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EDUCATION	RNDr. (similar to Ph.D. candidate) 2008
	Computer Science, Faculty of Mathematics and Physics, Charles University in Prague
	Mgr. (M.Sc. equivalent) 2006
	Computer Science, Faculty of Mathematics and Physics, Charles University in Prague

AWARDS	PSI 2009 Award for the paper obtaining the highest PC score: <i>Applicability of the BLAST Model Checker: An Industrial Case Study</i>
	Bolzano's Award 2005/2006: Master thesis <i>Model Checking and Reduction of Behavior Protocols</i>
	SOFSEM 2006 Best student paper: <i>Level-Of-Detail in Behaviour of Virtual Humans</i>

ACADEMIC EXPERIENCE

Charles University in Prague, Czech Republic 2006 – present
<ul style="list-style-type: none"> • Full-time Ph.D. student • Teaching assistant: <ul style="list-style-type: none"> ○ Program Analysis and Code Verification (lecture & lab) 2008 – present ○ C# Language and .NET Framework (lab) 2008 – present ○ Programming in C/C++ (lab) 2006 – 2008 • Research assistant: <ul style="list-style-type: none"> ○ Q-ImPRESS – European Union FP7 project 2008 – present <i>“Quality Impact Prediction for Evolving Service-Oriented Software”</i> ○ ECONET – Czech/French/Romania cooperation 2006 – 2008 <i>“Behaviour Abstraction from Code”</i> • Summer schools attended <ul style="list-style-type: none"> ○ Second International School on Trends in Concurrency, Czech Republic 2008 ○ Lugano Summer School on Dependable Software Systems, Switzerland 2006

IT SKILLS	<i>Programming languages:</i> Java, C/C++, C#, OCaml, Python <i>Development environments:</i> MS Visual Studio, NetBeans <i>Operating systems:</i> Windows, Linux
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PERSONAL RESEARCH STATEMENT

Model checking of code. When it comes to software verification, I am deeply convinced that application to real code is crucial. Therefore, I was happy that my task in the Q-ImPRESS project was to apply the model checker BLAST to a code base developed at the ABB company [3]. During the work, I have come up with an idea for improving property specification in BLAST by employing a simple regular language (based on behavior protocols). The state space of the property specification is tracked separately from the actual code, i.e., without any code modification, which tend to add artificial predicates. I have implemented this idea as an extension to BLAST resulting in a significant performance improvement [4].

Behavior specification and analysis of software components. The aforementioned work is only a part of my general interest in behavior specification and verification of software and component-based software, in particular. In cooperation with my colleagues, we have realized that any behavior specification aspiring for wide acceptance by the developer community should (i) support formal reasoning about compatibility and substitutability of the components, while (ii) being close to the imperative languages used in the development. We proposed a new formalism of Threaded Behavior Protocols (TBP), which is founded on these two building blocks [6]. I have designed and partially implemented a compatibility checker for TBP.

PUBLICATIONSavailable at <http://dsrg.mff.cuni.cz/~sery>

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- [2] Kebrt, M., Sery, O.: *UnitCheck: Unit Testing and Model Checking Combined*, In Proceedings of ATVA'09, LNCS 5799, pp. 97–103, Oct 2009. [30.9%]
- [3] Kolb, E., Sery, O., Weiss, R.: *Applicability of the BLAST Model Checker: An Industrial Case Study*, Accepted for publication in Post-proceedings of PSI'09, LNCS, Jun 2009.
- [4] Sery, O.: *Enhanced Property Specification and Verification in BLAST*, In Proceedings of FASE'09 (ETAPS), LNCS 5503, pp. 456–469, Mar 2009. [24%]
- [5] Kofron, J., Plasil, F., Sery, O.: *Modes in component behavior specification via EBP and their application in product lines*, In Information and Software Technology 51/1, pp. 31-41, Elsevier, Jan 2009.
- [6] Kofron, J., Poch, T., Sery, O.: *TBP: Code-Oriented Component Behavior Specification*, In Proceedings of SEW-32, IEEE CS Press, pp. 75-83, Oct 2008.
- [7] Kofron, J., Poch, T., Sery, O.: *Making Components Fit: SPINing*, In Proceedings of SEW-32, IEEE CS Press, pp. 65-74, Oct 2008.
- [8] Bures, T., Decky, M., Hnetynka, P., Kofron, J., Parizek, P., Plasil, F., Poch, T., Sery, O., Tuma, P.: *CoCoME in SOFA*, Chapter in The Common Component Modeling Example: Comparing Software Component Models, Springer-Verlag, LNCS 5153, pp. 388–417, Aug 2008.
- [9] Bulej, L., Bures, T., Decky, M., Jezek, P., Parizek, P., Plasil, F., Poch, T., Rivierre, N., Sery, O.: *CoCoME in Fractal*, Chapter in The Common Component Modeling Example: Comparing Software Component Models, Springer-Verlag, LNCS 5153, pp. 357–387, Aug 2008.
- [10] Sery, O., Plasil, F.: *Slicing of Component Behavior Specification with Respect to Their Composition*, In Proceedings of 10th International Symposium Component-Based Software Engineering (CBSE'07), LNCS 4608, pp. 189–202, 2007. [21.3%]
- [11] Brom, C., Sery, O., Poch, T.: *Simulation Level of Detail for Virtual Humans*, In Proceedings of Intelligent Virtual Agents (IVA 2007), LNAI 4722, pp. 1–14, 2007. [31%]
- [12] Sery, O., Poch, T., Safrata, P., Brom, C.: *Level-Of-Detail in Behaviour of Virtual Humans*, In Proceedings of Current Trends in Theory and Practice of Computer Science (SOFSEM 2006), LNCS 3831, pp. 565–574, 2006. [28.7%]

REFERENCES

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