

2016 Sixth International Workshop on Domain-Specific Languages and High-Level Frameworks for High Performance Computing (WOLFHPC 2016)

**Salt Lake City, Utah, USA
14 November 2016**



**IEEE Catalog Number: CFP16A41-POD
ISBN: 978-1-5090-6157-0**

**Copyright © 2016 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:	CFP16A41-POD
ISBN (Print-On-Demand):	978-1-5090-6157-0
ISBN (Online):	978-1-5090-6156-3

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

2016 Sixth International Workshop on Domain-Specific Languages and High-Level Frameworks for High Performance Computing

WOLFHPC 2016

Table of Contents

Workshop Organization.....	iv
-----------------------------------	-----------

Workshop Papers

Automatic Mapping of Array Operations to Specific Architectures	1
<i>Simon A. F. Lund, Mads R. B. Kristensen, and Brian Vinter</i>	
Devito: Automated Fast Finite Difference Computation	11
<i>Navjot Kukreja, Mathias Louboutin, Felipe Vieira, Fabio Luporini, Michael Lange, and Gerard Gorman</i>	
Efficient Parallelization of MATLAB Stencil Applications for Multi-core Clusters	20
<i>Johannes Spazier, Steffen Christgau, and Bettina Schnor</i>	
YASK—Yet Another Stencil Kernel: A Framework for HPC Stencil Code-Generation and Tuning	30
<i>Charles Yount, Josh Tobin, Alexander Breuer, and Alejandro Duran</i>	
Author Index	40

Workshop Organization

Organizing Committee

Sriram Krishnamoorthy, Pacific Northwest National Laboratory
J. (Ram) Ramanujam, Louisiana State University
P. (Saday) Sadayappan, The Ohio State University

Program Committee

Gagan Agrawal, The Ohio State University
Muthu Baskaran, Reservoir Labs
Anthony Danalis, University of Tennessee Knoxville
James Dinan, Intel
Anshu Dubey, Argonne National Lab
John Feo, Pacific Northwest National Lab
Franz Franchetti, Carnegie Mellon University
David Ham, Imperial College London
Mike Heroux, Sandia National Lab
Paul H.J. Kelly, Imperial College London
Rishi Khan, Extreme Scale Solutions
Christian Lengauer, University of Passau
Wenjing Ma, Institute of Software, Chinese Academy of Sciences
Kamesh Madduri, Penn State University
Pat McCormick, Los Alamos National Lab
Antoni Pop, University of Manchester
Istvan Reguly, Oxford e-Research Centre
Bin Ren, Pacific Northwest National Lab
Manu Shantharam, SDSC
Xipeng Shen, NC State
Michelle Strout, Arizona State University
Kenjiro Taura, University of Tokyo
Yonghong Yan, Oakland University