

2019 IEEE/ACM Third Annual Workshop on Emerging Parallel and Distributed Runtime Systems and Middleware (IPDRM 2019)

**Denver, Colorado, USA
22 November 2019**



**IEEE Catalog Number: CFP19W46-POD
ISBN: 978-1-7281-5994-2**

**Copyright © 2019 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:	CFP19W46-POD
ISBN (Print-On-Demand):	978-1-7281-5994-2
ISBN (Online):	978-1-7281-5993-5

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

2019 IEEE/ACM Third Annual Workshop on Emerging Parallel and Distributed Runtime Systems and Middleware (IPDRM) **IPDRM 2019**

Table of Contents

Organization v.....

Session 1

Sequential Codelet Model of Program Execution. A Super-Codelet model based on the Hierarchical Turing Machine. .1.....
Jose Monsalve (University of Delaware, USA), Kevin Harms (Argonne National Laboratory, USA), Kumaran Kalyan (Argonne National Laboratory, USA), and Guang Gao (University of Delaware, USA)

Advert: An Asynchronous Runtime for Fine-Grained Network Systems .9.....
Ryan Friese (Pacific Northwest National Lab, USA), Antonino Tumeo (Pacific Northwest National Lab, USA), Roberto Gioiosa (Pacific Northwest National Lab, USA), Mark Raugas (Pacific Northwest National Lab, USA), and Thomas Warfel (Pacific Northwest National Lab, USA)

Characterizing the Performance of Executing Many-tasks on Summit .18.....
Matteo Turilli (Rutgers University, USA), Andre Merzky (Rutgers University, USA), Thomas Naughton (Oak Ridge National Laboratory, USA), Wael Elwasif (Oak Ridge National Laboratory, USA), and Shantenu Jha (Rutgers University, USA)

Session 2

Assessing the Performance Impact of using an Active Global Address Space in HPX: A Case for AGAS .26.....
Parsa Amini (Louisiana State University, USA) and Harmut Kaiser (Louisiana State University, USA)

Leveraging Network-level parallelism with Multiple Process-Endpoints for MPI Broadcast .34.....
Amit Ruhela (Ohio State University, USA), Bharath Ramesh (Ohio State University, USA), Sourav Chakraborty (Ohio State University, USA), Hari Subramoni (Ohio State University, USA), Jahanzeb Hashmi (Ohio State University, USA), and Dhableswar Panda (Ohio State University, USA)

Design and Evaluation of Shared Memory Communication Benchmarks on Emerging Architectures using
MVAPICH2 42.....

Shulei Xu (Ohio State University, USA), Jahanzeb Maqbool Hashmi (Ohio State University, USA), Sourav Chakraborty (Ohio State University, USA), Hari Subramoni (Ohio State University, USA), and Dhabaleswar Panda (Ohio State University, USA)

Author Index 51.....