

GERARDO SCHNEIDER'S LIST OF PUBLICATIONS

Almost all the publications can be downloaded from my homepage at
<http://www.irisa.fr/lande/gerardo/>

On-going Work

1. D. Cachera, T. Jensen, D. Pichardie and G. Schneider. **A Certified Memory Analyser for Java Cards**. Submitted.
2. G. Schneider. **A Constraint-based Algorithm for Estimating Memory Usage on Java Cards**. Submitted.
3. G. Schneider. **Computing Phase Portrait Objects of Polygonal Hybrid Systems on Surfaces**. Submitted.

Journal Papers

1. G. Schneider. **Computing Invariance Kernels of Polygonal Hybrid Systems**. In: Nordic Journal of Computing 11 (2): 194–210, 2004.

Refereed Contributions in Conference and Workshops Proceedings

1. P. Giambiagi, G. Schneider and F.D. Valencia. **On the expressiveness of infinite behavior and name scoping in process calculi**. In: FOSSACS'04. LNCS Nro. 2987. Barcelone, Spain, p.226–240. March 27 - April 04, 2004.
2. G. Pace and G. Schneider. **Model checking polygonal differential inclusions using invariance kernels**. In: VMCAI'04. LNCS Nro. 2937. Venice, Italy, p.110–121. January 11-13, 2004.
3. E. Asarin and G. Schneider. **Widening the boundary between decidable and undecidable hybrid systems**. In: CONCUR'02. LNCS Nro. 2421. Brno, Czech Republic, p.193–208. August 20-23, 2002.
4. E. Asarin, G. Pace, G. Schneider and S. Yovine. **SPeeDI - a Verification Tool for Polygonal Hybrid Systems**. In: CAV'2002. LNCS Nro. 2404. Copenhagen, Denmark, p.354–358. July 27-31, 2002.
5. E. Asarin, G. Schneider and S. Yovine. **Towards Computing Phase Portraits of Polygonal Differential Inclusions**. In: HSCC'2002 (Hybrid Systems: Computation and Control). LNCS Nro. 2289. Stanford, USA, p.49–61. March, 2002.
6. E. Asarin, G. Schneider and S. Yovine. **On the Decidability of the Reachability Problem for Planar Differential Inclusions**. In: HSCC'2001 (Hybrid Systems: Computation and Control). LNCS Nro. 2034. Rome, Italy, p.89-104. March, 2001.
7. G. Laferriere, G.J. Pappas, G. Schneider and S. Yovine. **Parameter Synthesis in Robot Motion Planning Using Symbolic Reachability Computation**. In: Proceedings of 8th IEEE Mediterranean Conference on Control and Automation. Rio, Greece. July, 2000.
8. G. Schneider and Xu Qiwen. **Towards a Formal Semantics of Verilog using Duration Calculus**. In: FTRTFT'98. LNCS Nro. 1486. Lyngby, Denmark, p.282–293. September, 1998.

9. G. Schneider and A.C. da Rocha Costa. **Sequential and Parallel Computation Strategies on Coherence Spaces**. In: XXII Latin-American Conference of Informatica CLEI'96, v.1, Bogotá, Colombia, p.276-287. June, 1996.

Other Contributions

1. G. Schneider. **Memory usage estimation for Java cards**. In: NWPT'2004. Uppsala, Sweden, October 06-08, 2004. (Extended Abstract).
2. P. Giambiagi, G. Schneider and F.D. Valencia. **A note on scope and infinite behaviour in CCS-like calculi**. In: NWPT'2003. Turku, Finland, October 29-31, 2003. (Extended Abstract).
3. G. Schneider. **Computing invariance kernels of polygonal hybrid systems**. In: NWPT'2003. Turku, Finland, October 29-31, 2003. (Extended Abstract).
4. G. Schneider and A.C. da Rocha Costa. **Coherence Space as Event Structure and Concrete Data Structure**. In: XXIV SEMISH, Seminário Integrado de Software e Hardware, Brasília, Brazil, p.423-434, August, 1997.
5. G. Schneider and R. Accorsi. **Introduction to Linear Logic**. In: Primeiro Workshop sobre Métodos Formais e Qualidade de Software, Porto Alegre, Brazil, p.15-42, July, 1997. (Survey, in portuguese)
6. G. Schneider and L.V. Toscani. **Fixed point theory in Computer Science**. In: Anais do Congresso Nacional de Matemática Aplicada e Computacional (CN-MAC'95), v.1, Curitiba, Brazil, p.150-154, August, 1995. (Extended abstract, in Portuguese).

Technical Reports

1. G. Schneider. **A constraint-based algorithm for analysing memory usage on Java cards**. Technical Report No. RR-5440, INRIA, Rennes. December 2004, 26 pages.
2. P. Giambiagi, G. Schneider and F.D. Valencia. **On the expressiveness of CCS-like calculi**. Technical Report No. 2004-002, Department of Information Technology, Uppsala University. January 2004.
3. M. Baldamus, R. Mayr and G. Schneider. **A backward/forward strategy for verifying safety properties of infinite-state systems**. Technical Report No. 2003-065, Department of Information Technology, Uppsala University. December 2003. 17 pages.
4. G. Schneider. **Invariance kernels of Polygonal Differential Inclusions**. Technical Report No. 2003-042, Department of Information Technology, Uppsala University. August 2003. 15 pages.
5. G. Schneider and Xu Qiwen. **Towards an Operational Semantics of Verilog**. Technical Report No. 147, UNU/IIST, P.O. Box 3058, Macau, October 1998. 10 p.
6. G. Schneider and Xu Qiwen. **Towards a Formal Semantics of Verilog using Duration Calculus**. Technical Report 133, UNU/IIST, P.O. Box 3058, Macau. March, 1998.
7. P. Giambiagi and G. Schneider. **A Verilog Specification of the STARI**. Technical Report, UNU/IIST, P.O. Box 3058, Macau. March, 1998.
8. G. Schneider and L.V. Toscani. **Fixed point theory in Computer Science**. Porto Alegre: CPGCC da UFRGS, January, 1995. 68p. (Survey, in Portuguese).
9. G. Schneider. **An algebraic specification language**. Porto Alegre: CPGCC da UFRGS, July, 1994. 44p. (Survey, in Portuguese).

Dissertations and Thesis

1. G. Schneider. **Algorithmic Analysis of Polygonal Hybrid Systems**. Ph.D. thesis, VERIMAG - UJF, Grenoble, France. July 2002, 214 p.
2. G. Schneider. **Sequential and Parallel Computation Strategies on Coherence Spaces**. M.Sc. thesis, CPGCC da UFRGS, Brazil. March 1996, 144 p. (In Portuguese)
3. G. Schneider. **Using Induction for Algorithms Design**. Dissertation, in partial fulfillment of the requirement for the degree of System Engineer. Concepción del Uruguay: Facultad Regional Concepción del Uruguay de la Universidad Tecnológica Nacional, October, 1992, 91p. (In Spanish)

Tools

- **SPeeDI**: Together with Gordon Pace, I have implemented a verification tool for Polygonal Differential Inclusions (SPDI).