

## REFERENCES

- [1] Mason W. H. (2006). Configuration Aerodynamics, *Virginia Tech Blacksburg, VA*.
- [2] Pamadi B. N. (1998). Performance, Stability, Dynamics and Control of Airplanes, *AIAA Education Series, Reston, VA* 20191.
- [3] Anderson J. D. (2001). Fundamentals of Aerodynamics, third edition, McGraw Hill Higher Education, ASBN 0-07-237335-0, 2001.
- [4] Busemann A. (1935). Aerodynamic Lift at Supersonic speeds, *12th edu. LIFFFARFORCHUNG*. PP 210-220.
- [5] Lighthill M. J. (1944). A note on supersonic biplane, *British A.R.C. R & M*. No. 2002, 1944, p. 294-8.
- [6] Moeckel W. E. (1947). Theoretical Aerodynamics Coefficient for the Two-Dimensional Multi-planes in Supersonic Biplane. *Tech Rep. 1316 NACA*.
- [7] Ferri A. (1947). Elements of Aerodynamics in Supersonic Flow. *The Macmillan Company, Edition Dover Publication Inc. NEW YORK*.
- [8] Licher R. M. (1955). Optimized two-dimensional multiplanes in supersonic flow. *Report No. SM-18688, Douglass Aircraft Co*.
- [9] Kusunose K. (2004). A New Concept in the Development of Boomless Supersonic Transport. Proc. *First International Conference on Flow Dynamics, Sendai, Japan*.
- [10] Kusenose K, Matsusima K., Goto Y., Yamashita H., Yonezawa M., Maruyama D., & Nakuno T. (2006). Fundamental Study for the Development of Boomless Supersonic Transport Aircraft. In *44th AIAA Aerospace Sciences Meeting and Exhibit AIAA* (pp-654).

- [11] Maruyama D., Matsushima K., Kusunose K., & Nakahashi K. (2006) Aerodynamic Design of Biplane Airfoil for Low Wave Drag Supersonic Flight. *In 24<sup>th</sup> Applied Aerodynamic Conference, San Francisco California* (pp-3323).
- [12] Matsushima K., Kusunose K., Maruyama D., & Matsuzawa T. (2006). Numerical Design and Assessment of a biplane as future supersonic transport. *In Proceeding of the 25<sup>th</sup> ICAS congress, ICAS* (pp. 1-10).
- [13] Yamashita H., Yonezawa M., Obayashi S., & Kusunose K. (2007). A study of Busemann type biplane for avoiding choked flow. *In 45<sup>th</sup> AIAA Aerospace Sciences meeting and exhibit AIAA.* (pp. 688).
- [14] Maruyama D., Matsuzawa T., Kusunose K., Matsushima K., & Nakahashi K. (2007). Considering at Off-Design Condition of Supersonic Flow around Biplane airfoil. *In 45<sup>th</sup> AIAA Aerospace Sciences meeting and exhibit AIAA* (pp. 687).
- [15] Kurutani N., Ogawa T., Yamashita H., & Obayashi S. (2007). Experimental and Computational Fluid Dynamics around supersonic biplane for sonic boom reduction. *In 13<sup>th</sup> AIAA/CEAS Aero-acoustics Conference (28<sup>th</sup> AIAA Aero-acoustics Conference).* (pp. 3674).
- [16] Yonezawa M., Yamashita H., & Obayashi S. (2007). Investigation of supersonic wing shape using Busemann Biplane Airfoil, *AIAA.* (pp. 0686).
- [17] Maruyama D. (2008). Aerodynamic Design of three dimensional Biplane wings for low wave drag supersonic flight. *26<sup>th</sup> International congress of the Aeronautical Sciences, ICAS.*
- [18] Kashitani M., Yamaguchi Y., Kai Y., & Hitara K. (2008). Preliminary Study on Lift Coefficient of Biplane airfoil in Smoke Tunnel. *In 45<sup>th</sup> AIAA Aerospace Sciences meeting and exhibit AIAA* (pp. 349).

- [19] Yonezawa M., & Obayashi S. (2009). Reducing Drag penalty in the three-dimensional supersonic biplane. *Proceedings of the Institute of Mechanical Engineers, Part-G: Journal of Aerospace Engineering*, 223:891.
- [20] Utsumi Y., & Obayashi S. (2010). Design of Supersonic Aircraft Concerning Sonic Boom Minimization. *AIAA Paper, AIAA*, 4962.
- [21] Yamashita H., & Obayashi S. (2010). Global variation of Sonic boom Intensity due to Seasonal Atmospheric Gradients. *AIAA Paper, AIAA*, 1389.
- [22] Utsumi Y. (2010). Multidisciplinary Design Optimization of a Three-Dimensional Supersonic Biplane based on Method of Characteristics. *27<sup>th</sup> International Congress of the Aeronautical Sciences, ICAS*.
- [23] Kawazoe H., Abe S., Matsuno T., Yamade G., & Obayashi S. (2010). Low Speed Aerodynamic Characteristics of a Busemann type silent Supersonic Biplane. *27<sup>th</sup> International Congress of the Aeronautical Sciences, ICAS*.
- [24] Matsushima K., Maruyama D., Kusunose K., & Noguchi R. (2010). Extension of Busemann Biplane theory to Three-dimensional wing fuselage configurations. *27<sup>th</sup> International Congress of the Aeronautical Sciences, ICAS*.
- [25] Maruyama D., Kusunose K., Matsushima K., & Nakahashi K. (2011). Aerodynamic Analysis and Design of Busemann Biplane: Towards efficient supersonic flight. *Proceedings of the Institute of Mechanical Engineers, Part-G: Journal of Aerospace Engineering*. 226:217.
- [26] Hui R., Ajameson R., & Wang Q. (2011). Adjoint based Aerodynamic Optimization of Supersonic Biplane Airfoils. *AIAA Paper, AIAA*. 1248.
- [27] Rai H. (2009). Supersonic Biplane Design VIA Adjoint Method. *A dissertation for the Degree of Doctorial of Philosophy. Stanford University, USA*.
- [28] Yamashita H., Fujisono T., Toyoda A., Nagai H., Asai K., Jeong S., & Obayashi S. (2013). Aerodynamic Characteristics and Effect of Winglets of the

Boomless Tapered Supersonic Biplane during the Staring Process. *Trans. JSASS Aerospace Tech. Japan*. Volume 11 (pp. 17-26).

[29] Yamashita H., Kurutani N., Yonezawa M., Ogawa T., Nagai H., Asai K., & Obayashi S. (2013). Wind Tunnel Testing on Start/Unstart Characteristics of Finite Supersonic Biplane Wing. *International Journal of Aerospace Engineering*. Article ID 231434, 10 pages.

[30] Lynch T. (1982). Commercial Transports- Aerodynamic Design for Cruise Performance Efficiency. *Progress in Astronautics and Aeronautics*. New York AIAA. 81. (pp. 91-144).

[31] Igra D., & Arad E. A Parametric Study of the Busemann Biplane Phenomenon Shock Waves 16(33). (pp. 269-273).

[32] Tan H. S. (1960). The Aerodynamics of Supersonic Biplanes of Finite Span. Tech Rep. WADC. (pp. 52-576).

[33] Kusunose K., Matsushima K., & Maruyama D. (2011). Supersonic Biplane – A review. Progress on Aerospace sciences. *JAXA, University of Toyama, Japan*. 47. (pp. 53-87).

[34] Kusunose K., Matsushima K., Obayashi S., Furukawa T., Kurutani N., & Gota Y. (2007). Aerodynamic design of supersonic biplane, cutting edge and related topics. *The 21<sup>st</sup> century COE Program. International COE of flow dynamics lecture series, Sedai: Tohoku University Press*. 5.

[35] Liepmann H. W., & Roshiko A. (1957). Elements of Gas Dynamics. *New York: John Wiley & Sons, Inc.* 389 (pp. 107-123).

[36] Maruyama D., Matsushima K., Kusunose K., & Nakashi K. (2006). Aerodynamic design of biplane airfoils for low wave drags supersonic flight. *In: Proceedings of 24<sup>th</sup> AIAA applied aerodynamics conference, AIAA Paper, AIAA*. 3323.

- [37] Yamashita H., Obayashi S., & Kusunose K. (2009). Reduction of drag penalty by means of plain flaps in boomless Busemann biplane. *International Journal of Emerging. Multidisciplinary Fluid Science*, 2, 141-64.
- [38] Yamashita H., & Obayashi S. (2010). Sonic boom variability due to homogeneous atmospheric turbulence. *Journal of Aircraft*, 46(6), 1886-93.
- [39] Ferri A. (1944). Experiments at supersonic speed on a biplane of the Busemann type. *Translated by M. Flint, British R.T.P. Translation, No 1407, Ministry of Aircraft Production*, (pp. 1-40).
- [40] Pawlowski J.W., Graham D.H., & Boccadoro C.H. (2005). Origins and Overview of the Shaped Sonic boom Demonstration Program. *In 43<sup>rd</sup> AIAA Aerospace Sciences Meeting and Exhibit AIAA*. 5.
- [41] Xiaoqiang F., Zhanke LI., & Bifeng S. (2013). Research of low boom and low drag supersonic aircraft design, *Chinese Journal of Aeronautics*, S1000-9361(14)00074. (pp. 0-19).
- [42] Noguchi R., Maruyama D., Matsushima K., & Nakahashi K. (2008). Study of the aerodynamic center and aerodynamic characteristics of supersonic biplanes in a wide Mach number range. *In: Proceedings of the 22nd CFD symposium by the Japan Society of Fluid Mechanics*, B6-1, (pp. 1-7).
- [43] Noguchi R. (2010). Study of aerodynamic center and low boom for realization of the next generation supersonic transport. *Thesis for the degree of Master of Sciences (Aerospace Sciences), Department of Aerospace Engineering, Tohoku University*.
- [44] Blazak K. (2005). Computational Fluid Dynamics: Principles and Applications, second edition, *Elsevier, ISBN-13:978-0-08-044506-9*.

- [45] Tannehill J. C., Anderson D. A., & Pletcher R. H. (1997). *Computational Fluid Mechanics and Heat Transfer*. Taylor & Francis, QA901.A53, ISBN 1-56032-046-X.
- [46] Anderson J. D. (2009). *Computational Fluid Dynamics, The Basics with Application*. McGraw Hill, Inc, ISBN -0-07-001685-2.
- [47] Versteeg H., & Malalasekera W. (2009). *An Introduction to Computation Fluid Dynamics: The Finite Volume Method*. Second Edition, Dorling Kinderslet Publication, ISBN 978-81-317-2048-6.
- [48] Ansys Fluent. (2011) Theory Guide. ANSYS, Inc. Release 14.0.
- [49] Nakahashi K., Ito Y., & Togashi F. (2003). Some challenge of realistic flow simulations by unstructured grid CFD. *International Journal of Numerical Methods in Fluids*, 43 (pp. 769-83).
- [50] Pulliam T. H., & Stenger J. L. (1985). Recent improvements in efficiency accuracy and convergence for implicit approximate factorization algorithms. *In AIAA 23<sup>rd</sup> Aerospace Science Meeting. Reno. AIAA*, 85-360.
- [51] Nakahashi K., Ito Y., & Togashi F. (2003). Some challenge of realistic flow simulations by unstructured grid CFD. *International Journal for Numerical Methods in Fluids*, 43, (pp. 769–83).
- [52] Jameson A., & Caughey D. (1977). A finite volume method for transonic potential flow calculations. *In AIAA 3<sup>rd</sup> Computational Fluid Dynamics Conference, Albuquerque*, (pp. 35-54).
- [53] Younis M. Y., Sohail M. A., Rakman T., Zaka M., & Bakaul S. R. (2011). Applications of AUSM+ Scheme on Subsonic, Supersonic and Hypersonic Flows Fields. *International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering*, 5(1).

- [54] Suthisak P. (2015). Multidimensional Dissipation Technique for an AUSM Scheme on Triangular Grids. *Transactions of the Canadian Society for Mechanical Engineering*, 39(2).
- [55] Senatian D., Philippe D., Paulo E., & Philippe G. (2002). Development and application of Spalart–Allmaras one equation turbulence model to three-dimensional supersonic Complex configurations. *Aerospace Science and Technology*, 6 (pp. 171–183).
- [56] Spalart P. R., & Allmaras SRA. (1992). One-equation turbulent model for aerodynamic flows. *AIAA Paper*, AIAA, 92 (pp. 0439).
- [57] William W.L., George H., & Tsan-hsing S. (2000). Turbulence model assessment for shock wave/turbulent boundary-layer interaction in transonic and supersonic flows. *Computers & Fluids*, 29, 275±299.
- [58] Guohua T.U., Xiaogang D., & Meiliang M. (2012). Assessment of Two Turbulence Models and Some Compressibility Corrections for Hypersonic Compression Corners by High-order Difference Schemes. *Chinese Journal of Aeronautics*, 25, (pp. 25-32).
- [59] Zhang Q., & Yangyong. (2013). A new simpler rotation/curvature correction method for Spalart–Allmaras turbulence model. *Chinese Journal of Aeronautics*, 26(2), (pp. 326–333).
- [60] Mengsing L., & Steffen C. J. (1993). A New Flux Splitting Scheme. *Journal of Computational Physics*, 107, (pp. 23-39).
- [60] Murman E. M., & Cole J. D. (1971). Calculation of plane steady transonic flows. *AIAA Journal*, 9, (pp. 114 – 121).
- [61] Jameson A. (1974). Iterative solution of Transonic Flows over airfoil and wings. *Comm. Appl. Math*, 27, (pp. 283-309).

- [62] Ito Y., & Nakahashi K. (2002). Surface triangulation for polygonal models based on CFD data. *International Journal for Numerical Methods in Fluids*, 39(1), (pp. 75–96).
- [63] Van Wie DM., Kwok F.T., & Walsh R.F. (1996). Starting characteristics of supersonic inlets. In: *32nd AIAA/ASME/SAE/ASEE joint propulsion conference, AIAA*, 96, (pp. 2914).
- [64] Lomax H., & Sluder L. (1958). A method for the calculation of wave drag on supersonic edge wing and biplane. *NACA-TN no. 4232*.
- [65] Busenell DM. (2004). Shock wave drag reduction. *Annual Review of Fluid Mechanics*, 36, (pp. 81–96).
- [66] Kulfan RM. (1990). Application of favorable aerodynamic interference to supersonic airplane design. *SAE Technical Paper Series*, 901988, (pp. 1–19).
- [67] Taylor RM. (1983). Variable wing position supersonic biplane. *US Patent 4,405,102, US Navy*.
- [68] Ito T., & Nakahashi K. (2002). Surface triangulation for polygonal models based on CFD data. *International Journal for Numerical Methods in Fluids*, 39(1), (pp. 75-79).