IEEE Access
Multidisciplinary | Rapid Review | Open Access Journal

Received 9 November 2023, accepted 9 November 2023, date of current version 22 November 2023.

Digital Object Identifier 10.1109/ACCESS.2023.3332265

COMMENTS AND CORRECTIONS

Corrections to "A Survey on FPGA-Based Heterogeneous Clusters Architectures"

WERNER FLORIAN SAMAYOA[1,2], MARIA LIZ CRESPO[1], ANDRES CICUTTIN[1], AND SERGIO CARRATO[2]

[1]Multidisciplinary Laboratory (MLab), The Abdus Salam International Centre for Theoretical Physics, 34151 Trieste, Italy
[2]Dipartimento di Ingegneria e Architettura (DIA), Università degli Studi di Trieste, 34127 Trieste, Italy

Corresponding author: Werner Florian Samayoa (werneroswaldo.floriansamayoa@phd.units.it)

This work was supported in part by the University of Trieste and in part by The Abdus Salam International Centre for Theoretical Physics.

In the above article [1], two references were missing [2], [3].

In the 19th paragraph of subsection D "General-Purpose Clusters" of Section I "Cluster Implementations," the third sentence should read "A custom network interface (NI) in the FPGA provides support for all communications, allowing users to focus on their applications written on an OpenMP extension called OmpSs [3]."

In the 8th paragraph of subsection C "FPGAs in Data Centers" of Section I "Cluster Implementations," the penultimate sentence should read "To further improve the usability of the platform, continuous developments have been made to integrate MPI [4], [5] and OmpSs [2] into the system."

REFERENCES

[1] W. F. Samayoa, M. L. Crespo, A. Cicuttin, and S. Carrato, "A survey on FPGA-based heterogeneous clusters architectures," *IEEE Access*, vol. 11, pp. 67679–67706, 2023, doi: 10.1109/ACCESS.2023.3288431.

[2] J. M. de Haro, R. Cano, C. Álvarez, D. Jiménez-González, X. Martorell, E. Ayguadé, J. Labarta, F. Abel, B. Ringlein, and B. Weiss, "OmpSs@cloudFPGA: An FPGA task-based programming model with message passing," in *Proc. IEEE Int. Parallel Distrib. Process. Symp. (IPDPS)*, Lyon, France, May 2022, pp. 828–838, doi: 10.1109/IPDPS53621.2022.00085.

[3] J. M. de Haro, J. Bosch, A. Filgueras, M. Vidal, D. Jiménez-González, C. Álvarez, X. Martorell, E. Ayguadé, and J. Labarta, "OmpSs@FPGA framework for high performance FPGA computing," *IEEE Trans. Comput.*, vol. 70, no. 12, pp. 2029–2042, Dec. 2021, doi: 10.1109/TC.2021.3086106.

[4] B. Ringlein, F. Abel, A. Ditter, B. Weiss, C. Hagleitner, and D. Fey, "Programming reconfigurable heterogeneous computing clusters using MPI with transpilation," in *Proc. IEEE/ACM Int. Workshop Heterogeneous High-Perform. Reconfigurable Comput. (H2RC)*, Nov. 2020, pp. 1–9, doi: 10.1109/H2RC51942.2020.00006.

[5] B. Ringlein, F. Abel, A. Ditter, B. Weiss, C. Hagleitner, and D. Fey, "ZRLMPI: A unified programming model for reconfigurable heterogeneous computing clusters," in *Proc. IEEE 28th Annu. Int. Symp. Field-Program. Custom Comput. Mach. (FCCM)*, Fayetteville, AR, USA, May 2020, p. 220, doi: 10.1109/FCCM48280.2020.00051.

© 2023 The Authors. This work is licensed under a Creative Commons Attribution 4.0 License.
For more information, see https://creativecommons.org/licenses/by/4.0/