

Primary Studies

- P1:** C. Landauer and K. L. Bellman, An Architecture for Self-Awareness Experiments. 2017 IEEE International Conference on Autonomic Computing (ICAC), 2017.
<https://doi.org/10.1109/ICAC.2017.33>
- P2:** Perez-Palacin, Diego and Mirandola, Raffaella and Merseguer, José, Enhancing a QoS-Based Self-Adaptive Framework with Energy Management Capabilities. Proceedings of the Joint ACM SIGSOFT Conference – QoSA and ACM SIGSOFT Symposium – ISARCS on Quality of Software Architectures – QoSA and Architecting Critical Systems – ISARCS, 2011.
<https://doi.org/10.1145/2000259.2000287>
- P3:** J. F. Inglés-Romero and A. Romero-Garcés and C. Vicente-Chicote and J. Martínez, A Model-Driven Approach to Enable Adaptive QoS in DDS-Based Middleware. IEEE Transactions on Emerging Topics in Computational Intelligence, 2017.
<https://doi.org/10.1109/TETCI.2017.2669187>
- P4:** Thüm, Thomas and van Hoorn, André and Apel, Sven and Bürdek, Johannes and Getir, Sinem and Heinrich, Robert and Jung, Reiner and Kowal, Matthias and Lochau, Malte and Schaefer, Ina and Walter, Jürgen, Performance Analysis Strategies for Software Variants and Versions. Managed Software Evolution, 2019.
https://doi.org/10.1007/978-3-030-13499-0_8
- P5:** Brataas, Gunnar and Hanssen, Geir Kjetil and Ræder, Georg, Towards Agile Scalability Engineering. International Conference on Agile Software Development, 2018.
https://doi.org/10.1007/978-3-319-91602-6_17
- P6:** Zhang, X. and Lung, C.-H., Experience on building an architecture level adaptable system. Lecture Notes in Business Information Processing, 2012.
https://doi.org/10.1007/978-3-642-31069-0_15
- P7:** Zhang, X. and Lung, C.-H., Improving software performance and reliability with an architecture-based self-adaptive framework. Proceedings - International Computer Software and Applications Conference, 2010.
<https://doi.org/10.1109/COMPSAC.2010.68>
- P8:** Mirandola, R. and Potena, P. and Scandurra, P., Adaptation space exploration for service-oriented applications. Science of Computer Programming, 2014.
<https://doi.org/10.1016/j.scico.2013.09.017>
- P9:** Von Massow, R. and Van Hoorn, A. and Hasselbring, W., Performance simulation of runtime reconfigurable component-based software architectures. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2011.
https://doi.org/10.1007/978-3-642-23798-0_5
- P10:** Trubiani, C. and Bran, A. and van Hoorn, A. and Avritzer, A. and Knoche, H., Exploiting load testing and profiling for Performance Antipattern Detection. Information and Software Technology, 2018.
<https://doi.org/10.1016/j.infsof.2017.11.016>

- P11:** Incerto, E. and Tribastone, M. and Trubiani, C., Software performance self-adaptation through efficient model predictive control. ASE 2017 - Proceedings of the 32nd IEEE/ACM International Conference on Automated Software Engineering, 2017.
<https://doi.org/10.1109/ASE.2017.8115660>
- P12:** Incerto, E. and Tribastone, M. and Trubiani, C., Symbolic performance adaptation. Proceedings - 11th International Symposium on Software Engineering for Adaptive and Self-Managing Systems, SEAMS 2016, 2016.
<https://doi.org/10.1145/2897053.2897060>
- P13:** Incerto, E. and Tribastone, M. and Trubiani, C., A proactive approach for runtime self-adaptation based on queueing network fluid analysis. 1st International Workshop on Quality-Aware DevOps, QUDOS 2015 - Proceedings, 2015.
<https://doi.org/10.1145/2804371.2804375>
- P14:** Huber, N. and Brosig, F. and Spinner, S. and Kounev, S. and Bähr, M., Model-based self-Aware performance and resource management using the descartes modeling language. IEEE Transactions on Software Engineering, 2017.
<https://doi.org/10.1109/TSE.2016.2613863>
- P15:** Huber, N. and Brosig, F. and Kounev, S., Modeling dynamic virtualized resource landscapes. QoS'A'12 - Proceedings of the 8th International ACM SIGSOFT Conference on the Quality of Software Architectures, 2012.
<https://doi.org/10.1145/2304696.2304711>
- P16:** Di Marco, A. and Inverardi, P. and Spalazzese, R., Synthesizing self-adaptive connectors meeting functional and performance concerns. ICSE Workshop on Software Engineering for Adaptive and Self-Managing Systems, 2013.
<https://doi.org/10.1109/SEAMS.2013.6595500>
- P17:** De Sanctis, M. and Bucchiarone, A. and Trubiani, C., A DevOps Perspective for QoS-Aware Adaptive Applications. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2020.
https://doi.org/10.1007/978-3-030-39306-9_7
- P18:** Caporuscio, M. and Mirandola, R. and Trubiani, C., Building design-time and run-time knowledge for QoS-based component assembly. Software - Practice and Experience, 2017.
<https://doi.org/10.1002/spe.2502>
- P19:** C. Barna and H. Khazaei and M. Fokaefs and M. Litoiu, Delivering Elastic Containerized Cloud Applications to Enable DevOps. International Symposium on Software Engineering for Adaptive and Self-Managing Systems, 2017.
<https://doi.org/10.1109/SEAMS.2017.12>
- P20:** Cámara, J. and Garlan, D. and Moreno, G.A. and Schmerl, B., Analyzing self-adaptation via model checking of stochastic games. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2017.
https://doi.org/10.1007/978-3-319-74183-3_6

- P21:** Calinescu, R. and Autili, M. and Cámara, J. and Di Marco, A. and Gerasimou, S. and Inverardi, P. and Perucci, A. and Jansen, N. and Katoen, J.-P. and Kwiatkowska, M. and Mengshoel, O.J. and Spalazzese, R. and Tivoli, M., Synthesis and verification of self-aware computing systems. Self-Aware Computing Systems, 2017.
https://doi.org/10.1007/978-3-319-47474-8_11
- P22:** Becker, M. and Luckey, M. and Becker, S., Performance analysis of self-adaptive systems for requirements validation at design-time. QoSA 2013 - Proceedings of the 9th International ACM Sigsoft Conference on the Quality of Software Architectures, 2013.
<https://doi.org/10.1145/2465478.2465489>
- P23:** Becker, M. and Becker, S. and Meyer, J., SimuLizar: Design-time modeling and performance analysis of self-adaptive systems. Lecture Notes in Informatics (LNI), Proceedings - Series of the Gesellschaft für Informatik (GI), 2013.
<https://dl.gi.de/handle/20.500.12116/17731>
- P24:** Huber, Nikolaus and Brosig, Fabian and Kounev, Samuel, Model-Based Self-Adaptive Resource Allocation in Virtualized Environments. Symposium on Software Engineering for Adaptive and Self-Managing Systems, 2011.
<https://doi.org/10.1145/1988008.1988021>
- P25:** Yang, Q.-L. and Lv, J. and Tao, X.-P. and Ma, X.-X. and Xing, J.-C. and Song, W., Fuzzy self-adaptation of mission-critical software under uncertainty. Journal of Computer Science and Technology, 2013.
<https://doi.org/10.1007/s11390-013-1321-9>
- P26:** Arcelli, D. and Cortellessa, V. and Filieri, A. and Leva, A., Control theory for model-based performance-driven software adaptation. QoSA 2015 - Proceedings of the 11th International ACM SIGSOFT Conference on Quality of Software Architectures, Part of CompArch 2015, 2015.
<https://doi.org/10.1145/2737182.2737187>
- P27:** Koziolok, A. and Ardagna, D. and Mirandola, R., Hybrid multi-attribute QoS optimization in component based software systems. Journal of Systems and Software, 2013.
<https://doi.org/10.1016/j.jss.2013.03.081>
- P28:** Martens, A. and Ardagna, D. and Koziolok, H. and Mirandola, R. and Reussner, R., A hybrid approach for multi-attribute QoS optimisation in component based software systems. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2010.
https://doi.org/10.1007/978-3-642-13821-8_8
- P29:** Mazkatli, M. and Koziolok, A., Continuous integration of performance model. ICPE 2018 - Companion of the 2018 ACM/SPEC International Conference on Performance Engineering, 2018.
<https://doi.org/10.1145/3185768.3186285>
- P30:** Mirandola, R. and Potena, P. and Scandurra, P., An optimization process for adaptation space exploration of service-oriented applications. Proceedings - 6th IEEE International Symposium on Service-Oriented System Engineer-

- ing, SOSE 2011, 2011.
<https://doi.org/10.1109/SOSE.2011.6139103>
- P31:** Marzolla, M. and Mirandola, R., PARSY: Performance aware reconfiguration of software systems. *International Journal of Performability Engineering*, 2011.
<http://www.ijpe-online.com/EN/10.23940/ijpe.11.5.p479.mag>
- P32:** Arcelli, D. and Cortellessa, V. and Di Pompeo, D. and Eramo, R. and Tucci, M., Exploiting architecture/runtime model-driven traceability for performance improvement. *Proceedings - 2019 IEEE International Conference on Software Architecture, ICSA 2019*, 2019.
<https://doi.org/10.1109/ICSA.2019.00017>
- P33:** A. Lodde and A. Schlechter and P. Bauler and N. Biri and F. Feltz, Feedback Controlled Quality of Service Enforcement for Service Oriented Architectures. *International Conference on Services Computing*, 2010.
<https://doi.org/10.1109/SCC.2010.31>
- P34:** F. Sironi and A. Cuoccio and H. Hoffmann and M. Maggio and M. D. Santambrogio, Evolvable systems on reconfigurable architecture via self-aware adaptive applications. *2011 NASA/ESA Conference on Adaptive Hardware and Systems*, 2011.
<https://doi.org/10.1109/AHS.2011.5963933>
- P35:** A. Mousa and J. Bentahar and O. Alam, Multi-Objective Self-Adaptive Composite SaaS Using Feature Model. *International Conference on Future Internet of Things and Cloud*, 2018.
<https://doi.org/10.1109/FiCloud.2018.00019>
- P36:** J. Na and Y. Gao and B. Zhang and L. Huang and Z. Zhu, Improved Adaptation of Web Service Composition Based on Change Impact Probability. *Third International Conference on Dependability*, 2010.
<https://doi.org/10.1109/DEPEND.2010.30>
- P37:** J. Cámara and G. Moreno and D. Garlan, Reasoning about Human Participation in Self-Adaptive Systems. *International Symposium on Software Engineering for Adaptive and Self-Managing Systems*, 2015.
<https://doi.org/10.1109/SEAMS.2015.14>
- P38:** L. Shen and X. Peng and W. Zhao, Quality-Driven Self-Adaptation: Bridging the Gap between Requirements and Runtime Architecture by Design Decision. *36th Annual IEEE Computer Software and Applications Conference*, 2012.
<https://doi.org/10.1109/COMPSAC.2012.29>
- P39:** M. G. Stochel and M. R. Wawrowski and J. J. Waskiel, Adaptive Agile Performance Modeling and Testing. *36th Annual IEEE Computer Software and Applications Conference Workshops*, 2012.
<https://doi.org/10.1109/COMPSACW.2012.85>
- P40:** Arcelli, D. and Cortellessa, V. and Leva, A., A library of modeling components for adaptive queuing networks. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2016.
https://doi.org/10.1007/978-3-319-46433-6_14

- P41:** Lung, C.-H. and Zhang, X. and Rajeswaran, P., Improving software performance and reliability in a distributed and concurrent environment with an architecture-based self-adaptive framework. *Journal of Systems and Software*, 2016.
<https://doi.org/10.1016/j.jss.2016.06.102>
- P42:** C. Franke and M. Fritzsche and S. Pacheco-Sanchez, Self-Adaptive Model-Based Performance Management in Industrial Data Centers. *IEEE International Conference and Workshops on Engineering of Autonomic and Autonomous Systems*, 2010.
<https://doi.org/10.1109/EASe.2010.13>
- P43:** B. Chen and X. Peng and Y. Liu and S. Song and J. Zheng and W. Zhao, Architecture-Based Behavioral Adaptation with Generated Alternatives and Relaxed Constraints. *IEEE Transactions on Services Computing*, 2019.
<https://doi.org/10.1109/TSC.2016.2593459>
- P44:** N. Huber and J. Walter and M. Bähr and S. Kounev, Model-Based Autonomic and Performance-Aware System Adaptation in Heterogeneous Resource Environments: A Case Study. *International Conference on Cloud and Autonomic Computing*, 2015.
<https://doi.org/10.1109/ICCAC.2015.27>

Scores assigned to papers

Paper	T1	T2	T3	T4	T5	T6	T7
P1	0	0	0	0	0.5	0	0
P2	0	0	0	0	1	0	0.5
P3	0.5	0	0	0.5	0.5	0	0
P4	1	0	0	0.5	1	0.5	0.5
P5	0.5	0	1	0.5	0.5	0	0
P6	0	0	0	0.5	1	0	0.5
P7	0	0	0	0.5	1	0	0.5
P8	0	0	0	1	1	1	0
P9	1	0	0	1	0	0	1
P10	0	0.5	1	0	0	0	0
P11	0.5	0.5	0	1	1	0	0.5
P12	0.5	0	0	1	1	0	0.5
P13	0.5	0	0	0.5	1	0	0.5
P14	0	0	0	0.5	1	0	0.5
P15	0	0	0	0.5	1	0	0.5
P16	0	0	0	0	1	0	0.5
P17	1	0	1	0.5	0.5	0	0
P18	1	0.5	0	0.5	0.5	0.5	0.5
P19	1	0	1	1	0	0	0
P20	0.5	0.5	0	1	1	0	0.5
P21	0	0	0	1	1	0	0.5
P22	0	0	0	0	1	0	0.5
P23	0.5	0	0	0	1	0	0.5
P24	0.5	1	0	1	0	0	0
P25	1	0	0	1	0	0	0
P26	0.5	0	0	1	0	0	0
P27	0.5	0	0	0	1	1	1

P28	0.5	0	0	0	1	1	1
P29	1	0	1	0	1	0.5	0.5
P30	0.5	0	0	0.5	1	1	0
P31	0.5	0	0	1	0	0	0.5
P32	1	0	0.5	0	1	0	0
P33	0.5	0	0.5	1	0	0	1
P34	1	0.5	0	1	0	0	0.5
P35	0.5	0	0.5	1	0	1	0
P36	1	0.5	1	1	0.5	0	0.5
P37	0.5	0	0	0.5	0	0	0
P38	0.5	0.5	0.5	1	1	0	0
P39	1	0.5	1	1	1	0.5	0.5
P40	0.5	0	0	1	0	0	0
P41	1	0	0	1	0	0	0
P42	1	0.5	0.5	1	0	0	0.5
P43	1	0.5	0.5	1	0.5	1	0
P44	1	0.5	1	1	0.5	0	0.5