

Paweł T. Wojciechowski

Institute of Computing Science
Poznań University of Technology
Piotrowo 2
Poznań 60-965, Poland

tel.: +(48) 616653021
web: <http://www.cs.put.poznan.pl/pawelw>
email: Pawel.T.Wojciechowski@cs.put.edu.pl

Education

- Habilitation** Computer Science, Poznan University of Technology, Poland, 24.06.2008.
Thesis title: *Language Design for Atomicity, Declarative Synchronization, and Dynamic Update in Communicating Systems*
- Ph.D.** Computer Science, University of Cambridge, United Kingdom, 22.07.2000
Thesis title: *Nomadic Pict: Language and Infrastructure Design for Mobile Computation*
Supervisors: prof. Peter Sewell and prof. Ken Moody
- M.Sc. & B.S.** Computer Science (*with Honors*), Poznan University of Technology, Poland, 5.07.1993

Employment History

- 06/2008 – present *Associate Professor*
Poznan University of Technology, Institute of Computing Science, Poland
- 09/2005 – 06/2008 *Assistant Professor*
Poznan University of Technology, Institute of Computing Science, Poland
- 01/2001 – 08/2005 *Research and Teaching Assistant, Instructor* in the Distributed Systems Lab.
The Swiss Federal Institute of Technology in Lausanne (Ecole Polytechnique Fédérale de Lausanne, EPFL), School of Computer and Communication Sciences, Switzerland
- 01/2000 – 01/2001 *Postdoctoral Research Associate* in the Theory and Semantics Group
University of Cambridge, Computer laboratory, United Kingdom
- 09/1995 – 12/1999 *Doctoral student* in the OPERA (Distributed Systems) Group
University of Cambridge, Computer laboratory, United Kingdom
- 09/1993 – 08/1995 *Teaching and Research Assistant, Instructor*
Poznan University of Technology, Institute of Computing Science, Poland

Awards, Honors, Scholarships and Fellowships

1. Poznan University of Technology Rector's Jubilee Award, 2024.
2. Poznan University of Technology Rector's Award for Research and Teaching Achievements, 2023.
3. Poznan University of Technology Rector's Award for Organization Achievements, 2019.
4. Poznan University of Technology Rector's Award for Research Achievements, 2018.
5. Poznan University of Technology Rector's Award for Fund Raising Achievements, 2015.
6. Medal of the Commission of National Education (nr 133273), awarded by the Ministry of Education and Science to academics in Poland for special contributions to education, 2013.
7. Poznan University of Technology Rector's Award for Research Achievements, 2011.

8. Polish Ministry of Education and Science Award (of the 2nd degree) for the Habilitation Thesis, awarded to academics in Poland once a year, 2009.
9. Polish Academy of Sciences (PAN) Award of IV Division (Technical Sciences) for the monograph in the field of computer science, awarded each year to 7 researchers only, out of all applicants in Poland, 2009.
10. Cambridge Philosophical Society Travel Grant, 1996.
11. Wolfson Foundation Scholarship for Graduate Students from Eastern Europe, for four years of study towards a Ph.D. degree (any subject) at the University of Cambridge, awarded to 2 candidates only, out of all applicants from Eastern Europe, 1995.
12. Poznan University of Technology Rector's Award for Outstanding Academic Achievement, awarded to 4 graduates each year, out of all graduates (in all subjects) from PUT, 1993.

Research and Creative Works

Bibliographies in example scientific databases, with my ID:

- [ORCID \(0000-0003-2008-278X\)](#)
- [Scopus \(8902380500\)](#)
- [Web of Science \(511087\)](#)
- [Google Scholar](#)
- [dblp](#)
- [SIN at Poznan University of Technology](#)

Since I work in two different communities, I attached to papers the rank of the Computer Science Conference and Journal Ranking of the Computing Research and Education Association of Australasia (CORE) in the year of publication, where A* = Exceptional, the flagship conferences or journals for the particular area, A = Excellent, B = Good to Very Good, and C = Sound and Satisfactory (see <https://www.core.edu.au/conference-portal> for details).

Journal articles (peer reviewed)

- [1] Maciej Kokociński, Tadeusz Kobus, and Paweł T. Wojciechowski. “On the correctness of highly available systems in the presence of failures”. In: *Journal of Parallel and Distributed Computing (JPDC)* 180 (Oct. 2023). DOI: [10.1016/j.jpdc.2023.04.008](https://doi.org/10.1016/j.jpdc.2023.04.008).
▷ A, [PDF](#).
- [2] Maciej Kokociński, Tadeusz Kobus, and Paweł T. Wojciechowski. “On Mixing Eventual and Strong Consistency: Acute Cloud Types”. In: *IEEE Transactions on Parallel and Distributed Systems (TPDS)* 33.6 (June 2022), pp. 1338–1356. DOI: [10.1109/TPDS.2021.3090318](https://doi.org/10.1109/TPDS.2021.3090318).
▷ A*, [PDF](#).
- [3] Konrad Siek and Paweł T. Wojciechowski. “Last-use Opacity: A Strong Safety Property for Transactional Memory with Prerelease Support”. In: *Distributed Computing* 35.3 (June 2022), pp. 265–301. DOI: [10.1007/s00446-022-00420-2](https://doi.org/10.1007/s00446-022-00420-2).
▷ A, [PDF](#).

- [4] Jan Kończak and Paweł T. Wojciechowski and Nuno Santos and Tomasz Żurkowski and André Schiper. “Recovery Algorithms for Paxos-based State Machine Replication”. In: *IEEE Transactions on Dependable and Secure Computing (TDSC)* 18.2 (Mar. 2021), pp. 623–640. DOI: [10.1109/TDSC.2019.2926723](https://doi.org/10.1109/TDSC.2019.2926723).
▷ **A**, [PDF](#).
- [5] Tadeusz Kobus, Maciej Kokociński, and Paweł T. Wojciechowski. “Hybrid Transactional Replication: State-Machine and Deferred-Update Replication Combined”. In: *IEEE Transactions on Parallel and Distributed Systems (TPDS)* 29.7 (July 2018), pp. 1499–1514. DOI: [10.1109/TPDS.2018.2796079](https://doi.org/10.1109/TPDS.2018.2796079).
▷ **A***, [PDF](#).
- [6] Paweł Kobyliński and Konrad Siek and Jan Baranowski and Paweł T. Wojciechowski. “Helenos: A Realistic Benchmark for Distributed Transactional Memory”. In: *Software: Practice and Experience* 48.3 (Mar. 2018), pp. 528–549. DOI: [10.1002/spe.2548](https://doi.org/10.1002/spe.2548).
▷ **B**, [PDF](#).
- [7] Tadeusz Kobus, Maciej Kokociński, and Paweł T. Wojciechowski. “Relaxing Real-time Order in Opacity and Linearizability”. In: *Journal of Parallel and Distributed Computing (JPDC)* 100 (Feb. 2017), pp. 57–70. DOI: [10.1016/j.jpdc.2016.10.007](https://doi.org/10.1016/j.jpdc.2016.10.007).
▷ **A***, [PDF](#).
- [8] Jan Kończak, Paweł T. Wojciechowski, and Rachid Guerraoui. “Operation-Level Wait-Free Transactional Memory with Support for Irrevocable Operations”. In: *IEEE Transactions on Parallel and Distributed Systems (TPDS)* 28.12 (Dec. 2017), pp. 3570–3583. DOI: [10.1109/TPDS.2017.2734879](https://doi.org/10.1109/TPDS.2017.2734879).
▷ **A***, [PDF](#).
- [9] Paweł T. Wojciechowski, Tadeusz Kobus, and Maciej Kokociński. “State-Machine and Deferred-Update Replication: Analysis and Comparison”. In: *IEEE Transactions on Parallel and Distributed Systems (TPDS)* 28.3 (Mar. 2017), pp. 891–904. DOI: [10.1109/TPDS.2016.2590422](https://doi.org/10.1109/TPDS.2016.2590422).
▷ **A***, [PDF](#).
- [10] Konrad Siek and Paweł T. Wojciechowski. “Atomic RMI: a Distributed Transactional Memory Framework”. In: *International Journal of Parallel Programming* 44.3 (June 2016), pp. 598–619. DOI: [10.1007/s10766-015-0361-x](https://doi.org/10.1007/s10766-015-0361-x).
▷ **A**, [PDF](#).
- [11] Peter Sewell, Paweł T. Wojciechowski, and Asis Unyapoth. “Nomadic Pict: Programming Languages, Communication Infrastructure Overlays, and Semantics for Mobile Computation”. In: *ACM Transactions on Programming Languages and Systems (TOPLAS)* 32.4 (Apr. 2010), 12:1–12:63. DOI: [10.1145/1734206.1734209](https://doi.org/10.1145/1734206.1734209).
▷ **A***, [PDF](#).
- [12] Paweł T. Wojciechowski and Peter Sewell. “Nomadic Pict: Language and Infrastructure Design for Mobile Agents”. In: *IEEE Concurrency* 8.2 (Apr. 2000), pp. 42–52.
▷ **A**, [PDF](#).

Conference papers (peer reviewed)

- [13] Tadeusz Kobus, Maciej Kokociński, and Paweł T. Wojciechowski. “Jiffy: A Lock-free Skip List with Batch Updates and Snapshots”. In: *Proceedings of PPOPP '22: the 27th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*. Apr. 2022, pp. 400–415. DOI: [10.1145/](https://doi.org/10.1145/)

- 3503221.3508437.
▷ **A**, **PDF**.
- [14] Jan Kończak and Paweł T. Wojciechowski. “Failure Recovery from Persistent Memory in Paxos-based State Machine Replication”. In: *Proceedings of SRDS '21: the 40th IEEE Symposium on Reliable Distributed Systems*. Sept. 2021, pp. 88–98. DOI: [10.1109/SRDS53918.2021.00018](https://doi.org/10.1109/SRDS53918.2021.00018).
▷ **B**, **PDF**.
- [15] Maciej Kokociński, Tadeusz Kobus, and Paweł T. Wojciechowski. “On Mixing Eventual and Strong Consistency: Bayou Revisited”. In: *Proceedings of PODC '19: the 38th ACM Symposium on Principles of Distributed Computing*. July 2019, pp. 458–460. DOI: [10.1145/3293611.3331583](https://doi.org/10.1145/3293611.3331583).
▷ **A***, **PDF**.
- [16] Maciej Kokociński, Tadeusz Kobus, and Paweł T. Wojciechowski. “Brief Announcement: Eventually Consistent Linearizability”. In: *Proceedings of ACM PODC '15: the 34th ACM Symposium on Principles of Distributed Computing*. July 2015, pp. 237–239. DOI: [10.1145/2767386.2767448](https://doi.org/10.1145/2767386.2767448).
▷ **A***, **PDF**.
- [17] Maciej Kokociński, Tadeusz Kobus, and Paweł T. Wojciechowski. “Make the Leader Work: Executive Deferred Update Replication”. In: *Proceedings of SRDS '14: the 33rd IEEE Symposium on Reliable Distributed Systems*. Oct. 2014, pp. 89–94. DOI: [10.1109/SRDS.2014.42](https://doi.org/10.1109/SRDS.2014.42).
▷ **B**, **PDF**.
- [18] Konrad Siek and Paweł T. Wojciechowski. “Brief Announcement: Relaxing Opacity in Pessimistic Transactional Memory”. In: *Proceedings of DISC '14: the 28th International Symposium on Distributed Computing*. Vol. 8784. Lecture Notes in Computer Science. Oct. 2014, pp. 540–541. DOI: [10.1007/978-3-662-45174-8](https://doi.org/10.1007/978-3-662-45174-8).
▷ **A**, **PDF**.
- [19] Tadeusz Kobus, Maciej Kokociński, and Paweł T. Wojciechowski. “Hybrid Replication: State-Machine-based and Deferred-Update Replication Schemes Combined”. In: *Proceedings of ICDCS '13: the 33rd International Conference on Distributed Computing Systems*. July 2013, pp. 286–296. DOI: [10.1109/ICDCS.2013.30](https://doi.org/10.1109/ICDCS.2013.30).
▷ **A**, **PDF**.
- [20] Konrad Siek and Paweł T. Wojciechowski. “Brief Announcement: Towards a Fully-Articulated Pessimistic Distributed Transactional Memory”. In: *Proceedings of SPAA '13: the 25th ACM Symposium on Parallelism in Algorithms and Architectures*. July 2013, pp. 111–114. DOI: [10.1145/2486159.2486166](https://doi.org/10.1145/2486159.2486166).
▷ **A**, **PDF**.
- [21] Tadeusz Kobus and Paweł T. Wojciechowski. “RESTGroups for Resilient Web Services”. In: *Proceedings of SOFSEM '12: the 38th International Conference on Current Trends in Theory and Practice of Computer Science*. Vol. 7147. Lecture Notes in Computer Science. Jan. 2012, pp. 505–517.
▷ **B**, **PDF**.
- [22] Konrad Siek and Paweł T. Wojciechowski. “A Formal Design of a Tool for Static Analysis of Upper Bounds on Object Calls in Java”. In: *Proceedings of FMICS '12: the 17th International Workshop on Formal Methods for Industrial Critical Systems (co-located with FM '12: the 18th International Symposium on Formal Methods)*. Vol. 7437. Lecture Notes in Computer Science. Aug. 2012, pp. 192–206. DOI: [10.1007/978-3-642-32469-7_13](https://doi.org/10.1007/978-3-642-32469-7_13).
▷ **C**, **PDF**.

- [23] Paweł T. Wojciechowski, Tadeusz Kobus, and Maciej Kokociński. “Model-Driven Comparison of State-Machine-based and Deferred-Update Replication Schemes”. In: *Proceedings of SRDS '12: the 31st IEEE International Symposium on Reliable Distributed Systems*. Oct. 2012, pp. 101–110. DOI: [10.1109/SRDS.2012.44](https://doi.org/10.1109/SRDS.2012.44).
▷ **B**, [PDF](#).
- [24] Paweł T. Wojciechowski. “Typed First-class Communication Channels and Mobility for Concurrent Scripting Languages”. In: *Proceedings of SLE '11: the 4th ACM SIGPLAN International Conference on Software Language Engineering*. Vol. 6940. Lecture Notes in Computer Science. July 2011, pp. 378–387.
▷ **B**, [PDF](#).
- [25] Olivier Rütli, Paweł T. Wojciechowski, and André Schiper. “Service Interface: A New Abstraction for Implementing and Composing Protocols”. In: *Proceedings of SAC '06: the 21st ACM Symposium on Applied Computing - Track on Dependable and Adaptive Distributed Systems*. Apr. 2006, pp. 691–696.
▷ **B**, [PDF](#).
- [26] Olivier Rütli, Paweł T. Wojciechowski, and André Schiper. “Structural and Algorithmic Issues of Dynamic Protocol Update”. In: *Proceedings of IPDPS '06: the 20th IEEE International Parallel and Distributed Processing Symposium*. Apr. 2006.
▷ **A**, [PDF](#).
- [27] Paweł T. Wojciechowski. “A Class-Based Object Calculus of Dynamic Binding: Reduction and Properties”. In: *Proceedings of SC '06: the 5th IFIP International Symposium on Software Composition (co-located with ETAPS '06)*. Vol. 4089. Lecture Notes in Computer Science. Mar. 2006, pp. 131–146.
▷ **d'ed**, [PDF](#).
- [28] Paweł T. Wojciechowski. “Scalable Message Routing for Mobile Software Assistants”. In: *Proceedings of EUC '06: the 2006 IFIP International Conference on Embedded And Ubiquitous Computing*. Vol. 4096. Lecture Notes in Computer Science. Aug. 2006, pp. 355–364.
▷ **C**, [PDF](#).
- [29] Vlad Tanasescu and Paweł T. Wojciechowski. “Role-Based Declarative Synchronization for Reconfigurable Systems”. In: *Proceedings of PADL '05: the 7th International Symposium on Practical Aspects of Declarative Languages*. Vol. 3350. Lecture Notes in Computer Science. Jan. 2005, pp. 52–66.
▷ **B**, [PDF](#).
- [30] Paweł T. Wojciechowski. “Isolation-only Transactions by Typing and Versioning”. In: *Proceedings of PPDP '05: the 7th ACM-SIGPLAN International Symposium on Principles and Practice of Declarative Programming*. July 2005.
▷ **B**, [PDF](#).
- [31] Paweł T. Wojciechowski and Olivier Rütli. “On Correctness of Dynamic Protocol Update”. In: *Proceedings of FMOODS '05: the 7th IFIP Conference on Formal Methods for Open Object-Based Distributed Systems*. Vol. 3535. Lecture Notes in Computer Science. June 2005, pp. 275–289.
▷ **C**, [PDF](#).
- [32] Paweł T. Wojciechowski. “Concurrency Combinators for Declarative Synchronization”. In: *Proceedings of APLAS '04: the 2nd Asian Symposium on Programming Languages and Systems*. Vol. 3302. Lecture Notes in Computer Science. Nov. 2004, pp. 163–178.
▷ **B**, [PDF](#).

- [33] Paweł T. Wojciechowski, Olivier Rütli, and André Schiper. “SAMOA: A Framework for a Synchronisation-Augmented Microprotocol Approach”. In: *Proceedings of IPDPS '04: the 18th IEEE International Parallel and Distributed Processing Symposium*. Apr. 2004.
▷ **A**, [PDF](#).
- [34] Sergio Mena, André Schiper, and Paweł T. Wojciechowski. “A Step Towards a New Generation of Group Communication Systems”. In: *Proceedings of Middleware '03: the 4th ACM/IFIP/USENIX International Middleware Conference*. Vol. 2672. Lecture Notes in Computer Science. June 2003, pp. 414–432.
▷ **A**, [PDF](#).
- [35] Paweł T. Wojciechowski, Sergio Mena, and André Schiper. “Semantics of Protocol Modules Composition and Interaction”. In: *Proceedings of COORDINATION '02: the fifth International Conference on Coordination Models and Languages*. Vol. 2315. Lecture Notes in Computer Science. Apr. 2002, pp. 389–404.
▷ **A**, [PDF](#).
- [36] Paweł T. Wojciechowski. “Algorithms for Location-Independent Communication between Mobile Agents”. In: *Proceedings of AISB '01 Symposium on Software Mobility and Adaptive Behaviour*. Mar. 2001.
▷ **d'ed**, [PDF](#).
- [37] Paweł T. Wojciechowski and Peter Sewell. “Nomadic Pict: Language and Infrastructure Design for Mobile Agents”. In: *Proceedings of ASA/MA '99: Symposium on Agent Systems and Applications/Mobile Agents*. Oct. 1999, pp. 2–12.
▷ **d'ed**, [PDF](#).

Workshop papers

- [38] Jan Kończak, Paweł T. Wojciechowski, and Rachid Guerraoui. “Ensuring Irrevocability in Wait-free Transactional Memory”. In: *Proceedings of TRANSACT '16 : the 11th ACM SIGPLAN Workshop on Transactional Computing (in conjunction with PPOPP '16: the 21st ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming)*. Mar. 2016.
▷ **A (PPoPP)**, [PDF](#).
- [39] Paweł T. Wojciechowski and Konrad Siek. “Atomic RMI 2: Distributed Transactions for Java”. In: *Proceedings of AGERE '16: the 6th Workshop on Programming based on Actors, Agents, and Decentralized Control (in conjunction with SPLASH '16)*. Oct. 2016, pp. 61–69. DOI: <http://dx.doi.org/10.1145/3001886.3001893>.
▷ **A* (OOPSLA)**, [PDF](#).
- [40] Tadeusz Kobus, Maciej Kokociński, and Paweł T. Wojciechowski. “The Correctness Criterion for Deferred Update Replication”. In: *Proceedings of TRANSACT '15 : the 10th ACM SIGPLAN Workshop on Transactional Computing (co-located with 47th ACM STOC '15 and 36th ACM PLDI '15)*. June 2015.
▷ **A* (STOC i PLDI)**, [PDF](#).
- [41] Maciej Kokociński, Tadeusz Kobus, and Paweł T. Wojciechowski. “On Safety of Replicated Transactional Memory”. In: *Proceedings of WTTM '14: the 6th Workshop on the Theory of Transactional Memory (in conjunction with ACM PODC '14: the 33rd Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing)*. July 2014.
▷ **A* (PODC)**, [PDF](#).

- [42] Maciej Kokociński, Tadeusz Kobus, and Paweł T. Wojciechowski. “Towards a more scalable Deferred Update Replication (Abstract)”. In: *WTM '14: the 4th Euro-TM Workshop on Transactional Memory (co-located with EuroSys '14: the 9th ACM SIGOPS European Conference on Computer Systems)*. Apr. 2014.
- [43] Jan Kończak, Rachid Guerraoui, and Paweł T. Wojciechowski. “Towards wait-free transactional memory with irrevocables (Abstract)”. In: *WTM '14: the 4th Euro-TM Workshop on Transactional Memory (co-located with EuroSys '14: the 9th ACM SIGOPS European Conference on Computer Systems)*. Apr. 2014.
- [44] Konrad Siek and Paweł T. Wojciechowski. “Zen and the Art of Concurrency Control: An Exploration of TM Safety Property Space with Early Release in Mind”. In: *Proceedings of WTTM '14: the 6th Workshop on the Theory of Transactional Memory (in conjunction with ACM PODC '14: the 33rd Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing)*. July 2014.
▷ **A*** (PODC), [PDF](#).
- [45] Paweł T. Wojciechowski and Konrad Siek. “Having Your Cake and Eating it Too: Combining Strong and Eventual Consistency”. In: *Proceedings of PaPEC '14: the 1st Workshop on Principles and Practice of Eventual Consistency (co-located with EuroSys'14: the 9th ACM SIGOPS European Conference on Computer Systems)*. Apr. 2014. DOI: [10.1145/2596631.2596637](https://doi.org/10.1145/2596631.2596637).
▷ **A** (EuroSys), [PDF](#).
- [46] Paweł T. Wojciechowski and Jan Kończak. “Back to the Futures: the Futures-based Distributed Transactional Memory (Abstract)”. In: *WTM '13: 3rd Euro-TM Workshop on Transactional Memory (co-located with EuroSys '13: the 8th ACM SIGOPS European Conference on Computer Systems)*. Apr. 2013.
- [47] Tadeusz Kobus, Maciej Kokociński, and Paweł T. Wojciechowski. “Practical Considerations of Distributed STM Systems Development (Abstract)”. In: *Proceedings of WDTM '12: the 1st Euro-TM Workshop on Distributed Transactional Memory*. Feb. 2012.
- [48] Paweł T. Wojciechowski. “Conditional Concurrency Combinators”. In: *LaME '12: International Workshop on Languages for the Multi-core Era (co-located with ECOOP '12: the 26th European Conference on Object-Oriented Programming)*. June 2012.
▷ **A** (ECOOP), [PDF](#).
- [49] Paweł T. Wojciechowski and Jan Kończak. “A Formal Model of Crash Recovery in Distributed Software Transactional Memory (Extended Abstract)”. In: *WTTM '12: the 4th Workshop on the Theory of Transactional Memory (co-located with PODC '12: the 31st Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing)*. July 2012.
▷ **A*** (PODC), [PDF](#).
- [50] Paweł T. Wojciechowski and Konrad Siek. “Transaction Concurrency Control via Dynamic Scheduling Based on Static Analysis (Abstract)”. In: *WTM '12: 2nd Euro-TM Workshop on Transactional Memory (co-located with EuroSys '12: the 7th ACM SIGOPS European Conference on Computer Systems)*. Apr. 2012.
- [51] Sebastian Kochman, Paweł T. Wojciechowski, and Miłosz Kmiecik. “Batched Transactions for RESTful Web Services”. In: *Proceedings of ComposableWeb '11: the 3rd International Workshop on Lightweight Integration on the Web (co-located with ICWE '11: the 11th International Conference on Web Engineering)*. Vol. 7059. Lecture Notes in Computer Science. June 2011, pp. 86–98.
▷ **B** (ICWE), [PDF](#).

- [52] Tadeusz Kobus and Paweł T. Wojciechowski. “A 90% RESTful Group Communication Service (Extended Abstract)”. In: *Proceedings of DCDP '10: the Workshop on Decentralized Coordination of Distributed Processes (co-located with COORDINATION '10: the 12th International Conference on Coordination Models and Languages)*. June 2010.
▷ **A (Coordination)**, [PDF](#).
- [53] Konrad Siek and Paweł T. Wojciechowski. “Statically Computing Upper Bounds on Object Calls for Pessimistic Concurrency Control”. In: *Proceedings of (EC)² '10: Workshop on Exploiting Concurrency Efficiently and Correctly (co-located with CAV '10: the 22nd International Conference on Computer Aided Verification)*. July 2010.
▷ **A* (CAV)**, [PDF](#).
- [54] Peter Sewell and Paweł T. Wojciechowski. “Verifying Overlay Networks for Relocatable Computations (or: Nomadic Pict, relocated)”. In: *Proceedings of the Workshop on the Rise and Rise of the Declarative Datacentre*. May 2008.
- [55] Paweł T. Wojciechowski. “Extending Atomic Tasks to Distributed Atomic Tasks”. In: *Proceedings of the (EC)² Workshop on Exploiting Concurrency Efficiently and Correctly (co-located with CAV '08: the 20th International Conference on Computer Aided Verification)*. July 2008.
▷ **A* (CAV)**, [PDF](#).
- [56] Paweł T. Wojciechowski. “Typing for Reliable Distributed Systems - Recent Advances”. In: *Proceedings of Workshop on Dependable Software - Tools and Methods (co-located with IEEE DSN '05: the 35th International Conference on Dependable Systems and Networks)*. June 2005.
▷ **A (DSN)**, [PDF](#).
- [57] Peter Sewell, Paweł T. Wojciechowski, and Benjamin C. Pierce. “Location Independence for Mobile Agents”. In: *Proceedings of the Workshop on Internet Programming Languages (co-located with ICCL '98: International Conference on Computer Languages)*. May 1998.
▷ **A (ICCL)**, [PDF](#).

Book chapters

- [58] Tadeusz Kobus, Maciej Kokociński, and Paweł T. Wojciechowski. “Introduction to Transactional Replication”. In: *Transactional Memory: Foundations, Algorithms, Tools, and Applications. COST Action Euro-TM IC1001*. Vol. 8913. Lecture Notes in Computer Science. 2015, pp. 309–340. DOI: [10.1007/978-3-319-14720-8_15](#).
- [59] Daniel Bünzli and Rachele Fuzzati and Sergio Mena and Uwe Nestmann and Olivier Rütli and André Schiper and Paweł T. Wojciechowski. “Advances in the Design and Implementation of Group Communication Middleware”. In: *Dependable Systems: Software, Computing, Networks*. Vol. 4028. Lecture Notes in Computer Science. Sept. 2006, pp. 172–194. DOI: [10.1007/11808107](#).
- [60] Peter Sewell, Paweł T. Wojciechowski, and Benjamin C. Pierce. “Location-Independent Communication for Mobile Agents: a Two-Level Architecture”. In: *Internet Programming Languages*. Vol. 1686. Lecture Notes in Computer Science. Oct. 1999, pp. 1–31. DOI: [10.1007/3-540-47959-7](#).

Theses

- [61] Paweł T. Wojciechowski. *Language Design for Atomicity, Declarative Synchronization, and Dynamic Update in Communicating Systems*. Publishing House of Poznan University of Technology, 2007. [▷](#), [PDF](#).
- [62] Paweł T. Wojciechowski. “Nomadic Pict: Language and Infrastructure Design for Mobile Computation”. PhD thesis. University of Cambridge, June 2000. [▷](#), [PDF](#).

Patents

- [63] Paweł T. Wojciechowski, Tadeusz Kobus, and Maciej Kokociński. *A fault-tolerant data processing computer system and method for implementing a distributed two-tier state machine*. Aug. 2018.
- [64] Paweł T. Wojciechowski, Tadeusz Kobus, and Maciej Kokociński. *Fault-tolerant data processing computer system and method for implementing a distributed two-tier state machine*. Nov. 2018.

Keynotes

- [65] Paweł T. Wojciechowski. “A selective and biased choice of techniques for building a distributed data store”. In: *Proceedings of DEBS '23: the 17th ACM International Conference on Distributed and Event-based Systems*. June 2023, pp. DOI: [10.1145/3583678.3603441](#). [▷](#), [PDF](#).

Research Grants

Poznan University of Technology, Poland

Author and Principal Investigator

1. Principal Investigator for *Scalable in-memory data store systems based on mixed-consistency data types and replication algorithms for efficient and anomaly-free data management in the emerging NVM-based computer architectures*, Foundation for Polish Science (FNP), TEAM, grant no. POIR.04.04.00-00-5C5B/17-00; Foreign Advisor: prof. Fernando Pedone, University of Lugano, Switzerland (2018.12.01 – 2021.11.30, extended till 2023.06.30). *Highly competitive grant*.
2. Principal Investigator for *Novel methods and coherence algorithms for transactional data stores*, Foundation for Polish Science (FNP), IMPULS, grant no. 103/UD/SKILLS/2014 (2014.12.01 – 2015.12.31).
3. Principal Investigator for *Eventually consistent replication: Algorithms and methods*, National Science Centre (NCN), OPUS, grant no. UMO-2012/07/B/ST6/01230 (2013.09.30 – 2017.09.29).
4. Principal Investigator for *Concurrency control and fault-tolerance for distributed transactional memory*, National Science Centre (NCN), HARMONIA, grant no. UMO-2012/06/M/ST6/00463; Foreign Advisor: prof. Rachid Guerraoui, EPFL, Switzerland (2013.04.09 – 2016.01.08).

Co-author and Supervisor

5. Research Advisor for *Development, design and implementation of methods, algorithms, and tools for transactional replication in distributed transactional memory*, National Science Centre (NCN), PRE-

LUDIUM, grant no. UMO-2011/01/N/ST6/06762, with my doctoral student Tadeusz Kobus (2011.12.14 – 2014.12.13).

Co-author and Co-Investigator

6. Co-Principal Investigator of part at Poznan University of Technology for *Novel information technologies for public sector based on the Service-Oriented Architecture (SOA) paradigm*, Polish Ministry of Science and Higher Education grant no. POIG.01.03.01-00-008/08, with AGH University of Science and Technology, Wrocław University of Technology, Poznan University of Economics, and IPI (Polish Academy of Sciences) (2008 – 2012).

Participant

7. Co-Investigator for *Effective service state replication and recovery in distributed mobile systems*, Polish National Research Council (KBN) grant no. 3 T11C 073 28 (2005 – 2007).
8. Co-Investigator for *Integration of information systems for public administration*, Polish National Research Council (KBN) grant no. Z021/S5/94/01 (1994 – 1995).
9. Co-Investigator for *Algorithms for distributed systems management*, Polish National Research Council (KBN) grant no. PB0329/P4/92/02, within the European project CRIT III/92 (1993 – 1994).

Participant in European consortia

10. ICT European Cooperation in Science and Technology (COST) Action IC1001: *Transactional Memories: Foundations, Algorithms, Tools, and Applications*, including 17 European countries (2011 – 2015). I was a member of the Management Committee, representing Poland.
11. ICT European Cooperation in Science and Technology (COST) Action IC1201: *Behavioural Types for Reliable Large-Scale Software Systems*, including 22 European countries (2012 – 2016).

Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Co-author and Co-Investigator

12. Co-Investigator for *Semantics-Guided Design and Implementation of Group Communication Middleware*, Swiss National Science Foundation (SNF) grant no. 2100-067715.02, with prof. André Schiper and prof. Uwe Nestmann (2002 – 2005).
13. Co-Investigator for *Semantics-Guided Design and Implementation of Group Communication Middleware*, Hasler-Stiftung Foundation grant no. DICS-1825, with prof. Uwe Nestmann and prof. André Schiper (2002 – 2005).
14. Co-Investigator for *Semantics-Guided Design and Implementation of Group Communication Middleware*, EPFL Seed Grant, with prof. André Schiper and prof. Uwe Nestmann (2001 – 2003).

University of Cambridge, United Kingdom

Participant

15. *Wide-area Programming: Language, Semantics and Infrastructure Design*, Engineering and Physical Sciences Research Council (EPSRC) grant no. GR/N24872. with prof. Peter Sewell (Reader in Computer Science, Principal Investigator), prof. Robin Milner (Co-Investigator), and dr James Leifer (2000 – 2003).

16. *Calculi for Interactive Systems: Theory and Experiment*, Engineering and Physical Sciences Research Council (EPSRC) grant no. GR/L62290. with prof. Robin Milner (Principal Investigator), prof. Philippa Gardner (Reader in Computer Science, Co-Investigator), and prof. Peter Sewell (Reader in Computer Science). (1998 – 2001).

PhD Scholarship Recipient

17. *Wolfson Foundation Scholarship* for Graduate Students from Eastern Europe, for four years of Ph.D. study at Cambridge University (1995 – 2000).

Teaching Experience

All courses are for computer science students.

Professor at PUT, Faculty of Computing and Telecommunications

1. *Concurrent and System Programming*, lecture course (re-designed), B.Sc. studies, sem. 3, 2023- (c. 220 students)
2. *Methods of Safe Programming*, lecture and lab. course (proposed and designed), M.Sc. studies, sem. 1, 2008-2010 (c. 25-30 students)
3. *Diploma Seminar*, B.Sc. studies, sem. 7, 2012- (c. 45 students)
4. *Type Systems for Programming Languages*, lecture and lab. course (proposed and designed), B.Sc. studies, sem. 7, 2006 (c. 30 students), 2007 (c. 90 students)
5. *Operating Systems (Unix)*, lab. course, B.Sc. studies, sem. 2, 2006-2011 (c. 75 students)
6. *Diploma Seminar*, M.Sc. studies, sem. 4, 2006-2011 (c. 45 students)
7. *Distributed Algorithms*, lab. course. (co-designed), B.Sc./M.Sc. studies, sem. 9, 1994 (c. 60 students)
8. *Modelling and Evaluation of Computer Systems*, practical classes, B.Sc./M.Sc. studies, sem. 8, 1994 (c. 60 students)
9. *Operating Systems*, lab. course, B.Sc./M.Sc. studies, sem. 3 and 4, 1993 / 1994 (c. 60 students)
10. *Introduction to Computer Science*, lab. course, B.Sc./M.Sc. studies, sem. 1, 1993, 1994 (c. 60 students)

Instructor at EPFL, School of Computer and Communication Sciences

1. *Distributed Systems (Part I – theory)*, practical classes to prof. André Schiper lectures, sem. 6 (T) and 8, 2004 (c. 30 students)
2. *Distributed Systems (Part II – technologies)* lab. course (only one component), summer sem. 2001-2004 (c. 30 students)
3. *Concurrent Programming*, practical classes to prof. André Schiper's lectures, sem. 6 (T) and 8, 2001-2003 (c. 70-90 students)
4. *Operating Systems*, lab. course, sem. 5 (T) and 7, 2003, 2004 (c. 70-90 students)

Tutor in the University of Cambridge, Computer Laboratory

1. Oxbridge supervisions to a course *Distributed systems*.

Advising Experience

Advisor of PhD students

1. Konrad Siek, a PhD degree in Computer Science (*with Honors*), 4 January 2017
 Research and Teaching Assistant at Poznan University of Technology (PUT), Postdoctoral researcher at Czech Technical University in Prague, Czech Rep. and Research Assistant at Northeastern University, USA, now R&D engineer at TrustInSoft
Thesis title: Distributed Pessimistic Transactional Memory: Algorithms and Properties
Referees: prof. Michel Raynal (University of Rennes, France), prof. Marek Tudruj (The Polish Academy of Sciences, Poland)
2. Tadeusz Kobus, a PhD degree in Computer Science (*with Honors*), 7 April 2017
 Research and Teaching Assistant at PUT and Researcher at Huawei Corp.
Thesis title: Transactional Replication: Algorithms and Properties
Referees: prof. Fernando Pedone (University of Lugano, Switzerland), prof. Tomasz Jurdziński (University of Wrocław, Poland)
3. Maciej Kokociński, a PhD degree in Computer Science (*with Honors*), 1 April 2022
 Research and Teaching Assistant at PUT and Researcher at Huawei Corp.
Thesis title: Correctness of Highly-Available Eventually-Consistent Replicated Systems
Referees: prof. Petr Kuznetsov (Telecom ParisTech, Institut Polytechnique de Paris, France), prof. Wojciech Golab (University of Waterloo, Canada)
4. Jan Kończak, a PhD degree in Computer Science (*with Honors*), 21 September 2022
 Research and Teaching Assistant at PUT
Thesis title: Recovery algorithms in State Machine Replication with volatile and non-volatile main memory
Referees: prof. Alysso Bessani (Universidade de Lisboa, Portugal), prof. Fernando Pedone (University of Lugano, Switzerland)

Reviewer and member of PhD Defense Committees

1. Long Hoang Le *Thesis title: Scaling State Machine Replication*, University of Lugano, 2020
2. Marek Nowicki, *Thesis title: Opracowanie nowych metod programowania równoległego w Javie w oparciu o paradygmat Partitioned Global Address Space*, University of Warsaw, 2015
3. Marek Materzok, *Thesis title: Control Abstraction for Layered Continuations. Semantics, Types and Implementation*, University of Wrocław, 2014
4. Michał Kalewski, *Thesis title: Reliable Broadcast Protocols for Mobile Ad Hoc Networks with Liveness Property*, Poznan University of Technology, 2014
5. Arkadiusz Danilecki, *Thesis title: Algorytmy odtwarzania stanu w systemach z rozproszoną spekulatywną pamięcią współdzieloną*, Poznan University of Technology, 2008

Other advising work

1. Member of PhD Dissertation Committee at Poznan University of Technology for many years
2. Student advisor or reviewer of 81 M.Sc. and B.Sc. theses at PUT
3. Co-advisor of 1 Pre-Doctoral student at EPFL and 1 Ph.D. student at EPFL

4. Co-advisor of 1 Diploma student at Cambridge (he was awarded the “Prize for Outstanding Dissertation”).

Professional service

Editorial Work

Associate Editor of the **Foundations of Computing and Decision Sciences (FCDS)** from 2012 till now, a quarterly international (open access) journal published since 1975. ISSN: 0867-6356 (print version), ISSN: 2300-3405 (electronic version). The electronic, open access version is available since 2012.

Program committee member

1. IEEE International Conference on Distributed Computing Systems (36th ICDCS '16),
2. ACM SIGAPP Symposium on Applied Computing (30th SAC '15, 29th SAC '14, 28th SAC '13, 27th SAC '12, 26th SAC '11, 25th SAC '10, 24th SAC '09, and 23rd SAC '08),
3. IEEE Symposium on Reliable Distributed Systems (30th SRDS '11),
4. IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (7th EUC '09).

Reviewer for the following selected journals

1. Computer Languages, Systems and Structures (Elsevier),
2. Concurrency and Computation: Practice and Experience (Wiley & Sons),
3. Mathematical Structures in Computer Science (Cambridge University Press),
4. Science of Computer Programming (Elsevier),
5. Transactions on Dependable and Secure Computing (IEEE),
6. Transactions on Parallel and Distributed Systems (IEEE),
7. Software Practice & Experience (Wiley & Sons),
8. Fundamenta Informaticae (EATCS),
9. Logical Methods in Computer Science
10. Intern. Federation for Computational Logic (IfCoLog).

Reviewer for the following selected conferences

1. EATCS International Symposium on Distributed Computing (DISC),
2. ACM Symposium on Parallelism in Algorithms and Architectures (SPAA),
3. IEEE Symposium on Reliable Distributed Systems (SRDS),
4. ACM SIGPLAN International Conference on Functional Programming (ICFP),
5. International Conference on Foundations of Software Science and Computation Structures (FOSSACS) (part of the European Joint Conferences on Theory and Practice of Software ETAPS),
6. ACM-SIGPLAN Symposium on Principles and Practice of Declarative Programming (PPDP),
7. IEEE International Conference on Distributed Computing Systems (ICDCS),
8. International Symposium on Distributed Computing (WDAG) (now: International Symposium on Distributed Computing - DISC),
9. ACM Symposium on Applied Computing (SAC),
10. IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC),
11. IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS),

Presentations

Invited presentations

1. University of Cambridge, Department of Computer Science and Technology, UK, May 2024
2. Keynote speech at the 17th ACM International Conference on Distributed and Event-Based Systems (DEBS '23), University of Neuchâtel, Neuchâtel, Switzerland, June 2023
3. Google Corp., Zürich, Switzerland, June 2023
4. Intel Corp., Gdańsk, Poland, January 2023
5. Università della Svizzera italiana (University of Lugano), Institute of Computer Systems, Lugano, Switzerland, November 2022
6. University of Lisbon, Department of Informatics, Lisbon, Portugal, July 2022
7. Università della Svizzera italiana (University of Lugano), Institute of Computer Systems, Lugano, Switzerland, May 2019
8. Intel Corp., PMDK team, Gdańsk and Poznań, Poland, October 2020 (remotely)
9. The Hong Kong Polytechnic University (PolyU), Department of Computing, Hong Kong, September 2017
10. Invited speaker at TransForm Summer School on Research Directions in Distributed Computing, The Foundation for Research and Technology – Hellas (FORTH), Institute of Computer Science (ICS), Heraklion, Crete, Greece, June 2013
11. University of Wrocław, Institute of Computer Science, Wrocław, Poland, January 2013
12. Invited as the observer at IFIP WG 2.4 Meeting, organized by IBM T.J. Watson Research Center, Cape May, USA, September 2011
13. Invited as the observer at IFIP WG 2.4 Meeting, Leucorea, Lutherstadt Wittenberg, Germany, October 2010
14. Dagstuhl Seminar, The Leibniz-Zentrum für Informatik (LZI), Schloss Dagstuhl, Germany, 2005
15. Advanced Industrial Science and Technology Institute (AIST), Osaka, Japan, July 2005
16. University of Edinburgh, School of Informatics, Edinburgh, UK, May 2005
17. University of Oxford, Theory and Automated Verification Group, Oxford, UK, May 2005
18. Universidade de Lisboa, Departamento de Informática, Lisbon, Portugal, April 2005
19. University of Tokyo, Yonezawa lab., Tokyo, Japan, October 2004
20. University of Kyoto, Department of Communications and Computer Engineering, Kyoto, Japan, October 2004
21. University of London (Queen Mary and Imperial College), Logic and Semantics Group, London, UK, October 2000
22. Massachusetts Institute of Technology (MIT), Laboratory for Computer Science (now: Computer Science and Artificial Intelligence Laboratory – CSAIL), Boston, USA, September 2000
23. Dartmouth College, Department of Computer Science, Hanover, USA, September 2000
24. IBM Thomas J. Watson Research Center, Hawthorne, USA, September 2000
25. University of Sussex, Department of Informatics, Brighton, UK, August 2000
26. Hewlett-Packard Labs, Internet Systems & Storage Lab., Bristol, UK, May 2000

Selected peer-reviewed conference presentations

1. ACM SPAA HOPC '24 (France)
2. ACM EuroSys WTM '13 (Czech Republic)
3. IEEE SRDS '12 (USA)
4. ACM PODC WTTM '12 (Portugal)
5. ECOOP LaME '12 (China)

6. ACM EuroSys WTM '12 (Switzerland)
7. ACM SIGPLAN SLE '11 (Portugal)
8. ICWE ComposableWeb '11 (Cyprus)
9. Euro-TM Plenary Meeting '11 (France)
10. CAV EC² '08 (USA)
11. IFIP ETAPS SC '06 (Austria)
12. ACM SAC '06 (France)
13. IFIP EUC '06 (Korea)
14. ACM PPDP '05 (Portugal)
15. IFIP FMOODS '05 (Greece)
16. IEEE/IFIP DSN WDSTM '05 (Japan)
17. Dagstuhl Seminar '05 (Germany)
18. IEEE IPDPS '04 (USA)
19. APLAS '04 (Taiwan)
20. DICS Workshop '04 (Switzerland)
21. JAIST-EPFL Workshop '04 (Japan)
22. ACM COORDINATION '02 (UK)
23. AISB '01 (UK)
24. CONFER-2 Workshop '00 (UK)
25. ASA/MA '99 (USA)