1. Record Nr. UNISA996466275603316

Titolo	Certified Programs and Proofs [[electronic resource]] : Second International Conference, CPP 2012, Kyoto, Japan, December 13-15, 2012, Proceedings / / edited by Chris Hawblitzel, Dale Miller
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2012
ISBN	3-642-35308-8
Edizione	[1st ed. 2012.]
Descrizione fisica	1 online resource (X, 305 p. 64 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 7679
Disciplina	004.01/51
Soggetti	Computer science Machine theory Compilers (Computer programs) Computer science—Mathematics Software engineering Artificial intelligence Computer Science Logic and Foundations of Programming Formal Languages and Automata Theory Compilers and Interpreters Symbolic and Algebraic Manipulation Software Engineering Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	International conference proceedings.
Nota di bibliografia	Includes bibliographical references and author index.
Nota di contenuto	Scalable Formal Machine Models -- Mechanized Semantics for Compiler Verification -- Automation in Computer-Aided Cryptography: Proofs, Attacks and Designs -- Program Certification by Higher-Order Model Checking -- A Formally-Verified Alias Analysis -- Mechanized Verification of Computing Dominators for Formalizing Compilers -- On the Correctness of an Optimising Assembler for the Intel MCS-51 Microprocessor -- An Executable Semantics for CompCert C -- Producing Certified Functional Code from Inductive Specifications -- The New Quickcheck for Isabelle: Random, Exhaustive and Symbolic

	Testing under One Roof -- Proving Concurrent Noninterference -- Noninterference for Operating System Kernels -- Compositional Verification of a Baby Virtual Memory Manager -- Shall We Juggle, Coinductively? -- Proof Pearl: Abella Formalization of -Calculus Cube Property -- A String of Pearls: Proofs of Fermat's Little Theorem -- Compact Proof Certificates for Linear Logic -- Constructive Completeness for Modal Logic with Transitive Closure -- Rating Disambiguation Errors -- A Formal Proof of Square Root and Division Elimination in Embedded Programs -- Coherent and Strongly Discrete Rings in Type Theory -- Improving Real Analysis in Coq: A User-Friendly Approach to Integrals and Derivatives.
Sommario/riassunto	This book constitutes the refereed proceedings of the Second International Conference on Certified Programs and Proofs, CPP 2012, held in Kyoto, Japan, in December 2012. The 18 revised regular papers presented were carefully reviewed and selected from 37 submissions. They deal with those topics in computer science and mathematics in which certification via formal techniques is crucial.

2.

Record Nr.	UNINA9910906300603321
Autore	Vardoulaki Eleni
Titolo	Data-Intensive Radio Astronomy : Bringing Astrophysics to the Exabyte Era / / edited by Eleni Vardoulaki, Marta Dembska, Alexander Drabent, Matthias Hoeft
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	9783031584688 3031584686
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (461 pages)
Collana	Astrophysics and Space Science Library, , 2214-7985 ; ; 472
Altri autori (Persone)	DembskaMarta DrabentAlexander HoeftMatthias
Disciplina	522.682
Soggetti	Astronomy - Observations Astrophysics Quantitative research Sampling (Statistics) Computer science Astronomy, Observations and Techniques Data Analysis and Big Data Methodology of Data Collection and Processing Computer Science

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Introduction - Concepts and challenges of data-intensive radio astronomy -- Part 1. DATA CREATION, STORAGE AND ARCHIVES -- CHAPTER 1: From the data generation to the archive -- CHAPTER 2: Storage and archives -- CHAPTER 3: Computing infrastructure -- Part 2. DATA PROCESSING -- CHAPTER 4: Challenges of radio data processing (big radio data processing) -- CHAPTER 5: Implementations for specific radio observatories -- CHAPTER 6: Co-design and software architecture -- CHAPTER 7: Lesson learned from SKA pathfinders regarding processing -- PART 3. POST-PROCESSING AND DATA ANALYSIS -- CHAPTER 8: Continuum Source extraction and identification -- CHAPTER 9: Other types of source extraction and identification -- CHAPTER 10: Using AI for radio (big) data -- CHAPTER 11: Visualisation for analysis -- PART 4. DATA ACCESS AND REUSE (accessibility, VR/VO FAIR) -- CHAPTER 12: Exploitation platforms & Virtual Observatory -- CHAPTER 14: Data documentation beyond provenance: metadata, Research Data Management (RDM), FAIR -- Epilogue and future outlook -- Glossary -- Index.
Sommario/riassunto	Radio astronomy is irreversibly moving towards the exabyte era. In the advent of all-sky radio observations, efficient tools and methods to manage the large data volume generated have become imperative. This book brings together the knowledge of several different research fields to present an overview of current state-of-the-art methods in data-intensive radio astronomy. Its approach is comprehensive and data-centric, offering a coherent look at the four distinct parts of the data lifecycle: Data creation, storage and archives Data processing Post-processing and data analysis Data access and reuse Large data management has been the topic of discussion within the astronomical community for decades. Some relevant areas explored in this volume are: ongoing technological innovations in interferometers and computing facilities; difficulties and possible solutions for the huge processing demands of radiotelescope projects such as LOFAR, MeerKat, ASKAP; concepts for reliable and fast storage for archiving; and more. Written by experts across astrophysics, high-energy particle physics, data science, and computer science, this volume will help researchers and advanced students better understand the current state of data-intensive radio astronomy and tackle the major problems that may arise from future instruments.