Aerospace Propulsion
Annotated Bibliography

PROFESSIONAL LEVEL

Bedell, Frederick. *The Air Propeller: Its Working Characteristics and Theory; Together With A Brief Discussion of the Airplane Engine.* Whitefish, MT.: Kessinger Publishing, LLC. 2007.

- Originally published in 1919, this text is historically important as it contains many original theories of propulsion and flight.

Gunston, Bill. *The Development of Piston Aero Engines.* Somerset, UK: Patrick Stephens Limited. 1993.

- This text thoroughly details the history of piston engines from the Wright Brothers up through current trends in flight. The book includes the author's speculation about the future of these engines.

National Research Council. *A Review of United States Air Force and Department of Defense Aerospace Propulsion Needs.* Washington, D.C.: National Academies Press. 2006.

- This study ordered by the Deputy Assistant Secretary of the Air Force Science, Technology and Engineering, reviewed propulsion developments being undertaken by the DoD. This study was to determine the present and future capabilities of the Air Force. It defined gaps and recommendations for improvement in those areas.

National Research Council. *Materials Need and Research and Development Strategy for Future Military Aerospace Propulsion Systems.* Atlanta, GA: National Academies Press. 2011.

- Many of the significant advances in aircraft and rocket propulsion have resulted through improved materials and materials manufacturing processes. This text examines whether current and planned U.S. efforts are sufficient to meet U.S. military needs while keeping the U.S. on the leading edge of propulsion technology. The conclusions and recommendations asserted in this report will enhance the efficiency, level of effort, and impact of DOD materials development activities.

Sforza, Pasquale M. *Theory of Aerospace Propulsion.* Waltham, MA: Butterworth- Heinemann Aerospace Engineering. 2011.

- This book provides readers with basic fundamentals of fluid mechanics and thermodynamics as they relate to aircraft engines. This knowledge should ultimately allow them to perform system and design studies of aircraft engine systems for specified flight conditions, while aircrafts are in normal and unusual flight conditions.

Shekhar, Himanshu. *Aircraft and Automobile Propulsion: A Textbook.* Oxford, UK: Alpha Science Intl Ltd. 2013.

- Covers basic concepts of automobile and aircraft propulsion.

UNDERGRADUATE/GRADUATE LEVEL

Archer, Douglas R. and Saarlas, Maido. *An Introduction to Aerospace Propulsion.* Upper Saddle River, NJ: Prentice Hall. 1998.

- This text uses multiple examples and exercises to introduce undergraduate students to aerospace propulsion systems. Engines examined range from the piston engine and propeller to the rocket.

Cumpsty, Nicholas. *Jet Propulsion: A Simple Guide to the Aerodynamic and Thermodynamic Design and Performance of Jet Engines.* 2nd ed. New York: Oxford Press. 2003.

- Using basic introductions to aerodynamics this text introduces, illustrates and explains multiple facets of modern aircraft engine design.

Farokhi, Saeed. *Aircraft Propulsion*. 2nd ed. Hoboken, NJ: John Wiley and Sons. 2014.

- A comprehensive textbook covering aircraft gas turbine engine and rocket propulsion from the basic principles to more advanced treatments in engine components. Propulsion system integration with aircraft is discussed. Extensive review material is included.

Flack, Ronald D. *Fundamentals of Jet Propulsion with Applications*. Cambridge, UK: Cambridge Aerospace Series. 2010.

- An introduction to air-breathing jet propulsion it includes text ramjets, turbojets, and turbofans. Although many basic principles of propulsion are reviewed, this text is primarily written for upper-level and graduate engineering students. A teaching CD and supplemental practice sheets are included with the book.

Friedman, Raymond. *A History of Jet Propulsion including Rockets.* Xilbris E-Publishing Co. 2010.

- This text reviews the technology relevant to the history of jet-engine aircraft and long-range rockets. The development of both led to 10 rapid post- World War II improvements including; supersonic airplanes, communication satellites, and trips to the moon, unmanned exploration of Mars and the development of the International Space Station.

Mattingly, J. and H. Von Ohain. *Elements of Propulsion: Gas Turbines and Rockets.* Reston, VA.: AIAA Education Publications. 2006.

- This text book provides a complete introduction to gas turbine and rocket propulsion for aerospace and mechanical engineers. The text discusses basic concepts a wide variety of concepts from basic concepts of design and function up to and through an analysis of air breathing engines. Over 600 illustrations assist in clarifying concepts of propulsion engines. Additionally, the 100 assignments, and computer software allow for the application of varies concepts.

SECONDARY LEVEL

Burleigh, Robert. *Into the Air: The Story of the Wright Brothers First Flight*. New York: Silver Whistle Paperbacks. 2002.

- Set in comic-book format, this book provides a history of the Wright Brothers historic flight with interesting facts about flight included in sidebars.

Reichardt, Richard. *Space Shuttle: The First 20 Years.* New York: DK Publications. 2002.

- This book documents the history of the space shuttle program using personal narratives from the astronauts.