1. Record Nr. UNISA996466360103316

Titolo	Computer Safety, Reliability, and Security [[electronic resource]] : 37th International Conference, SAFECOMP 2018, Västerås, Sweden, September 19-21, 2018, Proceedings / / edited by Barbara Gallina, Amund Skavhaug, Friedemann Bitsch
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-99130-2
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XXI, 312 p. 92 illus.)
Collana	Programming and Software Engineering ; ; 11093
Disciplina	005.8
Soggetti	Computer logic Special purpose computers Computer communication systems Software engineering Computer security Microprogramming Logics and Meanings of Programs Special Purpose and Application-Based Systems Computer Communication Networks Software Engineering Systems and Data Security Control Structures and Microprogramming
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Automotive Safety Standards and Cross-domain Reuse Potential -- Autonomous Driving and Safety Analysis -- Verification -- Multi-concern Assurance -- Fault Tolerance -- Safety and Security Risk.
Sommario/riassunto	This book constitutes the refereed proceedings of the 37th International Conference on Computer Safety, Reliability, and Security, SAFECOMP 2018, held in Västerås, Sweden, in September 2018. The 19 revised full papers and 1 short paper presented together with three abstracts of keynotes were carefully reviewed and selected from 63

	submissions. The papers are organized in topical sections on Automotive Safety Standards and Cross-domain Reuse Potential; Autonomous Driving and Safety Analysis; Verification; Multi-concern Assurance; Fault Tolerance; and Safety and Security Risk.

2.

Record Nr.	UNINA9911021975203321
Autore	Roohi Ehsan
Titolo	Advances in Direct Simulation Monte Carlo: From Micro-Scale to Rarefied Flow Phenomena / / by Ehsan Roohi, Hassan Akhlaghi, Stefan Stefanov
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	981-9682-00-2
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (560 pages)
Collana	Chemistry and Materials Science Series
Altri autori (Persone)	AkhlaghiHassan StefanovStefan
Disciplina	621.381 532.05
Soggetti	Microfluidics Soft condensed matter Mathematical physics Computer simulation Fluids Computational Physics and Simulations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction to Micro and Nano Flows -- A Brief Review of Kinetic Theory -- DSMC Method and its Connection to Kinetic Theory -- Recent Advances in DSMC -- Pressure Driven Flows: Poisselle Flow -- Thermal Driven Micro/Nano Flows -- Shear Driven Flows: Couette Flow and Cavity Flow -- High-Speed Microflows: Nozzle Flow -- External Flows: Micro-Scale Flat Plate and Airfoil -- Cold to Hot Transfer at Micro-/Nano-Scales.
Sommario/riassunto	This book provides a comprehensive and in-depth presentation of recent advancements in the Direct Simulation Monte Carlo (DSMC)

method, focusing on modern collision algorithms that maintain accuracy even with low particle-per-cell. Drawing from theoretical insights and computational innovations, it bridges fundamental kinetic theory with practical simulation techniques for rarefied gas flows. Structured across ten chapters, the book begins with a discussion of micro- and nanoscale fluid flows, where non-equilibrium effects and rarefaction become dominant. It explores key phenomena in MEMS/NEMS devices, such as velocity slip, temperature jump, Knudsen minimum, and thermal polarization—essential for understanding transport in confined geometries. A strong emphasis is placed on advanced DSMC collision schemes, including the BT-family of algorithms (e.g., SBT, ISBT, GBT, SSBT, and SGBT), as well as emerging hybrid approaches such as DSMC-Fokker-Planck and Low-Variance DSMC. Applications span from pressure-driven microchannel flows, thermally induced rarefied flows, and Couette/cavity configurations, to supersonic wedge flows and nonlinear instability phenomena like Rayleigh–Bénard convection in rarefied gases. Special attention is given to semi-analytical aerodynamic models in free-molecular regimes, making the book particularly valuable for those working in aerospace applications at high altitudes or in low-density environments. With contributions from leading experts, this expanded volume serves as both a reference and a teaching guide for researchers and students in rarefied gas dynamics, microfluidics, and high-fidelity particle-based simulation methods.