1.	Record Nr.	UNINA9910299876203321
	Titolo	Direct and Large-Eddy Simulation X [[electronic resource] /] / edited by Dimokratis G.E. Grigoriadis, Bernard J. Geurts, Hans Kuerten, Jochen Fröhlich, Vincenzo Armenio
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
	ISBN	3-319-63212-4
	Edizione	[1st ed. 2018.]
	Descrizione fisica	1 online resource (XV, 565 p. 345 illus., 165 illus. in color.)
	Collana	ERCOFTAC Series, , 1382-4309 ; ; 24
	Disciplina	620.1064
	Soggetti	Fluid mechanics
		Thermodynamics
		Heat engineering
		Heat transfer
		Mass transfer
		Physics
		Computer mathematics
		Engineering Fluid Dynamics
		Engineering Thermodynamics, Heat and Mass Transfer
		Numerical and Computational Physics, Simulation
		Computational Science and Engineering
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	Chapter 1. Natural Convection in Ventilated Building Facades Using LES & DNS -- Chapter 2. The Implementation of 5-D FGM for LES Simulations of a Gas Turbine Model Combustor -- Chapter 3. Particle Agglomeration in Turbulent Flows: A LES Investigation Based on a Deterministic Collision and Agglomeration Model -- Chapter 4. A Novel Approach for Wall Modeling in LES of Wall-Bounded High-Reynolds-Number Flow via Function Enrichment -- Chapter 5. Velocity Profiles over Hypothetical Urban Areas in Unstable Stratification: Large-Eddy Simulation Approach -- Chapter 6. LES-IB Study of Mixing Enhancement by Polygonal Orifices and Wavy Walls -- Chapter 7. Physical Scaling of Numerical Dissipation for LES -- Chapter 8. Hybrid

	LES of a High Pressure Turbine Nozzle/Blade Interaction -- Chapter 9. Boundary Data Immersion Method for Direct Numerical Simulations of Aero-Vibro-Acoustic Systems -- Chapter 10. Influence of Periodic Forcing on Laminar Separation Bubble etc.
Sommario/riassunto	This book addresses nearly all aspects of the state of the art in LES & DNS of turbulent flows, ranging from flows in biological systems and the environment to external aerodynamics, domestic and centralized energy production, combustion, propulsion as well as applications of industrial interest. Following the advances in increased computational power and efficiency, several contributions are devoted to LES & DNS of challenging applications, mainly in the area of turbomachinery, including flame modeling, combustion processes and aeroacoustics. The book includes work presented at the tenth Workshop on 'Direct and Large-Eddy Simulation' (DLES-10), which was hosted in Cyprus by the University of Cyprus, from May 27 to 29, 2015. The goal of the workshop was to establish a state of the art in DNS, LES and related techniques for the computation and modeling of turbulent and transitional flows. The book is of interest to scientists and engineers, both in the early stages of their career and at a more senior level. .