Record Nr. UNINA9910813078903321 Autore Farokhi Saeed Titolo Future propulsion systems and energy sources in sustainable aviation / / Saeed Farokhi Pubbl/distr/stampa Hoboken, New Jersey;; Chichester, West Sussex, England:,: Wiley,, [2020] ©2020 **ISBN** 1-119-41505-5 1-119-41507-1 1-119-41498-9 Descrizione fisica 1 online resource (447 pages) Collana Aerospace series 629.13435 Disciplina Soggetti Airplanes - Motors Lingua di pubblicazione Inglese **Formato** Materiale a stampa

Monografia

Sommario/riassunto

Livello bibliografico

"Propulsion and Power: Shaping the Future of Air Transportation is a comprehensive reference considering the science and engineering behind propulsion and power in sustainable air transportation. It examines the impact of air transportation on the environment and covers alternative jet fuels and electric propulsion and power. Modern propulsion for transonic, and supersonic-hypersonic aircraft is discussed and the impact of propulsion on aircraft design is also covered. Each chapter covers lessons learned, from both successes and failures, from earlier technology developments in aircraft industry. A review of aircraft engines is also included. This book is also accompanied by a website hosting illustrations, presentation files and a solution manual. Climate change is the main driver for the new technology development in sustainable air transportation and there is a need to make air transportation environmentally friendly and sustainable. Studies have shown a roadmap to sustainable air transportation that includes alternative jet fuels, hybrid gas-electric propulsion and finally all electric propulsion. Inherent in the sustainable air transportation concept are drag reduction schemes that rely on new

aircraft configurations and advanced propulsion integrations, e.g., distributed propulsion system or boundary layer ingestion concepts"--