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Autore	Sato Mitsuhisa
Titolo	XcalableMP PGAS Programming Language : From Programming Model to Applications / / edited by Mitsuhisa Sato
Pubbl/distr/stampa	Springer Nature, 2021 Singapore : , : Springer Singapore : , : Imprint : Springer, , 2021
ISBN	981-15-7683-1
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (IX, 262 p. 367 illus., 57 illus. in color.)
Classificazione	COM051010
Disciplina	005.13
Soggetti	Programming languages (Electronic computers) Programming Languages, Compilers, Interpreters
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: XcalableMP programming model and language -- Chapter 2: Design and Performance Evaluation of the Omni XcalableMP Compiler -- Chapter 3: Coarrays in the Context of XcalableMP -- Chapter 4: XcalableACC: an Integration of XcalableMP and OpenACC -- Chapter 5: Mixed-language programming with XMP and Python -- Chapter 6: Three-dimensional Fluid Code with XcalableMP -- Chapter 7: Hybrid-View Data Model Programming of Nuclear Fusion Simulation Code in XcalableMP -- Chapter 8: Parallelization of Atomic Image Reconstruction from X-ray Fluorescence Holograms by XcalableMP -- Chapter 9: Multi-SPMD programming model with YML and XcalableMP -- Chapter 10: XcalableMP 2.0 and Future Directions.
Sommario/riassunto	XcalableMP is a directive-based parallel programming language based on Fortran and C, supporting a Partitioned Global Address Space (PGAS) model for distributed memory parallel systems. This open access book presents XcalableMP language from its programming model and basic concept to the experience and performance of applications described in XcalableMP. XcalableMP was taken as a parallel programming language project in the FLAGSHIP 2020 project, which was to develop the Japanese flagship supercomputer, Fugaku, for improving the productivity of parallel programing. XcalableMP is now available on Fugaku and its performance is enhanced by the Fugaku interconnect, Tofu-D. The global-view programming model of XcalableMP, inherited

	from High-Performance Fortran (HPF), provides an easy and useful solution to parallelize data-parallel programs with directives for distributed global array and work distribution and shadow communication. The local-view programming adopts coarray notation from Coarray Fortran (CAF) to describe explicit communication in a PGAS model. The language specification was designed and proposed by the XcalableMP Specification Working Group organized in the PC Consortium, Japan. The Omni XcalableMP compiler is a production-level reference implementation of XcalableMP compiler for C and Fortran 2008, developed by RIKEN CCS and the University of Tsukuba. The performance of the XcalableMP program was used in the Fugaku as well as the K computer. A performance study showed that XcalableMP enables a scalable performance comparable to the message passing interface (MPI) version with a clean and easy-to-understand programming style requiring little effort.

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Titolo	The Routledge companion to research in the arts / / edited by Michael Biggs and Henrik Karlsson in collaboration with Stiftelsen Riksbankens Jubileumsfond, Stockholm
Pubbl/distr/stampa	New York, : Routledge, 2010 New York : , : Routledge, , 2011
ISBN	1-136-89792-5 1-136-71579-7 1-136-89793-3 1-282-91905-9 1-78034-816-9 9786612919053 0-203-84132-8
Edizione	[1st ed.]
Descrizione fisica	1 online resource (488 p.)
Altri autori (Persone)	BiggsMichael (Michael A. R.) KarlssonHenrik
Disciplina	700 700.72
Soggetti	Arts - Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa

Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	BOOK COVER; TITLE; COPYRIGHT; CONTENTS; ILLUSTRATIONS; LIST OF CONTRIBUTORS; EDITORS' PREFACE; FOREWORD01; FOREWORD02; PART I: FOUNDATIONS; 1 UNIVERSITY POLITICS AND PRACTICE-BASED RESEARCH; 2 PLEADING FOR PLURALITY: ARTISTIC AND OTHER KINDS OF RESEARCH; 3 THE PRODUCTION OF KNOWLEDGE IN ARTISTIC RESEARCH; 4 SOME NOTES ON MODE 1 AND MODE 2: ADVERSARIES OR DIALOGUE PARTNERS?; 5 COMMUNITIES, VALUES, CONVENTIONS AND ACTIONS; 6 ARTISTIC COGNITION AND CREATIVITY; 7 THE ROLE OF THE ARTEFACT AND FRAMEWORKS FOR PRACTICE-BASED RESEARCH; PART II: VOICES; 8 EMBODIED KNOWING THROUGH ART 9 RHETORIC: WRITING, READING AND PRODUCING THE VISUAL10 RESEARCH AND THE SELF; 11 ADDRESSING THE 'ANCIENT QUARREL': CREATIVE WRITING AS RESEARCH; 12 THE VIRTUAL AND THE PHYSICAL: A PHENOMENOLOGICAL APPROACH TO PERFORMANCE RESEARCH; 13 NAVIGATING IN HETEROGENEITY: ARCHITECTURAL THINKING AND ART-BASED RESEARCH; 14 INSIGHT AND RIGOUR: A FREUDO-LACANIAN APPROACH; 15 TRANSFORMATIONAL PRACTICE: ON THE PLACE OF MATERIAL NOVELTY IN ARTISTIC CHANGE; 16 TIME AND INTERACTION: RESEARCH THROUGH NON-VISUAL ARTS AND MEDIA; 17 THINKING ABOUT ART AFTER THE MEDIA: RESEARCH AS PRACTISED CULTURE OF EXPERIMENT PART III: CONTEXTS18 CHARACTERISTICS OF VISUAL AND PERFORMING ARTS; 19 DIFFERENTIAL ICONOGRAPHY; 20 WRITING AND THE PhD IN FINE ART; 21 RESEARCH TRAINING IN THE CREATIVE ARTS AND DESIGN; 22 NO COPYRIGHT AND NO CULTURAL CONGLOMERATES: NEW OPPORTUNITIES FOR ARTISTS; 23 EVALUATING QUALITY IN ARTISTIC RESEARCH; REFERENCES; INDEX
Sommario/riassunto	The Routledge Companion to Research in the Arts is a major collection of new writings on research in the creative and performing arts by leading authorities from around the world. It provides theoretical and practical approaches to identifying, structuring and resolving some of the key issues in the debate about the nature of research in the arts which have surfaced during the establishment of this subject over the last decade.Contributions are located in the contemporary intellectual environment of research in the arts, and more widely in the universities, in the str