nd</sup> AIAA/ASME/SAE/ASEE Joint Propulsion Conference, Lake Buena Vista, July 1996.
274. [J.M. Zhou](#), [M.P. Robichaud](#), [M.F. Peeters](#) and W.G. Habashi, "A Finite Element Method for Heat Transfer Prediction in Cooled Turbine Blades, Proceedings of the ASME Fluids Engineering Division Summer Meeting, FED-Vol. 238, Vol. 3, pp. 299-307, San Diego, July 1996.

- 275. M-G. Vallet, J. Dompierre, Y. Bourgault, M. Fortin and W.G. Habashi, "Coupling Flow Solvers and Grid Through an Edge-Based Adaptive Grid Method", Proceedings of the ASME Fluids Engineering Conference, San Diego, July 7-11, 1996.
- 276. M. Sleiman, A. Tam, M.P. Robichaud, M.F. Peeters, W.G. Habashi and M. Fortin, "Turbomachinery Multistage Simulation by a Finite Element Adaptive Approach", ASME Paper 96-GT-418, 41<sup>st</sup> ASME Gas Turbine and Aeroengine Congress, Birmingham, U.K., June 1996.
- 277. Y. Bourgault, W.G. Habashi, J. Dompierre and G. Chevalier, "An Eulerian Approach to Ice Droplets Impingement", 15<sup>th</sup> International Conference on Numerical Methods in Fluid Dynamics, Monterey, Springer-Verlag, pp. 274-279, June 1996.
- 278. D. Ait-Ali-Yahia and W.G. Habashi "A Directionally-Adaptive Finite Element Method for Hypersonic Thermo-Chemical Non-Equilibrium Flows", 15<sup>th</sup> International Conference on Numerical Methods in Fluid Dynamics, Monterey, Springer-Verlag, pp. 261-267, June 1996.
- 279. W.G. Habashi and M. Fortin, "Anisotropic Mesh Adaptation: Towards a Mesh-Independent, User-Independent and Solver-Independent CFD", Invited Workshop Address, World User Association in Applied CFD Conference, Freiburg, Germany, pp. 13.1-13.4, May 1996.
- 280. W.G. Habashi and Ch. Hirsch, "Progress and Outlook for CFD in Turbomachinery", Invited Workshop Address, World User Association in Applied CFD Conference, Freiburg, Germany, pp. 20.6-20.12, May 1996.
- 281. Y. Bourgault, W.G. Habashi, J. Dompierre, G.S. Baruzzi and G. Chevalier, "A Finite Element Eulerian Approach to Ice Droplets Impingement", Proceedings of the FAA International Conference on Aircraft In-Flight Icing, Springfield/Washington D.C., Vol. II, pp. 275-284, May 1996.
- 282. M.-G. Vallet, Y. Bourgault, J. Dompierre, M. Fortin and W.G. Habashi, "A Directional Error Estimator for CFD", 5<sup>th</sup> International Conference on Numerical Grid Generation in CFD and Related Fields, Mississippi State University, Starkville, April 1996.
- 283. J.M. Zhou, M.P. Robichaud, W.G. Habashi and W.S. Ghaly, "CFD Predictions of Flow and Heat Transfer in the Coolant Passages of Gas Turbine Blades", AIAA Paper 96-0450, 34<sup>th</sup> Aerospace Sciences Meeting, Reno, January 1996.
- 284. L.C. Dutto, G. Yang, M. Fortin and W.G. Habashi, "Solution of the Navier-Stokes Equations by a Parallelizable Block Broyden Method", Proceedings of the 9<sup>th</sup> Finite Elements in Fluids Conference, Venice, Italy, Vol. II, pp. 1151-60, October 1995.
- 285. M. Fortin, Y. Bourgault, W.G. Habashi, J. Dompierre and M-G. Vallet, "Mesh Adaptation for Viscous Compressible Flows", Proceedings of the 9<sup>th</sup> Finite Elements in Fluids Conference, Venice, Italy, Vol. II, pp. 1171-80, October 1995.
- 286. W. Di Bartolomeo, P.L. Kotiuga and W.G. Habashi, "Certification Test Design Using CFD", Proceedings of the American Helicopter Society International Icing Symposium '95, pp. 43-51, Montreal, September 1995.

287. D. Ait-Ali-Yahia, A. Tam, W.G. Habashi, M.-G. Vallet and M. Fortin, "An Adaptive Moving-Node Scheme for Compressible Flows", Invited Paper, Proceedings of the 6<sup>th</sup> International Symposium on Computational Fluid Dynamics, Lake Tahoe, Vol. IV, pp. 1-6, September 1995.
288. J. Dompierre, M.-G. Vallet, M. Fortin, W.G. Habashi, D. Ait-Ali-Yahia, S. Boivin, Y. Bourgault and A. Tam, "Edge-Based Mesh Adaptation for CFD", Proceedings of the Conference on Numerical Methods for the Euler and Navier-Stokes Equations, Centre de Recherches Mathématiques, SIAM, also CERCA Report R-95-73, Montreal, September 1995.
289. W.G. Habashi, M.P. Robichaud, L.C. Dutto and M. Fortin, "Parallel Finite Element Methodology for Turbomachinery Calculations", International Conference on Computational Engineering Science, ICES'95, Mauna Lani, Big Island, Hawaii, July 30-August 3, 1995.
290. M.P. Robichaud, L.C. Dutto, M.F. Peeters, W.G. Habashi and M. Fortin, "Parallel Finite Element Methodology for Turbomachinery Calculations", Proceedings of the 42<sup>nd</sup> CASI Annual Conference, Montreal, pp. 51-54, May 1995.
291. J.-M. Zhou, M.P. Robichaud, W.S. Ghaly, W.G. Habashi and A. Riahi, "CFD Predictions of Heat Transfer, with Applications to Turbine Blade Cooling", Proceedings of the 42<sup>nd</sup> CASI Annual Conference, Montreal, pp. 83-86, May 1995.
292. W.S. Ghaly, W.G. Habashi and M.F. Peeters, "Assessment of a Finite Element Method for Turbomachinery Flows", Proceedings of the 42<sup>nd</sup> CASI Annual Conference, Montreal, pp. 55-58, May 1995.
293. D. Ait-Ali-Yahia, W.G. Habashi and G.S. Baruzzi, "Numerical Simulation of Hypersonic Reacting Flows Using a Finite Element Method", Proceedings of the 42<sup>nd</sup> CASI Annual Conference, Montreal, pp. 29-32, May 1995.
294. W.G. Habashi, M.P. Robichaud, L.C. Dutto and M.F. Peeters, "An Efficient Finite Element Approach for Turbomachinery Calculations", Invited Paper, Proceedings of the 1<sup>st</sup> Asian Computational Fluid Dynamics Conference, Hong Kong, Vol. 1, pp. 71-80, January 1995.
295. D. Ait-Ali-Yahia, W.G. Habashi and G.S. Baruzzi, "A Finite Element Method for Hypersonic Reacting Flows", Advances in Finite Element Analysis in Fluid Dynamics 1994, ASME Winter Annual Meeting, Chicago, FED-Vol. 200, pp. 11-19, November 1994.
296. M.P. Robichaud, W.G. Habashi, M.F. Peeters and L.C. Dutto, "Parallel Finite Element Methodology for Turbomachinery Calculations", Proceedings of the International Workshop on Solution Techniques for Large-Scale CFD Problems, Montreal, pp. 43-59, September 1994.
297. W.S. Ghaly, W.G. Habashi and M.F. Peeters, "Assessment of a Finite Element Solution Method for Viscous Compressible Flows in Gas Turbines", Proceedings of the 2<sup>nd</sup> European Computational Fluid Dynamics Conference (ECCOMAS 2) (Invited Lectures and Special Technological Sessions), Stuttgart, Germany, pp. 221-229, September 1994.

298. M. Fortin, M.-G. Vallet, D. Poirier and W.G. Habashi, "Error Estimation and Directionally-Adaptive Meshing", AIAA Paper 94-2211, AIAA 25<sup>th</sup> Fluid Dynamics Conference, Colorado Springs, June 1994.
299. W.G. Habashi, "CFD in Turbomachinery", Invited Address, Proceedings of the World User Association in Applied CFD Conference, Basel, Switzerland, pp. 25.1-25.6, May 1994.
300. M.-G. Vallet, M. Fortin and W.G. Habashi, "A Posteriori Estimation and Directional Adaptation in Compressible Flows", 4<sup>th</sup> Numerical Grid Generation Conference, Swansea, April 1994.
301. L.C. Dutto, W.G. Habashi, M.P. Robichaud and M. Fortin, "A Parallel Strategy for the Solution of the Fully Coupled Compressible Navier-Stokes Equations", Advances in Finite Element Analysis in Fluid Dynamics 1993, ASME Winter Annual Meeting, New Orleans, FED-Vol. 171, pp. 21-32, November 1993.
302. L.C. Dutto, W.G. Habashi and M. Fortin, "A Parallelizable ILU(0) Preconditioner for the Compressible and Transonic 2D Navier-Stokes Equations", Proceedings of the 8<sup>th</sup> International Conference on Finite Elements in Fluids, FEMIF'93, Barcelona, Spain, Pineridge Press, U.K., Vol. II, pp. 1221-1240, September 1993.
303. L.C. Dutto, W.G. Habashi, M.P. Robichaud and M. Fortin, "A Parallelizable Iterative Solver for Finite Element Viscous Compressible Flow Calculations", Invited Paper, Proceedings of the 5<sup>th</sup> International Symposium on Computational Fluid Dynamics, Sendai, Japan, Vol. IV, pp. 49-55, August 1993.
304. M. Chaaban, W.G. Habashi and J. Leduc, "A Finite Element Approach for Coupling Axisymmetric and Cartesian Domains in Underground Cable Applications", Proceedings of the 8<sup>th</sup> International Conference on Numerical Methods in Thermal Problems, Swansea, Pineridge Press, U.K., pp. 1565-1575, July 1993.
305. L.C. Dutto, W.G. Habashi, M. Fortin and M.P. Robichaud, "Parallelizable Block-Diagonal Preconditioners for 3D Viscous Compressible Flow Calculations", AIAA Paper 93-3309, Proceedings of the 11<sup>th</sup> AIAA Computational Fluid Dynamics Conference, Orlando, Vol. 2, pp. 135-143, July 1993.
306. W.G. Habashi, T. Krepec and T.S. Sankar, "Teaching Aircraft Propulsion Engineering to Meet Industry's Needs in Montreal", SAE Technical Paper 931392, SAE Aerospace Atlantic Conference & Exposition, Dayton, Ohio, April 20-23, 1993.  
doi.org/10.4271/931392
307. W.G. Habashi, "CFD in Canada: Challenges and Promises", Inaugural Address of the "1<sup>st</sup> Conference of the Canadian Society of CFD", Montreal, June 1993.
308. G.S. Baruzzi, W.G. Habashi and M.M. Hafez, "An Improved Finite Element Method for the Solution of the Compressible Euler and Navier-Stokes Equations", Proceedings of the 1<sup>st</sup> European Computational Fluid Dynamics Conference (ECCOMAS), Brussels, Belgium, Vol. II, pp. 643-650, September 1992.
309. G.S. Baruzzi, W.G. Habashi and M.M. Hafez, "A Second Order Method for the Finite Element Solution of the Euler and Navier-Stokes Equations", Proceedings of the 13<sup>th</sup> International Conference on Numerical Methods in Fluid Dynamics, Springer Verlag, Rome, Italy, pp. 509-513, July 1992.

310. J. Strigberger, G.S. Baruzzi, W.G. Habashi and M. Fortin "A Finite Element/GMRES Algorithm for Transonic and Supersonic Euler Equation Computations", SIAM 40<sup>th</sup> Anniversary Meeting, Los Angeles, July 20-24, 1992.
311. M. Chaaban and W.G. Habashi, "A New Approach to Cable Ampacity Calculation Using the Finite Element Method", Proceedings of the IEEE 91<sup>st</sup> Summer Meeting of the Insulated Conductors Committee, Birmingham, U.K., Chapter 22, July 1992.
312. G.S. Baruzzi and W.G. Habashi, "A Parallel Gauss Solver for Direct Methods in CFD", Parallel CFD '92, Rutgers University, New Brunswick, NJ, USA, May 18-22, 1992.
313. V-N. Nguyen, W.G. Habashi and M.V. Bhat, "Large-Scale Computational Fluid Dynamics by the Finite Element Method, 6<sup>th</sup> Annual Supercomputing Symposium, Supercomputing Canada (SUPERCAN), Montreal, June 8-11, 1992.
314. W.S. Ghaly, W.G. Habashi, M.F. Peeters, P.Q. Gauthier and M.P. Robichaud, "Finite Element Solution of Viscous Compressible Flows in Gas Turbine Components", Proceedings of the 4<sup>th</sup> International Symposium on Transport Phenomena and Dynamics of Rotating Machinery (ISROMAC-4), Honolulu, Hawaii, pp. 641-651, April 1992.
315. J. Strigberger, G.S. Baruzzi and W.G. Habashi, "Preconditioned Conjugate Gradient-Like Methods in the Finite Element Solution of the Euler Equations for Transonic and Supersonic Flows", 4<sup>th</sup> International Symposium on Computational Fluid Dynamics, University of California, Davis, September 1991.
316. W.G. Habashi, M.M. Hafez and G.S. Baruzzi, "A Second Order Finite Element Formulation for Viscous Transonic Flows", 4<sup>th</sup> International Symposium on Computational Fluid Dynamics, University of California, Davis, September 1991.
317. J. Strigberger and W.G. Habashi, "Application of AF-Preconditioned Conjugate Gradient-Like Methods to the Computation of Unsteady Incompressible Viscous Flows", Proceedings of the 7<sup>th</sup> International Conference on Numerical Methods in Laminar and Turbulent Flow, Stanford, pp. 1537-1547, July 1991.
318. W.G. Habashi, V-N. Nguyen and M.V. Bhat, "Large-Scale CFD Problems by Vector-Parallel Direct Solvers", Parallel CFD, University of Stuttgart, Germany, June 1991.
319. M.V. Bhat and W.G. Habashi, "Computational Fluid Dynamics at Pratt & Whitney Canada", Proceedings of the 13<sup>th</sup> Canadian Congress of Applied Mechanics, University of Manitoba, Winnipeg, June 1991.
320. M.P. Robichaud and W.G. Habashi, "Iterative Solution Methods for the Steady-State Compressible Navier-Stokes Equations", 1991 Meeting of the Canadian Applied Mathematics Society, Ottawa, May 1991.
321. W.G. Habashi, M.F. Peeters, M.P. Robichaud, V-N. Nguyen and M.V. Bhat, "Finite Element Solution of Viscous Compressible Flows in Gas Turbine Ducts and Diffusers", CFD Techniques for Propulsion Applications, AGARD Proceedings 510, San Antonio, pp. 31-1 to 31-11, May 1991.
322. V-N. Nguyen, W.G. Habashi and M.V. Bhat, "An Efficient Parallel-Vector Matrix Solver for Large-Scale Finite Element Computational Fluid Dynamics Using the IBM 3090

- Supercomputer", IBM Large-scale Analysis and Modeling Conference, Park City, April 1991.
323. W.G. Habashi, M. Fortin, J.W.H. Liu, M.P. Robichaud, V-N. Nguyen and W.S. Ghaly, "Large-Scale Computational Fluid Dynamics by the Finite Element Method", AIAA Paper 91-0120, AIAA 29<sup>th</sup> Aerospace Sciences Conference, Reno, January 1991.
  324. W.G. Habashi, M.V. Bhat and P.L. Kotiuga, "FEM Industrial-Academic Interaction in the Aerospace Industry", Invited Paper, Proceedings of the 6<sup>th</sup> World Congress on Finite Element Methods, Banff, pp. 240-246, October 1990.
  325. W.G. Habashi, "Directions of Computational Mechanics Technology", Panel Discussion at the ASME International Computers in Engineering Conference, Boston, August 1990.
  326. W.G. Habashi, "The Use of Supercomputers in the Gas Turbine Industry", Keynote Lecture at the Supercomputer World Conference", San Diego, June 1990.
  327. W.G. Habashi, "Large-Scale CFD Problems by the Finite Element Method", Keynote Lecture at the 9<sup>th</sup> Canadian Symposium on Fluid Dynamics", London, June 1990.
  328. V-N. Nguyen, W.G. Habashi and M.V. Bhat, "Vector-Parallel Gauss Elimination Solver for Large-Scale Finite Element Computational Fluid Dynamics", Proceedings of the Supercomputing Symposium '90, Montreal, pp. 363-369, June 1990.
  329. W.G. Habashi, "Direct Solvers for Large Scale CFD Problems", Invited Address at the Symposium on Recent Developments in Large-Scale Computational Fluid Dynamics", Minnesota Supercomputer Institute, Minneapolis, April 23, 1990 (published in CMAME Journal).
  330. M.F. Peeters, W.G. Habashi, B.Q. Nguyen and P.L. Kotiuga, "Finite Element Solutions of the Navier-Stokes Equations for Compressible Internal Flows", AIAA Paper 90-0441, AIAA 28<sup>th</sup> Aerospace Sciences Conference, Reno, January 1990. [doi.org/10.2514/3.23460](https://doi.org/10.2514/3.23460)
  331. G.S. Baruzzi, W.G. Habashi and M.M. Hafez, "Finite Element Solutions of the Euler Equations for Transonic External Flows", AIAA Paper 90-0405, AIAA 28<sup>th</sup> Aerospace Sciences Conference, Reno, January 1990.
  332. G.J. Guèvremont, W.G. Habashi, P.L. Kotiuga and M.M. Hafez, "Finite Element Solution of the 3-D Compressible Navier-Stokes Equations by a Velocity-Vorticity Method", AIAA Paper 90-0404, AIAA 28<sup>th</sup> Aerospace Sciences Conference, Reno, January 1990.
  333. W.G. Habashi, "Is Mainframe Supercomputing Still a Viable Option for Canadian Science and Engineering", Invited Debate Panel at Supercomputer Forum III, Ottawa, January 15, 1990.
  334. W.G. Habashi, G. Baruzzi and M.F. Peeters, "Fully Implicit Algorithms for Computational Fluid Dynamics", Proceedings of the Third International Congress of Fluid Mechanics, Cairo, Egypt, January 2-4, 1990.
  335. M.V. Bhat, W.G. Habashi, J.W.H. Liu, V-N. Nguyen and M.F. Peeters, "A Note on Nested Dissection for Rectangular Grids", Technical report No. CS-9002, Department of Computer Science, York University, Downsview, Canada, February 1990.

336. W.G. Habashi, [J.W.H. Liu](#), [M.V. Bhat](#), [V-N. Nguyen](#) and [M.F. Peeters](#), "Direct Solvers and Sparse Matrix Technology in the Solution of the 3-D Navier-Stokes Equations", Invited Paper, 1<sup>st</sup> CASI Symposium on Aerodynamics, Ottawa, December 1989.
337. W.G. Habashi, [M.F. Peeters](#) and [G.S. Baruzzi](#), "Computational Fluid Dynamics by Direct Solvers", Proceedings of the 10<sup>th</sup> Brazilian Congress of Mechanical Engineering, Rio de Janeiro, Brazil, December 1989.
338. W.G. Habashi, [G.S. Baruzzi](#), [M.M. Hafez](#) and [M.F. Peeters](#), "A Newton-Galerkin Direct Scheme for the Solution of the Euler and Navier-Stokes Equations", Proceedings of the 1<sup>st</sup> Soviet-US Workshop in Computational Aerodynamics, Tashkent, Uzbekistan, October 1989.
339. W.G. Habashi, [G.S. Baruzzi](#) and [M.F. Peeters](#), "A Newton-Galerkin Algorithm for Computational Fluid Dynamics", Invited Paper, International Symposium on Computational Fluid Dynamics, Nagoya, Japan, pp. 347-352, August 1989.
340. W.G. Habashi, [G.S. Baruzzi](#) and [M.F. Peeters](#), "The Finite Element Method in the Solution of the Euler and Navier-Stokes Equations for Internal Flow", Computational Methods and Experimental Measurements, 4<sup>th</sup> International Conference, CMEM 89, Capri, Italy, 23-26 May 1989.
341. W.G. Habashi, [G.S. Baruzzi](#), [M.F. Peeters](#) and [M.V. Bhat](#), "A Newton-Galerkin Direct Scheme for the Solution of the Euler and Navier-Stokes Equations", 1<sup>st</sup> Symposium on Aerodynamics, Conference of the Canadian Aerospace and Space Institute, Ottawa, May 1989.
342. [M.F. Peeters](#) and W.G. Habashi, "Finite Element Solutions of the Three-Dimensional Navier-Stokes Equations", Proceedings of the 7<sup>th</sup> International Conference on Finite Element Methods in Flow Problems, Huntsville, pp. 830-835, April 1989.
343. W.G. Habashi, [G.J. Guèvremont](#) and [M.M. Hafez](#), "Finite Element Solution of the Navier-Stokes Equations by a Velocity-Vorticity Method", Invited Paper, Proceedings of the 1<sup>st</sup> International Conference on Computational Methods in Flow Analysis, Okayama, Japan, pp. 312-319 September 1988.
344. [G.S. Baruzzi](#), W.G. Habashi and [M.M. Hafez](#), "Non-Unique Solutions of the Euler Equations", Invited Paper at the Holt Symposium, 11<sup>th</sup> International Conference on Numerical Methods in Fluid Dynamics, Williamsburg, June 1988 (see chapters in books).
345. [G.J. Guèvremont](#), W.G. Habashi, [M.M. Hafez](#) and [M.F. Peeters](#), "A Velocity-Vorticity Finite Element Formulation of the Compressible Navier-Stokes Equations", Invited Paper, Proceedings of the 4<sup>th</sup> International Conference on Computational Engineering Science, Atlanta, Springer-Verlag, pp. 51.x.1-51.x.4, April 1988.
346. [S.M. Przybytkowski](#), [M.F. Peeters](#), W.G. Habashi and [M.M. Hafez](#), "Transonic Viscous Internal Flow Calculations by a Finite Element Method", Proceedings of the 5<sup>th</sup> International Conference on Numerical Methods in Laminar and Turbulent Flow, Montreal, Pineridge Press, pp. 2115-2125, July 1987.
347. [S.M. Przybytkowski](#), W.G. Habashi, [M.F. Peeters](#) and [M.M. Hafez](#), "Finite Element Viscous/Inviscid Interaction Procedures for the Solution of the Compressible Navier-

- Stokes Equations", 34<sup>th</sup> Annual General Meeting of the Canadian Aeronautics and Space Institute, Toronto, May 1987.
348. W.G. Habashi, "On the Solution of High-Speed Turbomachinery Flows by the Finite Element Method", Keynote Address, Aerodynamics Symposium on Computational Fluid Dynamics, 34<sup>th</sup> Annual General Meeting of the Canadian Aeronautics and Space Institute, Toronto, May 1987.
  349. W.G. Habashi, M.M. Hafez, S.M. Przybytkowski and M.F. Peeters, "Compressible Internal Flow Calculations by a Finite Element Method", AIAA Paper 87-0644, AIAA 25<sup>th</sup> Aerospace Sciences Conference, Reno, January 1987.
  350. W.G. Habashi, M.F. Peeters, G.J. Guèvremont and M.M. Hafez, "Finite Element Solutions of the Compressible Navier-Stokes Equations", Proceedings of the 3<sup>rd</sup> International Conference on Computational Methods and Experimental Measurements, Porto Carras, Greece, Springer-Verlag, pp. 151-163, September 1986.
  351. M.F. Peeters, W.G. Habashi and M.M. Hafez, "Finite Element Stream Function-Vorticity Solutions of 2-D Compressible Turbulent Flows", Proceedings of the 6<sup>th</sup> International Symposium on Finite Element Methods in Flow Problems, Antibes, France, INRIA, pp. 97-102, June 1986.
  352. W.G. Habashi, M.F. Peeters, G.J. Guèvremont and M.M. Hafez, "Finite Element Solutions of the Compressible Navier-Stokes Equations", Invited Paper in A Workshop on Computational Fluid Dynamics, University of California, Davis, June 17-18, 1986.
  353. W.G. Habashi, M.F. Peeters and L. McLean, "Calculation of Internal Viscous Flows", AIAA Paper 85-1124, AIAA/SAE/ASME 21<sup>st</sup> Joint Propulsion Conference, Monterey, July 1985.
  354. M.F. Peeters, W.G. Habashi and E.G. Dueck, "Finite Element Solutions of the Navier-Stokes Equations", Proceedings of the 4<sup>th</sup> International Conference on Numerical Methods in Laminar and Turbulent Flow, Swansea, U.K., Pineridge Press, pp. 433-444, July 1985.
  355. W.G. Habashi and M.M. Hafez, "Finite Element Calculation of Rotational Flows in Transonic and Supersonic Turbomachinery", Invited Paper in Symposium on Recent Advances in Computational Mechanics, ASME Applied Mechanics Conference, Albuquerque, NM, June 24-26, 1985.
  356. W.G. Habashi, P.L. Kotiuga and L.A. McLean, "Finite Element Simulation of Transonic Flows by Modified Potential and Stream Function Methods", Proceedings of the 2<sup>nd</sup> International Conference on Computational Methods and Experimental Methods, Aboard Queen Elizabeth II, New York to Southampton, Springer-Verlag, pp. 31-42, June 1984.
  357. M.M. Hafez, W.G. Habashi and P.L. Kotiuga, "Conservative Calculations of Non-Isentropic Transonic Flows", AIAA Paper 84-1182, AIAA/SAE/ASME 20<sup>TH</sup> Joint Propulsion Conference, Cincinnati, June 1984. [doi.org/10.2514/6.1984-1182](https://doi.org/10.2514/6.1984-1182)
  358. W.G. Habashi, M.M. Hafez and P.L. Kotiuga, "Finite Element Methods for Internal Flow Calculations", AIAA Paper 83-1404, AIAA/SAE/ASME 19<sup>th</sup> Joint Propulsion Conference, Seattle, June 1983.

359. [D.S. Breitman](#), [E.G. Dueck](#) and W.G. Habashi, "Finite Element Analysis of a Split-Flow Particle Separator", Proceedings of the 3<sup>rd</sup> International Conference on Numerical Methods in Laminar and Turbulent Flow, Seattle, Pineridge Press, pp. 477-488, August 1983.
360. W.G. Habashi and [M.M. Hafez](#), "Finite Element Stream Function Solutions for Transonic Turbomachinery Flows", AIAA Paper 82-1268, AIAA/SAE/ASME 18<sup>th</sup> Joint Propulsion Conference, Cleveland, June 1982.
361. W.G. Habashi and [M.M. Hafez](#), "The Finite Element Method in the Solution of Transonic Flows", Proceedings of the 4<sup>th</sup> International Conference for Mechanical Power Engineering, Cairo University, Egypt, Paper V-65, October 1982.
362. W.G. Habashi, "Recent Progress in the Application of Finite Element Methods to Transonic Flows", Invited Paper in Proceedings of the 10<sup>th</sup> IMACS World Congress on Systems Simulation and Scientific Computation, Montreal, August 1982.
363. W.G. Habashi and [M.M. Hafez](#), "Finite Element Method for Transonic Cascade Flows", AIAA Paper 81-1472, AIAA/SAE/ASME 17<sup>th</sup> Joint Propulsion Conference, Colorado Springs, July 1981. [doi.org/10.2514/3.8206](https://doi.org/10.2514/3.8206)
364. W.G. Habashi and [P.L. Kotiuga](#), "Finite Element Solution of Subsonic and Transonic Cascade Flows", Proceedings of the 2<sup>nd</sup> International Conference on Numerical Methods in Laminar and Turbulent Flow, Venice, Italy, Pineridge Press, pp. 1253-1265, July 1981.
365. W.G. Habashi and [P.L. Kotiuga](#), "Rebuttal of A Cubic Triangular Element with Local Continuity-An Application in Potential Flow, authored by E-R Wu", Letter to the Editors of the International Journal for Numerical Methods in Engineering, Pineridge Press, December 1981.
366. W.G. Habashi and [P.L. Kotiuga](#), "Numerical Turbomachinery", Proceedings of the 3<sup>rd</sup> International Conference for Mechanical Analysis of Transonic Power Engineering, Cairo University, Egypt, pp. VII, 3.1 to VII 3.11, September 1980.
367. W.G. Habashi, "Transonic Cascades by Finite Elements", ASME Century 2 Emerging Technology Conference, Aerospace Conference, San Francisco, August 1980.
368. W.G. Habashi, "Pseudo-Variational Methods in the Solution of Inviscid Subsonic Flows", Proceedings of the 6<sup>th</sup> Canadian Congress of Applied Mechanics, University of British Columbia, Vancouver, Canada, May 30-June 3, 1977. Volumes 1 & 2.
369. W.G. Habashi, "The Finite Element Method in Subsonic Aerodynamics", Proceedings of the Heat Transfer and Fluid Mechanics Institute, 25<sup>th</sup> Meeting, University of California, Davis, Calif., June 21-23, 1976.
370. W.G. Habashi, "Confined and Cascade Flows via a Finite Element Method", 1975-Concordia University-Internal Report, 33 pages, September 1975.
371. W.G. Habashi and [J.H.S. Lee](#), "Implosion in a Non-Uniform Medium", American Physical Society, Paper AD5, Session AD: Shock & Blast Waves-I, New Orleans, November 1970.