List of Publications
Hillel Kugler

Journal Papers :

1. D. Harel and H. Kugler. Synthesizing State-Based Object Systems from LSC Specifications. *Int. J. of Foundations of Computer Science (IJFCS).*, 13(1):5–51, Febuary 2002. (Preliminary version appeared in CIAA'00).

2. J. Hooman H. Kugler, I. Ober, A. Votintseva and Y. Yushtein. Supporting UML-based Development of Embedded Systems by Formal Techniques . To appear in *International Journal of Software and Systems Modeling (SoSym)*, Springer Verlag, 2006.

3. P. Combes, D. Harel and H. Kugler. Modeling and Verification of a Telecommunication Application using Live Sequence Charts and the Play-Engine Tool. Submitted, 2006. (Preliminary version appeared in ATVA'05).

4. N. Kam, H. Kugler, L. Appleby, A. Pnueli, D. Harel, M.J. Stern and E.J.A. Hubbard. Hypothesis Testing and Biological Insights from Scenario-Based Modeling of Development. In Preparation.

5. H. Kugler, N. Kam, R. Marelly, L. Appleby, A. Pnueli, D. Harel, M.J. Stern and E.J.A. Hubbard. A Model of C. elegans Vulval Cell Fate Specification Using System Design Logical Formalisms. In Preparation.

6. D. Harel and H. Kugler. The Rhapsody Semantics of Statecharts. In Preperation. (Preliminary version appeared in CHARTS'04).

7. D. Harel, H. Kugler, R. Marelly, and A. Pnueli. Smart Play-Out of Behavioral Requirements. In Preperation. (Preliminary versions appeared in FMCAD'02 and QSIC'04).

Conference Papers :

1. D. Harel and H. Kugler. Synthesizing State-Based Object Systems from LSC Specifications. In *Proc. 5th Inf. Conf. on Implementation and Application of Automata (CIAA'00)*, volume 2088 of *Lect. Notes in Comp. Sci.*, pages 1–33. Springer-Verlag, July 2000.

2. R. Marelly, D. Harel, and H. Kugler. Multiple Instances and Symbolic Variables in Executable Sequence Charts. In *Proc. 17th Ann. ACM Conf. on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA'02)*, pages 83–100, Seattle, WA, 2002.

3. D. Harel, H. Kugler, R. Marelly, and A. Pnueli. Smart Play-Out of Behavioral Requirements. In *Proc. 5th Intl. Conference on Formal Methods in Computer-Aided Design (FMCAD'02), Portland, Oregon*, volume 2517 of *Lect. Notes in Comp. Sci.*, pages 378–398, 2002.

4. N. Kam, D. Harel, H. Kugler, R. Marelly, A. Pnueli, E.J.A. Hubbard and M.J. Stern. Formal Modeling of C. elegans Development: A Scenario-Based Approach. In *Proc. Intl. Workshop Computational Methods in Systems Biology (CMSB 2003)*, Rovereto, Italy, volume 2602 of *Lect. Notes in Comp. Sci.*, pages 5–20, 2003.

5. D. Harel and H. Kugler. The Rhapsody Semantics of Statecharts (or, On the Executable Core of the UML). In *Integration of Software Specification Techniques for Applications in Engineering (CHARTS'04)*, volume 3147 of *Lect. Notes in Comp. Sci.*, Springer-Verlag, pages 325–354, 2004.

6. T. Arons, J. Hooman, H. Kugler and A. Pnueli and M. van der Zwaag. Deductive Verification of UML Models in TLPVS. In *7th International Conference on UML Modeling Languages and Applications (UML 2004)*, Lisbon, Portugal, volume 3273 of *Lect. Notes in Comp. Sci.*, pages 335–349, 2004.

7. D. Harel, H. Kugler and A. Pnueli. Smart Play-Out Extended: Time and Forbidden Elements, In *Proc. 4th Int. Conf. on Quality Software (QSIC'04)*, Braunschweig, Germany, IEEE Computer Society Press, pages 2–10, 2004.

8. D. Harel, H. Kugler and A. Pnueli. Synthesis Revisited: Generating Statechart Models from Scenario-Based Requirements. In *Formal Methods in Software and System Modeling*, volume 3393 of *Lect. Notes in Comp. Sci.*, pages 309–324, 2005.

9. D. Harel, H. Kugler, A. Pnueli, Y. Lu and Y. Bontemps. Temporal Logic for Scenario-Based Specifications. In *Proc. 11th Int. Conf. on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'05)*, Edinburgh, U.K., volume 3440 of *Lect. Notes in Comp. Sci.*, Springer-Verlag, pages 445–460, 2005.

10. D. Harel, H. Kugler and G. Weiss. Some methodological observations resulting from experience using LSCs and the play-in/play-out approach. In *Proc. Scenarios: Models, Transformation and Tools*, volume 3466 of *Lect. Notes in Comp. Sci.*, pages 26–42, 2005.

11. P. Combes, D. Harel and H. Kugler. Modeling and Verification of a Telecommunication Application using Live Sequence Charts and the Play-Engine Tool. In *Proc. 3rd Int. Symp. on Automated Technology for Verification and Analysis (ATVA '05)*, volume 3707 of *Lect. Notes in Comp. Sci.*, Springer-Verlag, pages 414–428, 2005.

12. H. Kugler, A. Pnueli, M.J. Stern and E.J.A. Hubbard. "Don't Care" Modeling: A logical framework for developing predictive system models. Submitted, 2006.

13. H. Kugler, M.J. Stern and E.J.A. Hubbard. Testing Scenario-Based Models. Submitted, 2006.

14. H. Kugler, C. Plock. A Symbolic Implementation of Consistency-Checking and Synthesis for LSCs. In Preparation.

15. H. Kugler, D. Harel, M.J. Stern and J. Hubbard. A Model of Cell Lineage in C. elegans. In Preparation.

16. H. Kugler and G. Weiss. Modeling a Smart-Card Personalization Machine with LSCs. In Preparation.

17. H. Kugler. Specifying and Executing Object-Oriented Scenario-Based Requirements. In Preparation.

Workshop Papers :

1. D. Harel and H. Kugler and R. Marelly. The Play-in/Play-out Approach and Tool: Specifying and Executing Behavioral Requirements. In *Proc. Israeli Workshop on Programming Languages and Development Environments (PLE'02)* , July 2002.

2. Y. Bontemps, P. Heymans, and H. Kugler. Applying LSCs to an Air Traffic Control Case Study. In *2nd Int. Workshop on Scenarios and State Machines*, Portland, Oregon, 2003.

3. M. Kyas, H. Fecher, F.S. de Boer, J. Jacob, M. van der Zwaag, T. Arons and H. Kugler. Formalizing UML Models and OCL Constraints in PVS. In *Workshop on Semantic Foundations of Engineering Design Languages*, Barcelona, Spain, volume 115 of *Electr. Notes Theor. Comput. Sci.*, pages 39–47, 2005.

Chapters in Books :

1. Smart Play-Out. Chapter in book by D. Harel and R. Marelly, Come, Let's Play: Scenario-Based Programming Using LSCs and the Play-Engine, Springer 2003.

2. Formal Modeling of C. elegans Development: A Scenario-Based Approach. N. Kam, D. Harel, H. Kugler, R. Marelly, A. Pnueli, E.J.A. Hubbard and M.J. Stern, In *Modelling in Molecular Biology*, G. Ciobanu, G. Rozenberg (Eds.), pages 151-173, Natural Computing Series, Springer, 2004.

Posters, Demos :

1. N. Kam, R. Marelly, H. Kugler, I.R. Cohen, A. Pnueli, M.J. Stern, E.J.A. Hubbard and D. Harel. Formal Modeling, Simulation and Analysis of C. elegans Development. In *The East Coast C. elegans Meeting*, New

Hampshire, 2002.

2. D. Harel and H. Kugler and R. Marelly. Specifying and Executing Requirements - The Play-In/Play-Out Approach. In *The 17th Ann. ACM Conf. on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA'02)*, Seattle, WA, 2002.

3. D. Harel, H. Kugler, R. Marelly, and A. Pnueli. Smart Play-Out. In *Companion of the 18th Annual ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA 2003)*, pages 68 – 69. Anaheim, CA, USA, October 2003.