1.	Record Nr.	UNINA9910770249003321
	Autore	Habashi Wagdi George
	Titolo	Handbook of Numerical Simulation of In-Flight Icing / / edited by Wagdi George Habashi
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024
	ISBN	9783031338458 3031338456
	Edizione	[1st ed. 2024.]
	Descrizione fisica	1 online resource (1278 pages)
	Disciplina	621.319
	Soggetti	Aerospace engineering Astronautics Mathematics - Data processing Fluid mechanics Surface chemistry Surfaces (Technology) Thin films Engines Aerospace Technology and Astronautics Computational Mathematics and Numerical Analysis Engineering Fluid Dynamics Surface Chemistry Surfaces, Interfaces and Thin Film Engine Technology
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Numerical Simulation of Droplets Impingement by a Lagrangian Method -- Numerical Simulation of Dispersed Phase Droplets Impingement by a Hybrid Eulerian-Lagrangian Method -- Numerical Simulation of Supercooled Droplets Deformation, Impingement and Freezing for In-Flight Icing -- Numerical Simulation of In-Flight Icing by a Multi-Step Level-Set Method -- Numerical Simulation of In-Flight Icing by Coupled Immersed Boundary and Level-Set Methods -- Numerical Simulation of

In-Flight Icing Under Uncertain Conditions -- Numerical Simulation of In-Flight Icing via a Particle-Based Morphogenetic Method -- Numerical Simulation of Convective Heat Transfer for In-Flight Icing -- Numerical Simulation of In-Flight Iced Surface Roughness -- Numerical Simulation of Iced Swept Wing Aerodynamics with RANS, DES, and IDDES -- Numerical Simulation of Aerodynamic Features with Ice Shapes via High-Fidelity CFD Method.

Sommario/riassunto	This Handbook of Numerical Simulation of In-Flight Icing covers an array of methodologies and technologies on numerical simulation of in-flight icing and its applications. Comprised of contributions from internationally recognized experts from the Americas, Asia, and the EU, this authoritative, self-contained reference includes best practices and specification data spanning the gamut of simulation tools available internationally that can be used to speed up the certification of aircraft and make them safer to fly into known icing. The collection features nine sections concentrating on aircraft, rotorcraft, jet engines, UAVs; ice protection systems, including hot-air, electrothermal, and others; sensors and probes, CFD in the aid of testing, flight simulators, and certification process acceleration methods. Incorporating perspectives from academia, commercial, government R&D, the book is ideal for a range of engineers and scientists concerned with in-flight icing applications. .