

Dr. Sinan Eyi
Professor
Aerospace Engineering
Middle East Technical University
Ankara, 06800 Turkey
e-mail: seyi@metu.edu.tr
Phone: (90)-(312) 210 4283, Fax: (90)-(312) 210 4250

Journals

1. Onay O. K., and Eyi.S., "Ablation Analyses of Optimized Nose-Tips for Hypersonic Vehicles", Journal of Thermophysics and Heat Transfer, Vol. 34, No 1, pp. 78-89, 2020.
<https://doi.org/10.2514/1.T5644>
2. Eyi, S., Hanquist, K. M. and Boyd, I. D., "Shape Optimization of Reentry Vehicles to Minimize Heat Loading", Journal of Thermophysics and Heat Transfer, Vol. 33, No 3, pp. 785-796, 2019.
<https://doi.org/10.2514/1.T5705>
3. Eyi, S., Hanquist, K. M. and Boyd, I. D., "Aerothermodynamic Design Optimization of Hypersonic Vehicles", Journal of Thermophysics and Heat Transfer, Vol. 33, No 2, pp. 392-406, 2019.
<https://doi.org/10.2514/1.T5523>
4. Rouzbar, R. and Eyi, S., "Reacting Flow Analysis of a Cavity-Based Scramjet Combustor Using a Jacobian-Free Newton-Krylov Method," The Aeronautical Journal, Vol. 122, No 1258, pp. 1884-1915, December 2018.
<https://doi.org/10.1017/aer.2018.110>
5. Eyi S. and Yumuşak M., "Aerothermodynamic Shape Optimization of Hypersonic Blunt Bodies," Engineering Optimization, Vol. 47, No 7, pp. 909-926, 2015.
<https://doi.org/10.1080/0305215X.2014.933822>
6. Eyi, S., "Convergence Error and Higher-Order Sensitivity Estimations," AIAA Journal, Vol. 50, No 10, pp. 2219-2234, October 2012.
<https://doi.org/10.2514/1.J051592>
7. Yumusak, M. and Eyi, S., "Design Optimization of Rocket Nozzles in Chemically Reacting Flows," Computers and Fluids, Vol. 65, pp. 25-34, July 2012.
<https://doi.org/10.1016/j.compfluid.2012.05.002>
8. Onur, Ö. and Eyi, S., "Effects of the Jacobian Evaluation on Newton's Solution of the Euler Equations," International Journal for Numerical Methods in Fluids, Vol. 49, pp. 211-231, 2005.
<https://doi.org/10.1002/fld.996>
9. Eyi, S. and Lee, K. D., "Inverse Design of Transonic Airfoils Using the Navier-Stokes Equations," Engineering Optimization, Vol. 28, No. 3, 1997, pp. 245-262.
<https://doi.org/10.1080/03052159708941134>
10. Eyi, S., Lee, K. D., Rogers, S. E. and Kwak, D., "High-Lift Design Optimization Using the Navier-Stokes Equations," Journal of Aircraft, Vol. 33, No. 3, pp. 499-504, May-June 1996.
<https://doi.org/10.2514/3.46972>
11. Eyi, S., Hager, J. O. and Lee, K. D., "Airfoil Design Using the Navier-Stokes Equations," Journal of Optimization Theory and Applications, Vol. 83, No. 3, pp. 447-461, December 1994.
<https://doi.org/10.1007/BF02207637>
12. Eyi, S. and Lee, K. D., "Effects of Sensitivity Derivatives on Aerodynamic Design Optimization," Inverse Problems in Science and Engineering, Vol. 2, pp. 213-225, 1995.
<https://doi.org/10.1080/174159796088027603>

13. Hager, J. O., Eyi, S. and Lee, K. D., "Two-Point Transonic Airfoil Design Using Optimization for Improved Off-Design Performance," Journal of Aircraft, Vol. 31, No. 5, pp. 1143-1147, September-October 1994.
<https://doi.org/10.2514/3.46624>
14. Lee, K. D. and Eyi, S., "Transonic Airfoil Design by Constrained Optimization," Journal of Aircraft, Vol. 30, No. 6, pp. 805-806, November-December 1993.
<https://doi.org/10.2514/3.46419>
15. Lee, K. D. and Eyi, S., "Aerodynamic Design Via Optimization", Journal of Aircraft, Vol. 29, No. 6, pp. 1012-1029, November-December 1992.
<https://doi.org/10.2514/3.46278>

Book Chapters

16. Gür, H. B. and Eyi, S. "Diffusion in Hypersonic Flows", (chapter 2), A Closer Look at the Diffusion Equation, Nova Sicience Publishers, Jordan Hristov, (Editor), October 2020, ISBN: 978-1-53618-330-6.

International Conferences

17. Akar, G. and Eyi, S., " Computational Modelling and Analysis of Porous Bleed Holes at Supersonic Speeds," AIAA Paper 2020-3721, AIAA Propulsion and Energy 2020 Forum, August 2020.
<https://doi.org/10.2514/6.2020-3721>
18. Onay, O., K. and Eyi, S., "Comparison of Fully Coupled and Decoupled Modeling Results of Graphite Ablation In Hypersonic Flows," AIAC Paper 2019-049, 10th Ankara International Aerospace Conference, ODTÜ, Ankara, Turkey, September 2019.
<http://aiac.ae.metu.edu.tr/paper.php?Paper=AIAC-2019-049>
19. Ünlü T., Atasoy, M. Dincer, E. and Eyi, S., "Integrated Shap Optimization of RAE-M2129 Inlet for Aerodynamic Performance and Reduced Radar Cross Section," AIAC Paper 2019-106, 10th Ankara International Aerospace Conference, ODTÜ, Ankara, Turkey, September 2019.
<http://aiac.ae.metu.edu.tr/paper.php?Paper=AIAC-2019-106>
20. Eyi, S., Hanquist, K. M. and Boyd. I. D., "Shape Optimization of Reentry Vehicles to Minimize Heat Loading", AIAA Paper 2019-0973, AIAA Science and Technology Forum and Exposition 2019, San Diego, California, 7-11 January 2019.
<https://doi.org/10.2514/6.2019-0973>
21. Kutkan H. and Eyi, S. "Aerothermodynamic Shape Optimization of Reentry Capsules Using DSMC and POD Methods", ICCFD10-105, Barcelona, Spain, 9-13 July 2018.
<http://www.iccfd.org/iccfd10/papers/ICCFD10-105-Paper.pdf>
22. Eyi, S., Hanquist, K. M. and Boyd. I. D., "Aerothermodynamic Design Optimization of Hypersonic Vehicles", AIAA Paper 2018-3108, 2018 Multidisciplinary Analysis and Optimization Conference, AIAA AVIATION Forum, Atlanta, Georgia USA, 25-29 June 2018.
<https://doi.org/10.2514/6.2018-3108>
23. Ozmen, E. and Eyi, S., "Multi Block and Parallel Computations of Rotor Fan Using Three Dimensional Euler Equations", AIAA Paper 2018-2902, 2018 Fluid Dynamics Conference, AIAA AVIATION Forum, Atlanta, Georgia USA, 25-29 June 2018.
<https://doi.org/10.2514/6.2018-2902>
24. Gür, H. B. and Eyi, S. "CFD Analyses of Hypersonic Flow Regimes with Stephan-Maxwell Diffusion Equation", AIAA Paper 2018-3711, 2018 Fluid Dynamics Conference, AIAA AVIATION Forum, Atlanta, Georgia USA, 25-29 June 2018.

- <https://doi.org/10.2514/6.2018-3711>
25. Onay, O. K and Eyi, S.. "Transient Thermochemical Erosion Modeling for Solid Propellant Rocket Motor Nozzles Including the Effect of Shape Change and Anisotropy", AIAA Paper 2018-3719, 2018 Fluid Dynamics Conference, AIAA AVIATION Forum, Atlanta, Georgia USA, 25-29 June 2018.
<https://doi.org/10.2514/6.2018-3719>
26. Kutkan H. and Eyi, S. "Aerothermodynamic Shape Optimization of Reentry Capsule", 2018 Joint Thermophysics and Heat Transfer Conference, AIAA Paper 2018-4071, AIAA AVIATION Forum, Atlanta, Georgia USA, 25-29 June 2018.
<https://doi.org/10.2514/6.2018-4071>
27. Gür, H. B. and Eyi, S. "CFD Analysis of Diffusion Phenomena in Hypersonic Flow Regimes", MS-445, 26th Annual Conference of the Computational Fluid Dynamics Society of Canada Winnipeg, Manitoba, Kanada 10-12 June, 2018.
<http://umanitoba.ca/engineering/conferences/CFD2018/>
28. Gür, H. B. and Eyi, S. "Diffusion Models Implementation in Hypersonic Flow Regimes", AIAC-2017-112, 9th Ankara International Aerospace Conference, Ankara, Turkey, 20-22 September, 2017.
<http://aiac.ae.metu.edu.tr/paper.php?Paper=AIAC-2017-112>
29. Yıldırım, A. and Eyi, S., "Three Dimensional Design Optimization Using Adjoint Method with Newton Krylov Solver," AIAA Paper 2016-4802, 52nd AIAA/SAE/ASEE Joint Propulsion Conference, Salt Lake City, Utah USA, 25-27 July 2016.
<https://doi.org/10.2514/6.2016-4802>
30. Özmen E. and Eyi, S., "Multi Block and Parallel Computations of Rotor Fan Using Three Dimensional Euler Equations," AIAC Paper 2017-089, 9th Ankara International Aerospace Conference, ODTÜ, Ankara, Turkey, September 2017.
<http://aiac.ae.metu.edu.tr/paper.php?Paper=AIAC-2017-089>
31. Özgün, M. and Eyi, S., "Three Dimensional Hypersonic Flow Analysis Around a Reentry Vehicle Using Navier-Stokes Equations," ICCFD9-2016-299. Istanbul, Turkey, 11-15 July 2016.
<http://iccfd9.itu.edu.tr/assets/pdf/papers/ICCFD9-2016-299.pdf>
32. Onay, O. K. and Eyi S., " Adjoint Shape Optimization of Hypersonic Blunt Bodies Including Graphite Ablation Effect," ICCFD9-2016-199. Istanbul, Turkey, 11-15 July 2016.
<http://iccfd9.itu.edu.tr/assets/pdf/papers/ICCFD9-2016-199.pdf>
33. Yıldırım, A. and Eyi, S., "Three Dimensional Design Optimization Using Adjoint Method," AIAA Paper 2016-3868, 34th AIAA Applied Aerodynamics Conference, Washington, D.C. USA, 3–17 June 2016.
<https://doi.org/10.2514/6.2016-3868>
34. Rouzbar, R. and Eyi, S., "Scramjet Combustor Flow Analysis Using Coupled Navier-Stokes and Finite Rate Chemical Equations," AIAA Paper 2016-4391, 46th AIAA Fluid Dynamics Conference, Washington, D.C., 13–17 June 2016.
<https://doi.org/10.2514/6.2016-4391>
35. Eyi S., ", Convergence Acceleration Based on Eigenvalue Analysis, AIAA Paper 2016-3975, 46th AIAA Fluid Dynamics Conference, Washington, D.C., 13–17 June 2016.
<https://doi.org/10.2514/6.2016-3975>
36. Özgün, M. and Eyi, S. "Hypersonic Flow Analysis of Re-entry Vehicles Using Three Dimensional Navier-Stokes Equations", AIAA Paper 2015-3881, 51st AIAA/SAE/ASEE Joint Propulsion Conference, Orlando, Florida, USA, 27-29 July 2015.
<https://doi.org/10.2514/6.2015-3881>
37. Gür, H. B. and Eyi, S. "Diffusion Effect on Hypersonic Flow Using Fick's Law", AIAA Paper 2015-3797, 13th International Energy Conversion Engineering Conference, Orlando, Florida, USA, 27-29 July 2015.

- <https://doi.org/10.2514/6.2015-3797>
38. Pişkin T. and Eyi, S. "Modelling Thermochemical Nonequilibrium during Atmospheric Re-Entry", AIAA Paper 2015-3978, 51st AIAA/SAE/ASEE Joint Propulsion Conference, Orlando, Florida, USA, 27-29 July 2015.
<https://doi.org/10.2514/6.2015-3978>
39. Rouzbar, R. and Eyi, S. "Simulations of Ethylene and Hydrogen Combustion in a Cavity-Based Scramjet Combustor" 51st AIAA/SAE/ASEE Joint Propulsion Conference, AIAA Paper 2015-3750, Orlando, Florida, USA, 27-29 July 2015.
<https://doi.org/10.2514/6.2015-3750>
40. Onay, O. K. and Eyi S., "Implicit Solution of One-Dimensional Transient Ablation", AIAA Paper 2015-3882, Propulsion and Energy Forum, 13th International Energy Conversion Engineering Conference, Orlando, Florida, USA, 27-29 July 2015.
<https://doi.org/10.2514/6.2015-3882>
41. Muslubaş, Y. E. and Eyi, S., "Analysis of Hypersonic Nozzles with Newton and Preconditioned Newton-GMRES", AIAA Paper 2015-3746, 51st AIAA/SAE/ASEE Joint Propulsion Conference, Orlando, Florida, USA, 27-29 July 2015.
<https://doi.org/10.2514/6.2015-3746>
42. Eyi S., "Convergence Acceleration Using Convergence Error Estimation", AIAA Paper 2015-2751, 22nd AIAA Computational Fluid Dynamics Conference, Dallas, Texas, USA, 22-26 June 2015.
<https://doi.org/10.2514/6.2015-2751>
43. Rouzbar, R. and Eyi, S. "Three Dimensional Flow Analysis of a Cavity-Based Scramjet Combustor", AIAA Paper 2015-3212, 22nd AIAA Computational Fluid Dynamics Conference, Dallas, Texas, USA, 22-26 June 2015.
<https://doi.org/10.2514/6.2015-3212>
44. Muslubaş, Y. E. and Eyi, S., "Performances of Newton and Preconditioned Newton-GMRES Methods in Hypersonic Flow Solutions", AIAA Paper 2015-2458, 22nd AIAA Computational Fluid Dynamics Conference, Dallas, Texas, USA, 22-26 June 2015.
<https://doi.org/10.2514/6.2015-2458>
45. Özgün M. and Eyi S., "Three Dimensional Analysis of Hypersonic Flow Around Re-entry Vehicles Using Navier-Stokes Equations," 7th International Conference on Recent Advances in Space Technologies, RAST 2015, İstanbul, Turkey, 16-19 June 2015.
46. Gür, H. B. and Eyi, S. "Diffusion Analysis in Hypersonic Flow", 7th International Conference on Recent Advances in Space Technologies, RAST 2015, İstanbul, Turkey, 16-19 June 2015.
47. Pişkin T. and Eyi S. "Analysis of Hypersonic Non-Equilibrium Reentries With Newton-GMRES Method," IPPW2015-3207, 12th International Planetary Probe Workshop, Cologne, Germany, 15-19 June 2015.
48. Rouzbar, R. and Eyi, S. "Cavity-Stabilized Scramjet Analysis Using Reduced Chemical Kinetic Mechanisms", IPPW2015-3214, 12th International Planetary Probe Workshop, Cologne, Germany, 15-19 June 2015.
49. Özgün M. and Eyi, S., "Analysis of Hypersonic Flow Around a Re-entry Vehicle Using Three Dimensional Navier-Stokes Equations", IPPW2015-3206, 12th International Planetary Probe Workshop, Cologne, Almanya, 15-19 June 2015.
50. Gür, H. B. and Eyi, S. "Analysis of Diffusion in Hypersonic Flow Regimes", IPPW2015-3204, 12th International Planetary Probe Workshop, Cologne, Germany, 15-19 June 2015.
51. Pişkin T. and Eyi, S. "Modelling Physical and Chemical Non-Equilibrium Flow at Hypersonic Speed," Paper No 132, 8th ICCHMT (International

- Conference on Computational Heat and Mass Transfer), İstanbul, Turkey, 25-28 May 2015.
52. Rouzbar, R. and Eyi, S. "Analysis of Hydrogen-Air Combustion in a Scramjet Combustion Chamber", Paper No 110, 8th ICCHMT (International Conference on Computational Heat and Mass Transfer), İstanbul, Turkey, 25-28 May 2015.
53. Gür, H. B. and Eyi, S. "Effects of Diffusion in Hypersonic Flow", Paper No 130, 8th ICCHMT (International Conference on Computational Heat and Mass Transfer), İstanbul, Turkey 25-28 May 2015.
54. Onay, O. K. and Eyi, S., "Comparison of Landau Transformation and Remeshing Technique for the Transient Solution of One Dimensional Non-Charring Ablation", Paper no 127, 8th ICCHMT (International Conference on Computational Heat and Mass Transfer), İstanbul, Turkey, 25-28 May 2015.
55. Özgün M. and Eyi, S., "Hypersonic Flow Analysis Using Three Dimensional Navier-Stokes Equations", Paper No 131, 8th ICCHMT (International Conference on Computational Heat and Mass Transfer), İstanbul, Turkey, 25-28 May 2015.
56. Pişkin T. and Eyi, S., "Adjoint Design Optimization of Hypersonic Blunt Bodies in Weakly Ionized Flow," AIAA Paper 2014-4022, 50th AIAA/ASME/SAE/ASEE Joint Propulsion Conference 2014, Cleveland, Ohio, USA, 28-30 July 2014.
<https://doi.org/10.2514/6.2014-4022>
57. Özgün, M. and Eyi, S., "Analysis of Hypersonic Flow Using Three Dimensional Navier-Stokes Equations," AIAA Paper 2014-3401, '50th AIAA/ASME/SAE/ASEE Joint Propulsion Conference 2014, Cleveland, Ohio, USA, 28-30 July 2014.
<https://doi.org/10.2514/6.2014-3401>
58. Düzel, U. and Eyi S., "Static Aeroelastic Analysis of Supersonic Nozzles and Performance Response," AIAA Paper 2014-3689, '50th AIAA/ASME/SAE/ASEE Joint Propulsion Conference 2014, Cleveland, Ohio, USA, 28-30 July 2014.
<https://doi.org/10.2514/6.2014-3689>
59. Yıldızlar B. and Eyi, S., "Analysis and Design Optimization of Three Dimensional Nozzles," AIAA Paper 2014-3688, 50th AIAA/ASME/SAE/ASEE Joint Propulsion Conference, Cleveland, Ohio, USA, 28-30 July 2014.
<https://doi.org/10.2514/6.2014-3688>
60. Düzel, U. and Eyi S., "Effects of Static Aeroelasticity on the Performance of Hypersonic Nozzles," AIAA Paper 2014-2770, 44th AIAA Fluid Dynamics Conference, AIAA Aviation and Aeronautics Forum and Exposition 2014, Atlanta, Georgia, USA, 16-20 June 2014.
<https://doi.org/10.2514/6.2014-2770>
61. Pişkin T. and Eyi, S. "Analysis and Design Optimization of Blunt Bodies in Weakly Ionized Hypersonic Flow," AIAA Paper 2014-3255, 32nd AIAA Applied Aerodynamics Conference, AIAA Aviation and Aeronautics Forum and Exposition 2014, Atlanta, Georgia, USA, 16-20 June 2014.
<https://doi.org/10.2514/6.2014-3255>
62. Yıldızlar B. and Eyi, S., "Comparison of Newton and Newton-GMRES Methods for Three Dimensional Hypersonic Nozzle Design," AIAA Paper 2014-3177, 32nd AIAA Applied Aerodynamics Conference, AIAA Aviation and Aeronautics Forum and Exposition 2014, Atlanta, Georgia, USA, 16-20 June 2014.
<https://doi.org/10.2514/6.2014-3177>
63. Eyi S., "Convergence Acceleration via Convergence Error Estimation," 8th International Conference on CFD, ICCFD8-2014-0226, Chengdu, China, 14-18 July, 2014.
<http://www.cardc.cn/UpFile/2/File/2016-01/16435673820.pdf>

64. Piskin T. and Eyi S., "Weakly Ionized Hypersonic Flow Analysis during Atmospheric Re-entry," 1st International Middle East Plasma Science (IMEPS), Belek, Antalya, Turkey, April 2014.
<http://imeps.org/weakly-ionized-hypersonic-flow-analysis-during-atmospheric-re-entry/>
65. Eyi S., "Aerothermodynamic Design Optimization in Hypersonic Flows," AIAA Paper 2013-3977, 49th AIAA/ASME/SAE/ASEE Joint Propulsion Conference, San Jose, California, USA, July 2013.
<https://doi.org/10.2514/6.2013-3977>
66. Eyi S. and Yumusak M., "Three Dimensional Rocket Nozzle Design Using Adjoint Method," AIAA Paper 2013-4086, 49th AIAA/ASME/SAE/ASEE Joint Propulsion Conference, San Jose, California, USA, July 2013.
<https://doi.org/10.2514/6.2013-4086>
67. Yumusak, M. and Eyi S., "Aerothermodynamic Shape Optimization of Hypersonic Blunt Bodies," AIAA Paper 2013-2693, 21st AIAA Computational Fluid Dynamics Conference, San Diego, California, USA, June 2013.
<https://doi.org/10.2514/6.2013-2693>
68. Eyi S. and Yumusak, M., 'Convergence Acceleration Based on Convergence Error Estimation,' AIAA Paper 2013-2701, 21st AIAA Computational Fluid Dynamics Conference, San Diego, California, USA, June 2013.
<https://doi.org/10.2514/6.2013-2701>
69. Eyi S. and Yumusak M., "Aerodynamic Design Optimization of Three Dimensional Rocket Nozzles Using Adjoint Method," AIAA Paper 2013-2851, 21st AIAA Computational Fluid Dynamics Conference, San Diego, California, USA, June 2013.
<https://doi.org/10.2514/6.2013-2851>
70. Eyi S. and Yumusak M., "Design Optimization in Hypersonic Flows," AIAA Paper 2012-5827, 18th AIAA/3AF International Space Planes and Hypersonic Systems and Technologies Conference, Tours, France, September 2012.
<https://doi.org/10.2514/6.2012-5827>
71. Eyi S., "Convergence Error Estimation and Convergence Acceleration in Iteratively Solved Problems," ICCFD7-1802, 7th International Conference on CFD (ICCFD7), Big Island, Hawaii, USA, 9-13 July 2012.
http://www.iccfd.org/iccfd7/assets/pdf/papers/ICCFD7-1802_paper.pdf
72. Eyi S., Ezertas A., Değirmenci M., and Yumusak M., "Three Dimensional Design Optimization Using Analytical and Numerical Jacobians," AIAA Paper 2011-3537, 20th AIAA Computational Fluid Dynamics Conference, Honolulu, Hawaii, USA, 27-30 June 2011.
<https://doi.org/10.2514/6.2011-3537>
73. Eyi S., "Finite-Difference Sensitivity Calculation in Iteratively Solved Problems," AIAA Paper 2011-3071," 20th AIAA Computational Fluid Dynamics Conference, Honolulu, Hawaii, USA, 27-30 June, 2011.
<https://doi.org/10.2514/6.2011-3071>
74. Yumusak M., and Eyi S. "Design Optimization in Chemically Reacting Flows," 20th AIAA Computational Fluid Dynamics Conference, AIAA Paper 2011-3538, Honolulu, Hawaii, USA, 27-30 June, 2011.
<https://doi.org/10.2514/6.2011-3538>
75. Eyi S. and Yumusak M., "Nozzle Optimization in Chemically Reacting Flows," CFD & Optimization an ECCOMAS Thematic Conference, Paper no 2011-011, Antalya, Turkey, 23-25 May 2011.
<http://eccomas.ae.metu.edu.tr/>
76. Ezertas A. and Eyi S., "Aerodynamic Design Optimization Using Analytical and Numerical Jacobians," CFD & Optimization an ECCOMAS Thematic Conference, Paper no 2011-037, Antalya, Turkey, 23-25 May 2011.
<http://eccomas.ae.metu.edu.tr/>
77. Ezertas A. and Eyi S., "Performance Evaluation of the Numerical Flux Jacobians in flow solution and Aerodynamic Design Optimization,"

- Proceedings of the 6th International Conference on CFD, St. Petersburg, Russia, 12-16 July 2010, pp. 241-246, Springer, 2011.
<https://www.springer.com/gp/book/9783642178832>
78. Eyi S., Ezertas A. and Yumusak M., "Design Optimization in Non-equilibrium Reacting Flows," Proceedings of the 6th International Conference on CFD, St Petersburg, Russia, 12-16 July 2010, pp. 247-252, Springer, 2011.
<https://www.springer.com/gp/book/9783642178832>
79. Ezertas A. and Eyi S., "Performances of Numerical and Analytical Jacobians in Flow and Sensitivity Analysis," AIAA-Paper 2009-4140, 19th AIAA Computational Fluid Dynamics Conference, San Antonio Texas, USA, 22-25 June 2009.
<https://doi.org/10.2514/6.2009-4140>
80. Yüceoğlu, U., Javanshir, J. and Eyi, S., "Free Vibrations Analysis of Integrally-Stiffened and/or Stepped-Thickness Plates or Panels with Two Side Stiffeners," AIAA Paper 2008-2011, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials conference, Schaumburg, IL, USA, April 2008.
<https://doi.org/10.2514/6.2008-2011>
81. Onur, Ö. and Eyi S., "Effects of the Jacobian Evaluation on Newton's Solution of the Euler Equations," AIAA-Paper 2005-4864, 17th AIAA Computational Fluid Dynamics Conference, Toronto, Ontario, Canada, 6-9 June, 2005.
<https://doi.org/10.2514/6.2005-4864>
82. Özhamam, M. and Eyi, S., "Inverse Design Of Turbomachinery Cascades," 16th International Symposium on Airbreathing Engines, ISABE-2003-1022, Cleveland, Ohio, USA, September, 2003.
83. Özhamam, M. and Eyi S., "Inverse Design of Compressor Cascades On Parallel Computers," 40th Aerospace Sciences Meeting & Exhibition, AIAA Paper 2002-0375, Reno, Nevada, USA, January, 2002.
<https://doi.org/10.2514/6.2002-375>
84. Kaplan, B. and Eyi S., "Inverse Design of Compressor Cascades," 39th Aerospace Sciences Meeting & Exhibition, AIAA Paper 2001-0387, Reno, Nevada, USA, January, 2001.
<https://doi.org/10.2514/6.2001-387>
85. Kocabıçak, E. and Eyi, S., "Sensitivity Analysis in Inverse Turbomachinery Blade Design," 8th AIAA/USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization, AIAA Paper 2000-4730, Long Beach, California, USA, September, 2000.
<https://doi.org/10.2514/6.2000-4730>
86. Eyi, S. and Lee, K. D., "Turbomachinery Blade Design Via Optimization," AIAA paper 2000-0740, 38th Aerospace Sciences Meeting & Exhibit, Reno, Nevada, USA, January 2000.
<https://doi.org/10.2514/6.2000-740>
87. Kaplan, B. and Eyi S., "Inverse Design of Turbomachinery Airfoils Using the Navier-Stokes Equations," 22nd International Council of the Aeronautical Sciences (ICAS) Congress, Paper 0513P, Harrogate, UK, August, 2000.
http://www.icas.org/ICAS_ARCHIVE/ICAS2000/PAPERS/ICA0513.PDF
88. Kocabıçak, E. and Eyi, S., "Effects of Sensitivity Analysis on Turbomachinery Blade Design," 36th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit, AIAA Paper 2000-3361, Huntsville, Alabama, USA, July, 2000.
<https://doi.org/10.2514/6.2000-3361>
89. Eyi, S. and Lee, K. D., Turbomachinery Blade Design Using the Navier-Stokes Equations. "ISABE 14th International Symposium on Air Breathing Engines", Paper 11, Florence, Italy, 1999.
90. Eyi, S. and Lee, K. D., "Effects of Sensitivity Analysis on Airfoil Design," AIAA Paper 98-0909, 36th AIAA Aerospace Sciences Meeting & Exhibit, Reno, Nevada, USA, January 1998.
<https://doi.org/10.2514/6.1998-909>

91. Eyi, S. and Lee, K. D., "Transonic Turbomachinery Blade Design Using Optimization," AIAA Paper 97-0159, 35th AIAA Aerospace Sciences Meeting & Exhibit, Reno, Nevada, USA, January 1997.
<https://doi.org/10.2514/6.1997-159>
92. Eyi, S., Damodaran, M. and Lee, K. D., "Inverse Design of Transonic Airfoils," Proceedings of 7th Asian Congress of Fluid Mechanics, pp. 275-278, Madras, India, December 1997.
93. Lee, K. D. and Eyi, S., "Aerodynamic Shape Optimization Based on High-Level Physics," ICAS-96-2.7.3, Proceedings of 20th Congress of the International Council of Aeronautical Sciences, pp. 1502-1512, Sorento, Italya, September 1996.
https://www.icas.org/ICAS_ARCHIVE/ICAS1996/A1.%20ICAS%201996%20Sorrento%20-%20proceedings%20content.pdf
94. Eyi, S. and Lee, K. D., "Efficiency Improvement of Sensitivity Evaluation for Aerodynamic Shape Optimization," AIAA Paper 96-2506, Proceedings of 14th Applied Aerodynamic Conference," pp. 1022-1031, New Orleans, Louisiana, USA, June 1996.
<https://doi.org/10.2514/6.1996-2506>
95. Eyi, S., Chand, K. K., Lee, K. D., Rogers, S. E. and Kwak, D., "Multi-Element High-Lift Design Using the Navier-Stokes Equations," AIAA Paper 96-1943, 27th Fluid Dynamics Conference, New Orleans, Louisiana, USA, June 1996.
<https://doi.org/10.2514/6.1996-1943>
96. Eyi, S. and Lee, K. D., "Effects of Sensitivity Analysis on Aerodynamic Design Optimization," Proceedings of International Mechanical Engineering Congress & Exposition (IMECE 95), ASME, pp. 1-8, San Francisco, California, USA, November 1995.
97. Eyi, S. and Lee, K. D., "Experiences in Aerodynamic Shape Optimization Using the Navier-Stokes Equations," Proceedings of International Conference on Scientific Computing and Modeling, pp. 72-76, Charleston Illinois, USA, October 1995.
98. Eyi, S. and Lee, K. D., "Experiences in Aerodynamic Shape Optimization Using the Navier-Stokes Equations," Sixth International Symposium on Computational Fluid Dynamics, Vol. 4, pp. 29-34, Lake Tahoe, Nevada, USA, September 1995.
99. Eyi, S., Lee, K. D., Rogers, S. E. and Kwak, D., "High-Lift Design Optimization Using the Navier-Stokes Equations," AIAA Paper 95-0477, 33rd AIAA Aerospace Sciences Meeting & Exhibit, Reno, Nevada, USA, January 1995.
<https://doi.org/10.2514/6.1995-477>
100. Eyi, S. and Lee, K. D., "Effects of Sensitivity Calculation on Navier-Stokes Design Optimization," AIAA Paper 94-0060, 32nd Aerospace Sciences Meeting & Exhibit, Reno, Nevada, USA, January 1994.
<https://doi.org/10.2514/6.1994-60>
101. Hager, J. O., Eyi, S., and Lee, K. D., "Design Efficiency Evaluation for Transonic Airfoil Optimization: A Case for Navier-Stokes Design," AIAA Paper 93-3112, 24th AIAA Fluid Dynamics Conference, Orlando, Florida, USA, July 1993.
<https://doi.org/10.2514/6.1993-3112>
102. Eyi, S. and Lee, K. D., "Inverse Airfoil Design Using the Navier-Stokes Equations," AIAA Paper 93-0972, 2nd Annual Aerospace Design Conference, Irvine, California, USA, February, 1993.
<https://doi.org/10.2514/6.1993-972>
103. Eyi, S., Hager, J. O. and Lee, K. D., "Airfoil Design Using the Navier-Stokes Equations," AIAA Paper 93-0648, 31st AIAA Aerospace Sciences Meeting & Exhibit, Reno, Nevada, USA, January 1993.
<https://doi.org/10.2514/6.1993-648>

104. Hager, J. O., Eyi, S. and Lee, K. D., "Multi-Point Design of Transonic Airfoils Using Optimization," AIAA Paper 92-4225, AIAA Aircraft Design Systems Meeting, Hilton Head, South Carolina, USA, August 1992.
<https://doi.org/10.2514/6.1992-4225>
105. Hager, J. O., Eyi, S. and Lee, K. D., "A Multi-Point Optimization for Transonic Airfoil Design," AIAA Paper 92-4681, Proceedings of 4th AIAA/USAF/NASA/OAI Symposium on Multidisciplinary Analysis and Optimization, Vol. 1, pp. 13-20, Cleveland, Ohio, USA, September 1992.
<https://doi.org/10.2514/6.1992-4681>
106. Lee, K. D. and Eyi, S., "Transonic Airfoil Design by Constrained Optimization," AIAA Paper 91-3287, Proceedings of AIAA 9th Applied Aerodynamic Conference, Vol. 2, pp. 677-687, Baltimore, Maryland, USA, September 1991.
<https://doi.org/10.2514/6.1991-3287>
107. Lee, K. D. and Eyi, S., "Design Optimization of Transonic Airfoils," Proceedings of 3rd Air Force/NASA Symposium on Recent Advances in Multidisciplinary Analysis and Optimization, San Francisco, California, USA, September 1990.
108. Lee, K. D. and Eyi, S., "Aerodynamic Design via Optimization," ICAS 90-6.9.1, Proceedings of 17th Congress of the International Council of Aeronautical Sciences, Vol. 2, pp. 1808-1818, Stockholm, Sweden, September 1990.
http://www.icas.org/ICAS_ARCHIVE/ICAS1990/ICAS-90-6.9.1.pdf

Theses

109. Eyi, S., "Performance Evaluation and Improvements of CFD-Based Aerodynamic Design optimization," Ph.D Thesis, University of Illinois at Urbana Champaign, USA, 1995.
<https://www.ideals.illinois.edu/handle/2142/21001>
110. Eyi, S., "A Simultaneous Inviscid/Viscous Coupling Approach for Transonic Flows," Ms. Thesis, University of Illinois at Urbana Champaign, USA, 1989.

International Posters

111. Eyi, S., Design Optimization of Reentry Vehicles and Rocket's Propulsion Systems,' Let's Embrace Space, Roma, Italy, September 2014.

National Journals

112. Özgün, M. and Eyi, S., Atmosferik Geçiş Yapan Araç Etrafında Navier-Stokes Denklemleri İle Üç Boyutlu Hipersonik Akiş Analizi,' Havacılık ve Uzay Teknolojileri Dergisi, Vol. 7, No. 2, pp. 71-77, July 2014.
<http://www.jast.hho.edu.tr/JAST/index.php/JAST/article/view/78>

National conferences

113. Akar, G. and Eyi, S., "Gözenekli Tahliye Sistemlerinin Ses-üstü Hızlarda Hesaplama Akışkanlar Dinamiği ile Analizleri", UHUK-2018-053, VII. Ulusal Havacılık Ve Uzay Konferansı, Ondokuz Mayıs Üniversitesi, Samsun, Turkey, 12-14 September 2018.
<http://www.uhuk.org.tr/bildiri.php?No=UHUK-2018-053>
114. Can, M., Atak, B., Kayabaşı İ. and Eyi, S. "Su Altı Araçları için Düzlemsel Hareket Mekanizması Testinin Sayısal Olarak Modellenmesi", UHUK-2014-103, (IV Ulusal Havacılık ve Uzay Konferansı), Erciyes Üniversitesi, Kayseri, Turkey, 8-10 September 2014.
<http://uhuk.org.tr/bildiri.php?No=UHUK-2014-103>

115. Yıldızlar, B. and Eyi, S., "3 Boyutlu Süpersonik Lüle Tasarımında Newton-GMRES Yöntemi ile Newton Yönteminin Karşılaştırılması", HITEK 2014, III. Ulusal Havacılıkta İleri Teknolojiler Konfernsı, İstanbul, Turkey, 18-20 June 2014.
116. Özgün, M. and Eyi, S., "Navier-Stokes Denklemleri Kullanılarak Üç Boyutlu Hipersonik Akış Analizinin Yapılması," HITEK 2014, III. Ulusal Havacılıkta İleri Teknolojiler Konfernsı, İstanbul, Turkey, 18-20 June 2014.
117. Özgün, M. and Eyi, S., "Re-entry Aracı Üzerinde Navier-Stokes Denklemleri ile Üç Boyutlu Hipersonik Akış Analizinin Yapılması," UHUK-2014-055, IV Ulusal Havacılık ve Uzay Konferansı, Erciyes Üniversitesi, Kayseri, Turkey, 8-10 September 2014.
118. Ezertas A. and Eyi S., "Sayısal ve Analitik Jacobian Kullanarak Duyarlılık Analizi", HASEM 2008 Kayseri VII. Havacılık Sempozyumu, Kayseri, Turkey, pp. 231-236, 15-16 May 2008.
119. Onur, Ö and Eyi, S. "Jacobian Değerlendirilmesinin Euler Deklemlerinin Newton Çözümlerine Etkisi," HASEM 2006, Kayseri 6. Havacılık Sempozyumu, Kayseri, Turkey, pp. 613-626, 2006.