

2022 IEEE/ACM International Workshop on Education for High Performance Computing (EduHPC 2022)

**Dallas, Texas, USA
13-18 November 2022**



**IEEE Catalog Number: CFP22A50-POD
ISBN: 978-1-6654-7367-5**

**Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP22A50-POD
ISBN (Print-On-Demand):	978-1-6654-7367-5
ISBN (Online):	978-1-6654-7366-8

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2022 IEEE/ACM International Workshop on Education for High Performance Computing (EduHPC) **EduHPC 2022**

Table of Contents

Message from the Workshop Chairs	v
Workshop Organization	vii

Paper Session 1: Teaching HPC and Heterogeneous Parallelism

UnoAPI: Balancing Performance, Portability, and Productivity (P3) in HPC Education	1
<i>Konstantin Läufer (Loyola University Chicago) and George K. Thiruvathukal (Loyola University Chicago)</i>	
OpenMPI+Java as a High Performance Language	11
<i>Joel C. Adams (Calvin University, USA)</i>	
Adopting Heterogeneous Computing Modules: Experiences from a ToUCH Summer Workshop	18
<i>David P. Bunde (Knox College, USA), Kishwar Ahmed (University of Toledo, USA), Sridevi Ayloo (City University of New York, USA), Tisha Brown-Gaines (Belmont University, USA), Joel Fuentes (University of Bío Bío, Chile), Vishwesh Jatala (Indian Institute of Technology Bhilai, India), Ruth Kurniawati (Westfield State University, USA), Isil Öz (Izmir Institute of Technology, Turkey), Apan Qasem (Texas State University, USA), Philip J. Schielke (Concordia University Texas, USA), Mary C. Tedeschi (St. John's University, USA), and Thomas Y. Yeh (Pomona College, USA)</i>	

Paper Session 2: Diverse Approaches to Teaching HPC

Challenges and Triumphs Teaching Distributed Computing Topics at a Small Liberal Arts College	26
<i>Nathaniel Kremer-Herman (Hanover College, USA)</i>	
Bridging the Gap between Education and Research: A Retrospective on Simulating an HPC Conference	34
<i>Sarah Neuwirth (Goethe University Frankfurt, Germany)</i>	

Lightning Talks

Lightning Talks of EduHPC 2022	42
<i>Apan Qasem (Texas State University, USA), Hartwig Anzt (Karlsruhe Institute of Technology (KIT), Germany; University of Tennessee, USA), Eduard Ayguade (Barcelona Supercomputing Center (BSC), Spain), Katharine Cahill (Ohio Supercomputer Center, USA), Ramon Canal (Barcelona Supercomputing Center and Universitat Politecnica de Catalunya, Spain), Jany Chan (The Ohio State University, USA), Eric Fosler-Lussier (Ohio State University, USA), Fritz Goebel (Karlsruhe Institute of Technology (KIT), Germany), Arpan Jain (The Ohio State University, USA), Marcel Koch (Karlsruhe Institute of Technology (KIT), Germany), Mateusz Kuzak (Netherlands eScience Center, The Netherlands), Josep Llosa (Barcelona Supercomputing Center (BSC), Spain), Raghu Machiraju (Ohio State University, USA), Xavier Martorell (Barcelona Supercomputing Center (BSC), Spain), Pratik Nayak (Karlsruhe Institute of Technology (KIT), Germany), Shameema Oottikkal (Ohio Supercomputer Center, USA), Marcin Ostasz (European Technology Platform for High-Performance Computing (ETP4HPC), The Netherlands), Dhableswar K Panda (The Ohio State University, USA), Dirk Pleiter (PDC Center for High Performance Computing, KTH Royal Institute of Technology, Sweden), Rajiv Ramnath (The Ohio State University, USA), Maria-Ribera Sancho (Barcelona Supercomputing Center and Universitat Politecnica de Catalunya, Spain), Alessio Sclocco (Netherlands eScience Center, The Netherlands), Aamir Shafi (The Ohio State University, USA), Hanno Spreew (Netherlands eScience Center, The Netherlands), Hari Subramoni (The Ohio State University, USA), and Karen Tomko (Ohio Supercomputer Center, The Netherlands)</i>	

Peachy Assignments

Peachy Parallel Assignments (EduHPC 2022)	50
<i>Rocío Carratalá-Sáez (University of Valladolid, Spain), Arturo Gonzalez-Escribano (University of Valladolid, Spain), Alexandros-Stavros Iliopoulos (Massachusetts Institute of Technology, USA), Charles E. Leiserson (Massachusetts Institute of Technology, USA), Charlotte Park (Massachusetts Institute of Technology, USA), Isabel Rosa (Massachusetts Institute of Technology, USA), Tao B. Schardl (Massachusetts Institute of Technology, USA), Yuri Torres (University of Valladolid, Spain), and David P. Bunde (Knox College, USA)</i>	

Author Index	57
--------------------	----