

Automated area and coverage optimization of minimal latency checkers

Azad, Siavoosh Payandeh; Niazmand, Behrad; Apneet Kaur; Raik, Jaan; Jervan, Gert; Hollstein, Thomas 2017 22nd IEEE European Test Symposium (ETS 2017), Limassol, Cyprus, 22 – 26 May 2017 : proceedings 2017 / p. 7-8 : ill <https://doi.org/10.1109/ETS.2017.7968211>

Automated minimization of concurrent online checkers for network-on-chips

Saltarelli, Pietro; Niazmand, Behrad; Hariharan, Ranganathan; Raik, Jaan; Jervan, Gert; Hollstein, Thomas 10th International Symposium on Reconfigurable and Communication-centric Systems-on-Chip (ReCoSoC 2015) : Bremen, 29 June - 1 July 2015 2015 / [8] p. : ill <http://dx.doi.org/10.1109/ReCoSoC.2015.7238079>

Bandwidth Reduction DoS attacks in Multi-Tenant NoC-based MPSoCs : detection and avoidance strategies = Ribalaiuse vähendamise DoS-rünnakud mitme rentnikuga NoC-põhiste MPSoC-de puhul : tuvastamise ja vältimise strateegiad

Chaves Arroyave, Cesar Giovanni 2023 <https://doi.org/10.23658/taltech.8/2023> <https://digikogu.taltech.ee/et/Item/60b3f5ee-3a53-43c6-b79e-d6a8cbbc3489> https://www.ester.ee/record=b5548907*est

Challenges for future system-on-chip design

Hollstein, Thomas; Peng, Zebo; **Ubar, Raimund-Johannes**; Glesner, Manfred Circuit Paradigm in the 21st Century : ECCTD '01 : proceedings of the 15th European Conference on Circuit Theory and Design : Helsinki University of Technology, Finland, 28th-31st August 2001. Vol 3 2001 / p. 173-176

Communication modelling and synthesis for NoC-based systems with real-time constraints

Tagel, Mihkel; Ellervee, Peeter; Hollstein, Thomas; Jervan, Gert Proceedings of the 2011 IEEE Symposium on Design and Diagnostics of Electronic Circuits and Systems : April 13-15, 2011, Gottbus, Germany 2011 / p. 237-242 : ill <https://www.semanticscholar.org/paper/Communication-modelling-and-synthesis-for-NoC-based-Tagel-Ellervee/71f9595d88ed06b63367b87188b218fe6da6bd97>

Comprehensive performance and robustness analysis of 2D turn models for network-on-chips

Azad, Siavoosh Payandeh; Niazmand, Behrad; Janson, Karl; Kogge, Thilo; Raik, Jaan; Jervan, Gert; Hollstein, Thomas 2017 IEEE International Symposium on Circuits and Systems (ISCAS) 2017 / p. 1476-1479 : ill <https://doi.org/10.1109/ISCAS.2017.8050634> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Contention aware scheduling for NoC-based real-time systems

Tagel, Mihkel; Ellervee, Peeter; Hollstein, Thomas; Jervan, Gert Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK viienda aastakonverentsi artiklite kogumik : 25.-26. novembril 2011, Nelijärve 2011 / p. 75-78 : ill

Contention aware scheduling for NoC-based real-time systems

Tagel, Mihkel; Ellervee, Peeter; Hollstein, Thomas; Jervan, Gert Norchip 2011 : 14-15 November 2011, Lund 2011 / [4] p.: ill

Cross-layer dependability management in network on chip based system on chip = Kiipvõrkudel põhinevate süsteemide kihtideülene usaldatavuse haldus

Azad, Siavoosh Payandeh 2018 <https://digi.lib.ttu.ee/i/?9948> https://www.ester.ee/record=b5056143*est

Deadlock-free generic routing algorithms for 3-dimensional Networks-on-Chip with reduced vertical link density topologies

Ying, Haoyuan; Jaiswal, Ashok; **Hollstein, Thomas**; Hofmann, Klaus Journal of systems architecture 2013 / p. 528-542 : ill <https://doi.org/10.1016/j.sysarc.2013.03.005> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Design concept and microarchitecture of network-on-chip with best-effort and guaranteed-throughput services

Samman, Faizal; **Hollstein, Thomas** International journal of innovative computing, information and control 2019 / p. 305–319 : ill <https://doi.org/10.24507/ijicic.15.01.305> <http://www.ijicic.net/> <http://www.ijicic.net/servlet/Download?contentID=CONT5b67c7cbc23142feade914ceeabbd4d> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Design methodology for fault-tolerant heterogeneous MPSoC under real-time constraints

Amin, Mohsin; Tagel, Mihkel; Jervan, Gert; Hollstein, Thomas 7th International Workshop on Reconfigurable and Communication-Centric Systems-on-Chip : July 9-11, 2012 : York, United Kingdom : proceedings 2012 / [6 p.] : ill <https://ieeexplore.ieee.org/document/6322901>

Detecting and mitigating Low-and-Slow DoS attacks in NoC-based MPSoCs

Chaves Arroyave, Cesar Giovanni; Azad, Siavoosh Payandeh; Sepulveda, Johanna; Hollstein, Thomas 2019 14th International Symposium on Reconfigurable Communication-centric Systems-on-Chip (ReCoSoC) : July 1-3 2019, York - United Kingdom : proceedings 2019 / p. 82-89 : ill <https://doi.org/10.1109/ReCoSoC48741.2019.9034934>

Diagnosing DoS attacks in NoC-based MPSoCs

Chaves Arroyave, Cesar Giovanni; Azad, Siavoosh Payandeh; Hollstein, Thomas; Sepulveda, Johanna Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, TUZ 2019 2019 / p. [39–41] <https://www.researchgate.net/publication/333756736>

DICE - an interactive approach to hardware/software co-design of heterogeneous real-time systems

Hollstein, Thomas; Becker, J.; Kirschbaum, A.; Renner, F.-M.; Glesner, M. BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 97-100

A Distributed DoS detection scheme for NoC-based MPSoCs

Chaves Arroyave, Cesar Giovanni; Azad, Siavoosh Payandeh; Hollstein, Thomas; Sepulveda, Johanna 2018 IEEE Nordic Circuits and Systems Conference (NORCAS) : NORCHIP and International Symposium of System-on-Chip (SoC) : 30-31 October 2018, Tallinn, Estonia : proceedings in IEEE Xplore 2018 / 6 p. : ill <https://doi.org/10.1109/NORCHIP.2018.8573524>

DoS attack detection and path collision localization in NoC-based MPSoC architectures

Chaves Arroyave, Cesar Giovanni; Azad, Siavoosh Payandeh; Hollstein, Thomas; Sepulveda, Johanna Journal of low power electronics and applications 2019 / art. 7, 20 p. : ill <https://doi.org/10.3390/jlpea9010007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Dynamic quadrant partitioning adaptive routing algorithm for irregular reduced vertical link density topology 3-dimensional network-on-chips

Ying, Haoyuan; Hofmann, Klaus; Hollstein, Thomas Proceedings of the 2014 International Conference on High Performance Computing & Simulation (HPCS 2014) : July 21-25, 2014, Bologna, Italy 2014 / p. 516-522 : ill

An efficient feature-based method for people counting

Helmer, Daniel; Hinkelmann, Heiko; Hollstein, Thomas SAC '23: Proceedings of the 38th ACM/SIGAPP Symposium on Applied Computing 2023 / p. 852 - 855 <https://doi.org/10.1145/3555776.3577801>

An efficient FPGA-based architecture for contractive autoencoders

Kerner, Madis; Tammemäe, Kalle; Raik, Jaan; Hollstein, Thomas 2020 IEEE 28th Annual International Symposium on Field-Programmable Custom Computing Machines (FCCM), 3 – 6 May 2020, Fayetteville, Arkansas : proceedings 2020 / p. 230–230 <https://doi.org/10.1109/FCCM48280.2020.00062>.

Enhancing university visitor satisfaction : a human-robot interaction study on the design and perception of a guiding robot assistant

Leoste, Janika; Marmor, Kristel; Hollstein, Thomas; Hinkelmann, Heiko; Leoste, Leo Benjamin Robotics in education : proceedings of the RiE 2024 conference 2024 / p. 223-234 https://doi.org/10.1007/978-3-031-67059-6_20 [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Extended checkers for control part of routers in network-on-chips

Hariharan, Ranganathan; Niazmand, Behrad; Hollstein, Thomas; Raik, Jaan; Jervan, Gert MEDIAN 2015 : the 4th Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale : March 13, 2015, Grenoble, France 2015 / p. 36-39 : ill

Extended checkers for logic-based distributed routing in network-on-chips

Niazmand, Behrad; Hariharan, Ranganathan; Govind, Vineeth; Jervan, Gert; Hollstein, Thomas; Raik, Jaan BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 77-80 : ill

Extended checkers for logic-based distributed routing in network-on-chips

Niazmand, Behrad; Hariharan, Ranganathan; Govind, Vineeth; Jervan, Gert; Hollstein, Thomas; Raik, Jaan Proceedings of the 8th Annual Conference of the Estonian National Doctoral School in Information and Communication Technologies : December 5-6, 2014, Rakvere 2014 / p. 83-86 : ill

Fast and optimized task allocation method for low vertical link density 3-Dimensional Networks-on-Chip based many core systems

Ying, Haoyuan; Hollstein, Thomas; Hofmann, Klaus Proceedings : Design, Automation & Test in Europe : Grenoble, France, March 18-22, 2013 2013 / p. 1777-1782 : ill

Feasibility of a multi-tier cyber physical system as a self-aware entity

Tammemäe, Kalle; Hollstein, Thomas AmiES-2017 : Ambient Intelligence and Embedded Systems : International Symposium, 14-16 September, 2017, Vaasa, Finland 2017 / 3 p. : ill <http://amies-2017.international-symposium.org/abstracts.html#tammemae>

A framework for area-efficient concurrent online checkers design

Saltarelli, Pietro; Niazmand, Behrad; Hariharan, Ranganathan; Raik, Jaan; Jervan, Gert; Hollstein, Thomas MEDIAN Finale : Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale : November 10-11, 2015, Tallinn, Estonia 2015 / p. 64-69 : ill

A framework for combining concurrent checking and online embedded test for low-latency fault detection in NoC routers

Saltarelli, Pietro; Niazmand, Behrad; Raik, Jaan; Govind, Vineeth; Hollstein, Thomas; Jervan, Gert; Hariharan, Ranganathan NOCS '15 : International Symposium on Networks-on-Chip : Vancouver, BC, Canada, September 28-30, 2015 2015 / [8] p. : ill <http://dx.doi.org/10.1145/2786572.2788713>

A framework for comprehensive automated evaluation of concurrent online checkers

Saltarelli, Pietro; Niazmand, Behrad; Raik, Jaan; Hariharan, Ranganathan; Jervan, Gert; Hollstein, Thomas Euromicro Conference on Digital System Design : DSD 2015 : 26-28 August 2015, Funchal, Madeira, Portugal : proceedings 2015 / p. 288-292 : ill <http://dx.doi.org/10.1109/DSD.2015.15>

From online fault detection to fault management in network-on-chips : a ground-up approach

Azad, Siavoosh Payandeh; Niazmand, Behrad; Janson, Karl; Nevin, George; Oyeniran, Adeboye Stephen; Putkaradze, Tsotne; Apneet Kaur; Raik, Jaan; Jervan, Gert; Ubar, Raimund-Johannes; Hollstein, Thomas Proceedings 2017 IEEE 20th International Symposium on Design and Diagnostics of Electronic Circuit & Systems(DDECS) : April 19-21, 2017, Dresden, Germany 2017 / p. 48-53 : ill <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7934553>

GSNoC — the comprehensive design platform for 3-dimensional Networks-on-Chip based many core embedded systems

Ying, Haoyuan; Hollstein, Thomas; Hofmann, Klaus Proceedings of the 2013 International Conference on High Performance Computing & Simulation (HPCS 2013) : July 1-July 5, 2013, Helsinki, Finland 2013 / p. 217-223 : ill

Hardware/software co-design : state-of-the-art and future directions

Glesner, Manfred; Hollstein, Thomas; Gasteier, Michael; Münch, Michael BEC'96 : the 5th Biennial Baltic Electronics Conference, October 7-11, 1996, Tallinn, Estonia : proceedings 1996 / p. 9-16: ill

A hardware/software co-design reconfigurable network-on-chip FPGA emulation method

Ying, Haoyuan; Hollstein, Thomas; Hofmann, Klaus 2014 9th International Symposium on Reconfigurable and Communication-Centric Systems-on-Chip (ReCoSoC) : Montpellier, France, 26-28 May, 2014 2014 / [8] p. : ill

High-level synthesis and test in the MOSCITO-based virtual laboratory

Schneider, Andre; Diener, Karl-Heinz; Jervan, Gert; Peng, Z.; Raik, Jaan; Ubar, Raimund-Johannes; Hollstein, Thomas; Glesner, M. BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia 2002 / p. 287-290 : ill

Holistic approach for Fault-Tolerant Network-on-Chip based many-core systems [Online resource]

Azad, Siavoosh Payandeh; Niazmand, Behrad; Raik, Jaan; Jervan, Gert; Hollstein, Thomas arXiv.org 2016 / [8] p. : ill

Lightweight monitoring scheme for flooding DoS Attack detection in multi-tenant MPSoCs

Chaves Arroyave, Cesar Giovanni; Sepulveda, Johanna; Hollstein, Thomas 2021 IEEE International Symposium on Circuits and Systems (ISCAS), Daegu, Korea May 22-28, 2021 : proceedings 2021 / 5 p <https://doi.org/10.1109/ISCAS51556.2021.9401153>
[Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Logic-based implementation of fault-tolerant routing in 3D Network-on-Chips

Niazmand, Behrad; Azad, Siavoosh Payandeh; Flich, Jose; Raik, Jaan; Jervan, Gert; Hollstein, Thomas 2016 Tenth IEEE/ACM International Symposium on Networks-on-Chip (NOCS) : Nara, Japan, 31 August - 2 September 2016 2016 / [8] p. : ill <https://doi.org/10.1109/NOCS.2016.7579317>

A modular 6LoWPAN-based wireless sensor body area network for health-monitoring applications

Le Moullec, Yannick; Lecat, Yoann; Annus, Paul; Land, Raul; Kuusik, Alar; Reidla, Marko; Hollstein, Thomas; Reinsalu, Uljana; Tammemäe, Kalle; Ruberg, Priit APSIPA ASC 2014 : Asia-Pacific Signal and Information Processing Association Annual Summit and Conference 2014 : December 9-12, 2014, Siem Reap, city of Angkor Wat, Cambodia 2014 / [4] p. : ill

Motivation-driven learning processes at the example of embedded systems

Hollstein, Thomas; Reinsalu, Uljana; Leier, Mairo 10th European Workshop on Microelectronics Education : EWME 2014 : May 14-16, 2014, Tallinn, Estonia 2014 / p. 3-6 : ill

Network-on-Chip with equality-of-service : a local fair runtime arbitration method for global fair bandwidth share

Samman, Faizal; Hollstein, Thomas International journal of innovative computing, information and control 2019 / p. 1821-1834
<http://www.ijicic.net/servlet/Download?contentID=CONT34590d01977b424ea4f1cdfbb4c8c264> <https://doi.org/10.24507/ijicic.15.05.1821> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A new concept for a self-learning kit for FPGA design

Hollstein, Thomas; Zahm, U.; Wehn, N.; Herpel, H.-J.; Glesner, M. BEC : Baltic Electronics Conference : proceedings of the 4th Biennial Conference, October 9-14, 1994, Tallinn (Estonia). 2 1994 / p. 405-410: ill https://www.ester.ee/record=b2150914*est

New curricula and a competence centre through TEMPUS at the Technical University of Tallinn

Glesner, M.; Hollstein, Thomas; Courtois, B.; Amblar, P.; Ubar, Raimund-Johannes; Vainomaa, Kaido Workshop on Design Methodologies for Microelectronics, Smolenice castle, Slovakia, September 11-13, 1995 : proceedings 1995 / p. 347-353

NoCDepend : a flexible and scalable dependability technique for 3D networks-on-chip

Hollstein, Thomas; Azad, Siavoosh Payandeh; Kogge, Thilo; Ying, Haoyuan; Hofmann, Klaus 2015 IEEE 18th International

Symposium on Design and Diagnostics of Electronic Circuits & Systems DDECS 2015 : 22-24 April 2015, Belgrade, Serbia : proceedings 2015 / p. 75-78 : ill <http://dx.doi.org/10.1109/DDECS.2015.30>

Novel architectures for contractive autoencoders with embedded learning

Kerner, Madis; Tammemäe, Kalle; Raik, Jaan; Hollstein, Thomas 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 6 p. : ill <https://doi.org/10.1109/BEC49624.2020.9277246>

Novel Neural Network accelerator architectures for FPGAs = Uudsed närvivõrkude kiirendite arhitektuurid FPGAdele

Kerner, Madis 2024 https://www.ester.ee/record=b5675484*est <https://digikogu.taltech.ee/et/Item/3568fe35-19c3-43e6-9525-73c79371ab13> <https://doi.org/10.23658/taltech.16/2024>

Practicing start-up culture in teaching embedded systems

Reinsalu, Uljana; Azad, Siavoosh Payandeh; Leier, Mairo; Tammemäe, Kalle; Hollstein, Thomas EWME 2016 : 11th European Workshop on Microelectronics Education : May 11-13, 2016, Southampton, UK 2016 / [6] p. : ill <https://doi.org/10.1109/EWME.2016.7496463>

Preface

Hollstein, Thomas; Raik, Jaan; Kostin, Sergei; Tšertov, Anton; O'Connor, Ian; Reis, Ricardo VLSI-SoC: System-on-Chip in the Nanoscale Era – Design, Verification and Reliability, 24th IFIP WG 10.5/IEEE International Conference on Very Large Scale Integration, VLSI-SoC 2016, Tallinn, Estonia, September 26-28, 2016 : Revised Selected Papers 2017 / p. V-VI <https://link.springer.com/book/10.1007/978-3-319-67104-8> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Research on digital system design and test at Tallinn University of Technology

Ubar, Raimund-Johannes; Ellervee, Peeter; Hollstein, Thomas; Jervan, Gert; Jutman, Artur; Kruus, Margus; Raik, Jaan Research in Estonia : present and future 2011 / p. 184-205 : ill

Runtime contention and bandwidth-aware adaptive routing selection strategies for networks-on-chip

Samman, Faizal; Hollstein, Thomas; Glesner, Manfred IEEE transactions on parallel and distributed systems 2013 / p. 1411-1421 : ill <https://doi.org/10.1109/TPDS.2012.200> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Scalable dependable SoC architectures based on Networks-on-Chip

Hollstein, Thomas CREDES Summer School : Dependable Systems Design : handouts 2011 / p. 35-47 : ill

A simulation framework for 3-dimension networks-on-chip with different vertical channel density configurations

Ying, Haoyuan; Jaiswal, Ashok; Abd El Ghany, Mohamed A; Hollstein, Thomas; Hofmann, Klaus Proceedings of the 2012 IEEE 15th International Symposium on Design and Diagnostics of Electronic Circuits & Systems (DDECS) : April 18-20, 2012 Tallinn, Estonia 2012 / p. 83-88 : ill

Smart, wireless modular communication platform

Ruberg, Priit; Hollstein, Thomas; Reinsalu, Uljana; Tammemäe, Kalle; Le Moullec, Yannick; Kuusik, Alar; Reidla, Marko; Annus, Paul Proceedings of the 8th Annual Conference of the Estonian National Doctoral School in Information and Communication Technologies : December 5-6, 2014, Rakvere 2014 / p. 111-112 : ill

SoCDep2 : a framework for dependable task deployment on many-core systems under mixed-criticality constraints

Azad, Siavoosh Payandeh; Niazmand, Behrad; Ellervee, Peeter; Raik, Jaan; Jervan, Gert; Hollstein, Thomas 2016 11th International Symposium on Reconfigurable Communication-centric Systems-on-Chip (ReCoSoC) : June 27-29, 2016, Tallinn, Estonia 2016 / [6] p. : ill <https://doi.org/10.1109/ReCoSoC.2016.7533903>

Software-level TMR approach for on-board data processing in space applications

Janson, Karl; Treudler, Carl Johann; Hollstein, Thomas; Raik, Jaan; Jenihhin, Maksim; Fey, Goerschwin 21st IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems : DDECS 2018 : Budapest, Hungary 25-27 April, 2018 : proceedings 2018 / p. 147-152 : ill <https://doi.org/10.1109/DDECS.2018.00033>

System-level optimization of NoC-based timing sensitive systems

Tagel, Mihkel; Ellervee, Peeter; Hollstein, Thomas; Jervan, Gert Estonian journal of engineering 2011 / 2, p. 158-168 : ill https://artiklid.elnet.ee/record=b2422982*est

Techniques for robust routing, communication and computation in multiprocessor systems = Robustse marsruutimise, side ja arvutuse tehnikad mitmeprotsessorilistes süsteemides

Janson, Karl 2021 https://www.ester.ee/record=b5396084*est <https://digikogu.taltech.ee/et/Item/c9091d5c-dcd8-4b21-95a7-84ead85241e6> <https://doi.org/10.23658/taltech.3/2021>

Throughput estimation with regard to airtime consumption unfairness in mixed data rate Wi-Fi networks

Abdul-Hadi, Alaa Mohammed; Tarasyuk, Olga; Gorbenko, Anatoliy; Kharchenko, Vyacheslav; Hollstein, Thomas Communications - Scientific Letters of the University of Žilina 2014 / p. 84-89 : ill <https://komunikacie.uniza.sk/pdfs/csl/2014/01/15.pdf> [Journal metrics at Scopus](#) [Article at Scopus](#)

Triple fixed-point MAC unit for deep learning

Kerner, Madis; Tammemäe, Kalle; Raik, Jaan; Hollstein, Thomas Proceedings of the 2021 Design, Automation & Test in Europe (DATE 2021), 1-5 February 2021 : Virtual Conference 2021 / p. 1404-1407 <https://doi.org/10.23919/DATE51398.2021.9474020>