## References

<sup>1</sup>The Random House College Dictionary, Rev. ed., Random House, New York, 1975.

<sup>2</sup>NOAA, NASA, and USAF, "U.S. Standard Atmosphere, 1976," U.S. Government Printing Office, Washington, DC, Oct. 1976.

<sup>3</sup>"1989 AIAA/General Dynamics Corporation, Team Aircraft Design Competition, Engine Data Package," Director of Student Programs, AIAA, Washington, DC, 1988.

<sup>4</sup>Oates, G. C. (ed.), Aerothermodynamics of Gas Turbine and Rocket Propulsion, third ed., AIAA Education Series, AIAA, Reston, VA, 1997.

5"2000 Is (Nearly) Now," Air Force Magazine, Feb. 1987, pp. 52-63.

6"Squeezing More Power from Turbine Engines," *Machine Design*, 10 March, 1988, pp. 44-60.

<sup>7</sup>Mattingly, J. D., "Improved Methodology for Teaching Aircraft Gas Turbine Engine Analysis and Performance," 1992 ASEE Annual Conference Proceedings, Vol. 1, ASEE, Washington, DC, 1992, pp. 240–247.

<sup>8</sup>Nicolai, L. M., Fundamentals of Aircraft Designs, METS, San Jose, CA, 1975.

<sup>9</sup>Raymer, D. P., *Aircraft Design: A Conceptual Approach*, fourth ed., AIAA Education Series, AIAA, Reston, VA, 2006.

<sup>10</sup>Hale, F. J., Introduction to Aircraft Performance, Selection and Design, Wiley, New York, 1984.

<sup>11</sup>Anderson, J. D., *Introduction to Flight*, 3rd ed., McGraw-Hill, New York, 1989.

<sup>12</sup>Mattingly, J. D., Heiser, W. H., and Pratt, D. T., *Aircraft Engine Design*, second ed., AIAA Education Series, AIAA, Reston, VA, 2002.

<sup>13</sup>Heiser, W. H., and Pratt, D. T., *Hypersonic Airbreathing Propulsion*, AIAA Education Series, AIAA, Washington, DC, 1994.

<sup>14</sup>Penner, S. S., *Chemistry Problems in Jet Propulsion*, Pergamon Press, London, 1957.

<sup>15</sup>Keenan, J. H., and Kaye, J., Gas Tables, Wiley, New York, 1948.

<sup>16</sup>McKinney, J. S., "Simulation of Turbofan Engine (SMOTE)," AFAPL-TR-67-125, Air Force Aero Propulsion Laboratory, Wright-Patterson AFB, OH, Nov. 1967.

<sup>17</sup>Pratt, D. T. and Heiser, W. H., "Isolator-Combustor Interaction in a Dual-mode Scramjet Engine," AIAA Paper 93-0358, 1993.

<sup>18</sup>Gordon, S., and McBride, B., "Computer Program for Calculation of Complex Chemical Equilibrium Compositions," NASA SP-273, 1971.

<sup>19</sup>Sutton, G. P., Rocket Propulsion Elements, 6th ed., Wiley, New York, 1992. <sup>20</sup>Summerfield, M., Foster, C. R., and Swan, W. C., "Flow Separation in

Overexpanded Supersonic Exhaust Nozzles," Jet Propulsion, Vol. 24, Sept. – Oct. 1954, pp. 319–321.

<sup>21</sup>Kubota, N. "Survey of Rocket Propellant and their Combustion Characteristics," Fundamentals of Solid-Propellant Combustion, Vol. 90, Progress in Astronautics and Aeronautics, AIAA, New York, 1984.

<sup>22</sup>Hill, P. G., and Peterson, C. R., Mechanics and Thermodynamics of Propulsion, 2nd ed., Addison-Wesley, Reading, MA, 1992.

<sup>23</sup>Haven, B. A., and Wood, C. W., "The Rocket Laboratory in the USAF Aero-Propulsion Curriculum," AIAA Paper 93-2054, 1993.

<sup>24</sup>Ferri, A., and Naucci, L. M., "Preliminary Investigation of a New Type of Supersonic Inlet," NACA Rept. 1104, 1953.

<sup>25</sup>Wyatt, D. D., "Aerodynamic Forces Associated with Inlets of Turbojet

Installations," Aero Engr. Review., Oct. 1951.

<sup>26</sup>Sibulkin, M., "Theoretical and Experimental Investigation of Additive Drag," NACA Rept. 1187, 1954.

<sup>27</sup>"Definition of the Thrust of a Jet Engine and Internal Drag...," Journal of the Royal Society, Aug. 1955, pp. 517-526.

<sup>28</sup>Kerrebrock, J. L., Aircraft Engines and Gas Turbines, second ed., MIT Press, Cambridge, MA, 1992.

<sup>29</sup>Cohen, H., Rogers, G. F. C., and Saravanamuttoo, H. I. H., Gas Turbine Theory, Wiley, New York, 1972.

<sup>30</sup>"Gas Turbine Engine Performance Station Identification and Nomenclature," Aerospace Recommended Practice (ARP) 755A, Society of Automotive Engineers, Warrendale, PA, 1974.

<sup>31</sup>Heiser, W. H., and Pratt, D. T., "Thermodynamic Cycle Analysis of Pulse Detonation Engines," Journal of Propulsion and Power, Vol. 18, No. 1, Jan.-Feb. 2002.

<sup>32</sup>Kailasanath, K., "Applications of Detonations to Propulsion: A Review," AIAA Paper 99-1067, 1999.

<sup>33</sup>Strehlow, R. A., Combustion Fundamentals, McGraw-Hill, New York, 1984.

<sup>34</sup>Shapiro, A. H., The Dynamics and Thermodynamics of Compressible Fluid Flow, Vol. 1, Ronald, New York, 1953.

<sup>35</sup>Pratt, D. T., Humphrey, J. W., and Glenn, D. E., "Morphology of Standing Oblique Detonation Waves," Journal of Propulsion and Power, Vol. 7, No. 5, 1991.

<sup>36</sup>Model Specification for Engines, Aircraft, Turboiet, MIL-SPEC MIL-E-5008B, U.S. Dept. of Defense, Jan. 1959.

<sup>37</sup>Dixon, S. L., *Thermodynamics of Turbomachinery*, 3rd ed., Pergamon Press, Elmsford, NY, 1978.

<sup>38</sup>Oates, G. C. (ed.), Aerothermodynamics of Aircraft Engine Components, AIAA Education Series, AIAA, Washington, DC, 1985.

<sup>39</sup>Horlock, J. H., Axial Flow Compressors, Krieger, Melbourne, FL, 1973.

<sup>40</sup>Horlock, J. H., Axial Flow Turbines, Krieger, Melbourne, FL, 1973.

<sup>41</sup>Johnsen, I. A., and Bullock, R. O. (eds.), *Aerodynamic Design of Axial-Flow Compressors*, NASA SP-36, 1965.

<sup>42</sup>Glassman, A. J. (ed.), Turbine Design and Application, Vols. 1-3, NASA

SP-290, 1972.

<sup>43</sup>Wilson, D. G., *The Design of High-Efficiency Turbomachinery and Gas Turbines*, MIT Press, Cambridge, MA, 1984.

<sup>44</sup>Sorensen, H. A., Gas Turbines, Ronald, New York, 1951.

<sup>45</sup>Hess, W. J., and Mumford, N. V., *Jet Propulsion for Aerospace Applications*, 2nd ed., Pitman, New York, 1964.

<sup>46</sup>Bathie, W. W., Fundamentals of Gas Turbines, Wiley, New York, 1972.

<sup>47</sup>Treager, I. E., Aircraft Gas Turbine Engine Technology, 2nd ed., McGraw-Hill, New York, 1979.

<sup>48</sup>Glauert, H., *The Elements of Aerofoil and Airscrew Theory*, 3rd ed., Cambridge Univ. Press, Cambridge, UK, 1959.

<sup>49</sup>Theodorsen, T., *Theory of Propellers*, McGraw-Hill, New York, 1948.

<sup>50</sup>Theodorsen, T., "Theory of Static Propellers and Helicopter Rotors," Paper 326, 25th Annual Forum, American Helicopter Society, Alexandria, VA, May 1969.

<sup>51</sup>Abbott, I. H., and Von Doenhoff, A. E., *Theory of Wing Sections*, Dover, New York, 1959.

<sup>52</sup>Nikkanen, J. P., and Brooky, J. D., "Single Stage Evaluation of Highly Loaded High Mach Number Compressor Stages V," NASA CR 120887 (PWA-4312), March 1972.

<sup>53</sup>Zweifel, O., "The Spacing of Turbomachinery Blading, Especially with Large Angular Deflection," *Brown Boveri Review*, Vol. 32, 1945, p. 12.

<sup>54</sup>Seddon, J., and Goldsmith, E. L., *Intake Aerodynamics*, second ed., AIAA Education Series, AIAA, New York, 1999.

<sup>55</sup>Goldsmith, E. L., and Seddon, J., Practical Intake Aerodynamic Design, AIAA Education Series, AIAA, 1993.

<sup>56</sup>Younghans, J., "Engine Inlet Systems and Integration with Airframe," lecture notes for aero propulsion short course, Univ. of Tennessee Space Institute, Tullahoma, TN, 1980.

<sup>57</sup>McCloy, R. W., *The Fundamentals of Supersonic Propulsion*, Publ. D6A-10380-1, Supersonic Propulsion Test Group, Boeing, Seattle, WA, May 1968.

<sup>58</sup>Kline, S. J., "On the Nature of Stall," *Journal of Basic Engineering*, Vol. 81, Series D, No. 3, Sept. 1959, pp. 305–320.

<sup>59</sup>Taylor, H. D., "Application of Vortex Generator Mixing Principle to Diffusers, Concluding Report," Air Force Contract W33-038 AC-21825, United Aircraft Corp. Rept. R-15064-5, United Aircraft Corp. Research Dept., East Hartford, CT, Dec. 31, 1948.

<sup>60</sup>"Stealth Engine Advances Revealed in JSF Designs," *Aviation Week and Space Technology*, 19 March 2001.

<sup>61</sup>Fabri, J. (ed.), Air Intake Problems in Supersonic Propulsion, Pergamon Press, Elmsford, NY, 1958.

<sup>62</sup>Sedlock, D., and Bowers, D., "Inlet/Nozzle Airframe Integration," lecture notes for aircraft design and propulsion design courses, U.S. Air Force Academy, Colorado Springs, CO, 1984.

<sup>63</sup>Swan, W., "Performance Problems Related to Installation of Future Engines in Both Subsonic and Supersonic Transport Aircraft," 2nd International Symposium on Air-Breathing Engines, Sheffield, UK, March 1974.

<sup>64</sup>Surber, L., "Trends in Airframe/Propulsion Integration," lecture notes for aircraft design and propulsion design courses, Dept. of Aeronautics, U.S. Air Force Academy, Colorado Springs, CO, 1984.

<sup>65</sup>Hunter, L., and Cawthon, J., "Improved Supersonic Performance Design for the F-16 Inlet Modified for the J-79 Engine," AIAA Paper 84-1271, 1984.

<sup>66</sup>Stevens, C., Spong, E., and Oliphant, R., "Evaluation of a Statistical Method for Determining Peak Inlet Flow Distortion Using F-15 and F-18 Data," AIAA Paper 80-1109, 1980.

<sup>67</sup>Oates, G. C. (ed.), *The Aerothermodynamics of Aircraft Gas Turbine Engines*, AFAPL-TR-7852, Air Force Aero Propulsion Laboratory, Wright-Patterson AFB, OH, July 1978. (Note: This extensive reference is no longer available. However, the contents have been updated and are published in three textbooks; see Refs. 4, 38, and 70.

<sup>68</sup>Aronstein, D., and Piccirillo, A., *Have Blue and the F-117A: Evolution of the "Stealth Fighter," AIAA, Reston, VA, 1997.* 

<sup>69</sup>Lefebvre, A. H., Gas Turbine Combustion, Hemisphere, New York, 1983.

<sup>70</sup>Oates, G. C. (ed.), Aircraft Propulsion Systems Technology and Design, AIAA Education Series, AIAA, Washington, DC, 1989.

Williams, F. A., Combustion Theory, Addison-Wesley, Reading, MA, 1965.
Spalding, D. B., Combustion and Mass Transfer, Pergamon Press, Elmsford, NY, 1979.

<sup>73</sup>Grobman, J., Jones, R. E., and Marek, C. J., "Combustion," *Aircraft Propulsion*, NASA SP-259, 1970.

<sup>74</sup>Barclay, L. P., "Pressure Losses in Dump Combustors," AFAPL-TR-72-57, Air Force Aero Propulsion Laboratory, Wright-Patterson AFB, OH, 1972.

<sup>75</sup>Nealy, D. A., and Reider, S. B., "Evaluation of Laminated Porous Wall Materials for Combustor Liner Cooling," American Society of Mechanical Engineers, Paper 79-GT-100, March 1979.

<sup>76</sup>Hopkins, K. N., "Turbopropulsion Combustion—Trends and Challenges," AIAA Paper 80-1199, 1980.

<sup>77</sup>Norgren, C. T., and Riddlebaugh, S. M., "Advanced Liner-Cooling Techniques for Gas Turbine Combustors," AIAA, Paper 85-1290, 1985.

<sup>78</sup>Bahr, D. W., "Technology for the Design of High Temperature Rise Combustors," AIAA Paper 85-1292, 1985.

<sup>79</sup>Taylor, J. R., "Combustion System Design," lecture notes for aero propulsion short course, Univ. of Tennessee Space Institute, Tullahoma, TN, 1978.

<sup>80</sup>McAuley, J. E., and Abdelwahab, M., "Experimental Evaluation of a TF30-P-3 Turbofan Engine in an Altitute Facility: Afterburner Performance and Engine-Afterburner Operating Limits," NASA TN D-6839, July 1972.

<sup>81</sup>Marshall, R. L., Canuel, G. E., and Sullivan, D. J., "Augmentation Systems for Turbofan Engines," *Combustion in Advanced Gas Turbine Systems*, Cranfield International Symposium Series, Vol. 10, Pergamon Press, Elmsford, NY, 1967.

<sup>82</sup>Cornell, W. G., "The Flow in a Vee-Gutter Cascade," *Transactions of the American Society of Mechanical Engineers*, Vol. 78, 1956, p. 573.

83 VonMises, R., Theory of Flight, Dover, New York, 1958.

<sup>84</sup>Cifone, A. J., and Krueger, E. L., "Combustion Technology: A Navy Perspective," AIAA Paper 85-1400, 1985.

<sup>85</sup>Climatic Information to Determine Design and Test Requirements for Military Equipment, MIL-SPEC MIL-STD-210C, Rev. C, U.S. Dept. of Defense, Jan. 1997.

<sup>86</sup>Climatic Information to Determine Design and Test Requirements for Military Equipment, MIL-SPEC MIL-STD-210A, U.S. Dept. of Defense, Nov. 1958.

<sup>87</sup>Aerospace Structural Metals Handbook, Batelle, Columbus Laboratories, Columbus, OH, 1984.

<sup>88</sup>Sims, C. T., and Hagel, W. C., *The Superalloys*, Wiley, New York, 1972.

<sup>89</sup>Smith, W. F., Structure and Properties of Engineering Alloys, 2nd ed., McGraw-Hill, New York, 1993.

<sup>90</sup>Brick, R. M., Pense, A. W., and Gordon, R. B., Structure and Properties of Engineering Materials, 4th ed., McGraw-Hill, New York, 1977.

<sup>91</sup>Imarigeon, J. P., "The Super Alloys: Materials for Gas Turbine Hot Section Components," *Canadian Aeronautics and Space Institute Journal*, Vol. 27, 1981.