

@article{Bao:2016:SDF:3012405.3011017, author = {Bao, Wenlei and Hong, Changwan and Chunduri, Sudheer and Krishnamoorthy, Sriram and Pouchet, Louis-Noël and Rastello, Fabrice and Sadayappan, P.}, title = {Static and Dynamic Frequency Scaling on Multicore CPUs}, journal = {ACM Trans. Archit. Code Optim.}, issue\_date = {December 2016}, volume = {13}, number = {4}, month = dec, year = {2016}, issn = {1544-3566}, pages = {51:1-51:26}, articleno = {51}, numpages = {26}, url = {<http://doi.acm.org/10.1145/3011017>}, doi = {10.1145/3011017}, acmid = {3011017}, publisher = {ACM}, address = {New York, NY, USA}, keywords = {Affine Programs, CPU Energy, Static Analysis, Voltage and Frequency Scaling}, }

@inproceedings{Pouchet:2013:PDR:2435264.2435273, author = {Pouchet, Louis-Noel and Zhang, Peng and Sadayappan, P. and Cong, Jason}, title = {Polyhedral-based Data Reuse Optimization for Configurable Computing}, booktitle = {Proceedings of the ACM/SIGDA International Symposium on Field Programmable Gate Arrays}, series = {FPGA '13}, year = {2013}, isbn = {978-1-4503-1887-7}, location = {Monterey, California, USA}, pages = {29-38}, numpages = {10}, url = {<http://doi.acm.org/10.1145/2435264.2435273>}, doi = {10.1145/2435264.2435273}, acmid = {2435273}, publisher = {ACM}, address = {New York, NY, USA}, keywords = {compilation, data reuse, high-level synthesis, program transformations}, }

@article{Kong:2013:PTM:2499370.2462187, author = {Kong, Martin and Veras, Richard and Stock, Kevin and Franchetti, Franz and Pouchet, Louis-Noël and Sadayappan, P.}, title = {When Polyhedral Transformations Meet SIMD Code Generation}, journal = {SIGPLAN Not.}, issue\_date = {June 2013}, volume = {48}, number = {6}, month = jun, year = {2013}, issn = {0362-1340}, pages = {127-138}, numpages = {12}, url = {<http://doi.acm.org/10.1145/2499370.2462187>}, doi = {10.1145/2499370.2462187}, acmid = {2462187}, publisher = {ACM}, address = {New York, NY, USA}, keywords = {affine scheduling, autotuning, compiler optimization, loop transformations, program synthesis}, }

@inproceedings{Kong:2013:PTM:2491956.2462187, author = {Kong, Martin and Veras, Richard and Stock, Kevin and Franchetti, Franz and Pouchet, Louis-Noël and Sadayappan, P.}, title = {When Polyhedral Transformations Meet SIMD Code Generation}, booktitle = {Proceedings of the 34th ACM SIGPLAN Conference on Programming Language Design and Implementation}, series = {PLDI '13}, year = {2013}, isbn = {978-1-4503-2014-6}, location = {Seattle, Washington, USA}, pages = {127-138}, numpages = {12}, url = {<http://doi.acm.org/10.1145/2491956.2462187>}, doi = {10.1145/2491956.2462187}, acmid = {2462187}, publisher = {ACM}, address = {New York, NY, USA}, keywords = {affine scheduling, autotuning, compiler optimization, loop transformations, program synthesis}, } @article{cummins2017synthesizing,

title={Synthesizing benchmarks for predictive modeling},

author={Cummins, Chris and Petoumenos, Pavlos and Wang, Zheng and Leather, Hugh},

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title      = "Minimizing the cost of iterative compilation with active  
learning",  
keywords   = "Active Learning, Compilers, Iterative Compilation, Machine  
Learning, Sequential Analysis;",  
author     = "William Ogilvie and Pavlos Petoumenos and Zheng Wang and Hugh  
Leather",  
note       = "Date of Acceptance: 25/10/2016",  
year       = "2016",  
month      = "10",  
booktitle  = "The International Symposium on Code Generation and Optimization  
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@inproceedings{Putnam:2014:RFA:2665671.2665678, author = {Putnam, Andrew and Caulfield, Adrian M. and Chung, Eric S. and Chiou, Derek and Constantinides, Kypros and Demme, John and Esmaeilzadeh, Hadi and Fowers, Jeremy and Gopal, Gopi Prashanth and Gray, Jan and Haselman, Michael and Hauck, Scott and Heil, Stephen and Hormati, Amir and Kim, Joo-Young and Lanka, Sitaram and Larus, James and Peterson, Eric and Pope, Simon and Smith, Aaron and Thong, Jason and Xiao, Phillip Yi and Burger, Doug}, title = {A Reconfigurable Fabric for Accelerating Large-scale Datacenter Services}, booktitle = {Proceeding of the 41st Annual International Symposium on Computer Architecture}, series = {ISCA '14}, year = {2014}, isbn = {978-1-4799-4394-4}, location = {Minneapolis, Minnesota, USA}, pages = {13-24}, numpages = {12}, url = {<http://dl.acm.org/citation.cfm?id=2665671.2665678>}, acmid = {2665678}, publisher = {IEEE Press}, address = {Piscataway, NJ, USA}, }

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We describe the design of a convolutional neural network accelerator running on a Stratix V FPGA. The design runs at three times the throughput of previous FPGA CNN accelerator designs. We show that the throughput/watt is significantly higher than for a GPU, and project the performance when ported to an Arria 10 FPGA.

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{https://www.microsoft.com/en-us/research/publication/accelerating-deep-convolutional-neural-networks-using-specialized-hardware/}, address = {}, pages = {}, journal = {}, volume = {}, chapter = {}, isbn = {}, }
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Bradford L. and Snyder, Lawrence}, title = {Eliminating Redundancies in Sum-of-product Array
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series = {ICS '01}, year = {2001}, isbn = {1-58113-410-X}, location = {Sorrento, Italy}, pages =
{65-77}, numpages = {13}, url = {http://doi.acm.org/10.1145/377792.377807}, doi =
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@inproceedings{Basu:2015:CTH:2863692.2863932, author = {Basu, Protonu and Hall, Mary and
Williams, Samuel and Straalen, Brian Van and Olikar, Leonid and Colella, Phillip}, title = {Compiler-
Directed Transformation for Higher-Order Stencils}, booktitle = {Proceedings of the 2015 IEEE
International Parallel and Distributed Processing Symposium}, series = {IPDPS '15}, year = {2015},
isbn = {978-1-4799-8649-1}, pages = {313-323}, numpages = {11}, url =
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Optimization, Stencil, High-Order, Multigrid, Mehrstellen}, }
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Dave and Dellinger, Eric and Mason, Jeff and Sundararajan, Prasanna}, title = {CHiMPS: A High-level
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numpages = {1}, url = {http://doi.acm.org/10.1145/1344671.1344720}, doi =
{10.1145/1344671.1344720}, acmid = {1344720}, publisher = {ACM}, address = {New York, NY,
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computing}, } @inproceedings{Wong:2011:CFV:1950413.1950419, author = {Wong, Henry and Betz,
Vaughn and Rose, Jonathan}, title = {Comparing FPGA vs. Custom Cmos and the Impact on Processor
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location = {Monterey, CA, USA}, pages = {5-14}, numpages = {10}, url =
{http://doi.acm.org/10.1145/1950413.1950419}, doi = {10.1145/1950413.1950419}, acmid =
{1950419}, publisher = {ACM}, address = {New York, NY, USA}, keywords = {area, cmos, delay,
fpga, soft processor}, }
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@article{DBLP:journals/corr/GruslysMDLG16,
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author      = {Audrunas Gruslys and
               R{\'}{e}mi Munos and
               Ivo Danihelka and
               Marc Lanctot and
               Alex Graves},
title       = {Memory-Efficient Backpropagation Through Time},
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journal    = {CoRR},  
volume     = {abs/1606.03401},  
year       = {2016},  
url        = {http://arxiv.org/abs/1606.03401},  
timestamp  = {Fri, 01 Jul 2016 17:39:49 +0200},  
biburl     = {http://dblp.uni-trier.de/rec/bib/journals/corr/GruslysMDLG16},  
bibsource  = {dblp computer science bibliography, http://dblp.org}
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