Curriculum Vitæ

Andriy Paskevych

Born September 14, 1979, in Kiev, Ukraine.
Ukrainian citizen. Single.

Current position

Associated professor (maître de conférences)
Paris-Sud 11 University, IUT d'Orsay.
Plateau de Moulon 91400 Orsay.

Education

2001 — 2007	**Doctor in informatics** with high honors Paris 12 «Val de Marne» University, Créteil, France in co-tutelage with Kiev National Taras Shevchenko University.
2001 — 2005	**Candidate in physical and mathematical sciences** (specialty: theoretical bases of informatics and cybernetics) Kiev National Taras Shevchenko University, Kiev, Ukraine in co-tutelage with Paris 12 «Val de Marne» University.
1999 — 2001	**Master in informatics** with honors Kiev National Taras Shevchenko University, Faculty of Cybernetics, Kiev, Ukraine.
1995 — 1999	**Bachelor in applied mathematics** Kiev National Taras Shevchenko University, Faculty of Cybernetics, Kiev, Ukraine.

Doctorate

Thesis title: Methods of formalization of mathematical knowledge and reasoning: practical and theoretical aspects.

Scientific advisors: Konstantin Verchinine, Professor, Paris 12 University (France) and Vladimir Donchenko, Professor, Kiev National University (Ukraine).

Presented in Ukraine: December 15, 2005 at Kiev National University, Kiev.

Presented in France: December 21, 2007 at Paris 12 University, Créteil.

Examination panel:

Chair:	Anatol Slissenko, Professor, Paris 12 University, France
Reviewers:	Gilles Dowek, Professor, École polytechnique, France
	Michaël Rusinowitch, Senior researcher, INRIA, France
	Sergei Soloviev, Professor, IRIT, Toulouse, France
Examiners:	Patrick Cegielski, Professor, Paris 12 University, France
Advisor:	Konstantin Verchinine, Professor, Paris 12 University, France

Laboratories of affiliation: Laboratory of Algorithmic, Complexity and Logic (LACL) at Paris 12 University and Chair of System Analysis and Decision Theory at the Faculty of Cybernetics of Kiev National University.

Teaching activities

Since 2009	**Associated professor** (maître de conférences) Department of Informatics, IUT d'Orsay, Paris-Sud 11 University.
2006 — 2007 (97.5 hours)	**Temporary teacher** (vacataire) Graduate course *Architecture, Systems, Networks*, 2nd year Department of Informatics, IUT Fontainebleau, Paris 12 University.
2004 — 2006 (192 hours)	**Teaching assistant** (A.T.E.R.) Graduate course *Architecture, Systems, Networks*, 1st and 2nd years Department of Informatics, IUT Fontainebleau, Paris 12 University.

Research activities

Since 2009	**Permanent member**, Project-team PROVAL, LRI, Paris-Sud 11 University.
Summer 2009	**Post-doctoral research**, ANR project CAT Project-team PROVAL, INRIA Saclay, Orsay.
2008 — 2009	**Post-doctoral research**, ANR project A3PAT Project-team PROVAL, LRI, CNRS, Orsay Laboratory CÉDRIC, CNAM, Paris.
1998 — 2009	Research project *Evidence Algorithm*, `http://nevidal.org` Kiev National Taras Shevchenko University, Ukraine Paris 12 «Val de Marne» University.
2007 — 2008	Egide-Dnipro project M/108-2007 *Démonstration mathématique assistée par ordinateur.*
2006 — 2008	INTAS project 05-1000008-8144 *Practical formal verification using automated reasoning.*
2001 — 2004	INTAS project 2000-447 *Weak arithmetics.*
1998 — 2000	INTAS project 96-0760 *Rewriting techniques and efficient theorem proving.*
April 2000	Invited researcher (in the frame of INTAS 96-0760) Research Institute for Symbolic Computation (RISC), Austria.

Software development

- WHY3, a software verification platform. Developed in collaboration with F. Bobot, J.-C. Filliâtre, and C. Marché. Available at `http://why3.lri.fr/`.

- Development for the A3PAT project: a certified resolving procedure for the systems of linear Diophantine equations (implemented in COQ, 2800 lines of code). In collaboration with J. Forest: certificate generation procedures for termination proofs by RPO (*recursive path ordering*).

- System for Automated Deduction (SAD): a mathematical assistant intended for automated verification of formal mathematical texts. SAD processes texts written in ForTheL, a kind of controlled English language that closely follows the natural language and style of mathematical publications. The SAD system is implemented in Haskell (4900 lines of code) and available at `http://nevidal.org`.

- Moses: an automated connection tableaux prover for classical first-order logic with equality. Moses is written in C (1200 lines of code) and distributed as a component of the SAD system.

- A suite of shell scripts providing Wi-Fi authentication and routing at the Department of Informatics in IUT Sénart/Fontainebleau.

Publications

[1] F. Bobot and A. Paskevich: *Expressing polymorphic types in a many-sorted language.* In C. Tinelli and V. Sofronie-Stokkermans (eds.): *FroCoS 2011, 8th International Symposium on Frontiers of Combining Systems*, vol. 6989 of *Lecture Notes in Computer Science*, pp. 87–102, Saarbrücken, Germany, Oct. 2011. Springer.

[2] F. Bobot and A. Paskevich: *Expressing polymorphic types in a many-sorted language*, July 2011. `http://hal.inria.fr/inria-00591414/en/`, Extended report.

[3] F. Bobot, J.C. Filliâtre, C. Marché, and A. Paskevich: *Why3: Shepherd your herd of provers.* In *Boogie 2011, First International Workshop on Intermediate Verification Languages*, pp. 53–64, Wrocław, Poland, Aug. 2011.

[4] É. Contejean, P. Courtieu, J. Forest, A. Paskevich, O. Pons, and X. Urbain: *A3PAT, an approach for certified automated termination proofs.* In *PEPM'10, Proceedings of the 2010 ACM SIGPLAN Workshop on Partial Evaluation and Program Manipulation*, pp. 63–72, Madrid, Spain, Jan. 2010. ACM.

[5] K. Verchinine, A. Lyaletski, A. Paskevich, and A. Anisimov: *On correctness of mathematical texts from a logical and practical point of view.* In S. Autexier, J. Campbell, J. Rubio, V. Sorge, M. Suzuki, and F. Wiedijk (eds.): *Intelligent Computer Mathematics, AISC/Calculemus/MKM 2008*, vol. 5144 of *Lecture Notes in Computer Science*, pp. 583–598, Birmingham, United Kingdom, July 2008. Springer.

[6] A. Paskevich: *Connection tableaux with lazy paramodulation.* Journal of Automated Reasoning, 40(2–3):179–194, 2008.

[7] A. Paskevych: *Méthodes de formalisation des connaissances et des raisonnements mathématiques: aspects appliqués et théoriques.* PhD thesis, Université Paris 12, 2007. In French.

[8] A. Paskevich, K. Verchinine, A. Lyaletski, and A. Anisimov: *Reasoning inside a formula and ontological correctness of a formal mathematical text.* In M. Kauers, M. Kerber, R. Miner, and W. Windsteiger (eds.): *Calculemus/MKM 2007 — Work in Progress*, no. 07-06 in *RISC-Linz Report Series, University of Linz, Austria*, pp. 77–91, Hagenberg, Austria, June 2007.

[9] K. Verchinine, A. Lyaletski, and A. Paskevich: *System for Automated Deduction (SAD): a tool for proof verification.* In F. Pfenning (ed.): *Automated Deduction, 21st International Conference, CADE-21*, vol. 4603 of *Lecture Notes in Computer Science*, pp. 398–403, Bremen, Germany, July 2007. Springer.

[10] A. Paskevich: *Connection tableaux with lazy paramodulation.* In U. Furbach and N. Shankar (eds.): *Automated Reasoning, 3rd International Joint Conference, IJCAR 2006*, vol. 4130 of *Lecture Notes in Computer Science*, pp. 112–124, Seattle WA, USA, Aug. 2006. Springer.

[11] A. Lyaletski, A. Paskevich, and K. Verchinine: *SAD as a mathematical assistant — how should we go from here to there?* Journal of Applied Logic, 4(4):560–591, 2006.

[12] A. Paskevych: *Methods of formalization of mathematical knowledge and reasoning: theoretical and practical aspects.* PhD thesis, Kiev National Taras Shevchenko University, 2005. In Ukrainian.

[13] A. Lyaletski, K. Verchinine, and A. Paskevich: *Theorem proving and proof verification in the system SAD.* In A. Asperti, G. Bancerek, and A. Trybulec (eds.): *Mathematical Knowledge Management, 3rd International Conference, MKM 2004*, vol. 3119 of *Lecture Notes in Computer Science*, pp. 236–250, Bialowieza, Poland, Sept. 2004. Springer.

[14] A.V. Lyaletski, A.E. Doroshenko, A. Paskevich, and K. Verchinine: *Evidential paradigm and intelligent mathematical text processing.* In A.E. Doroshenko, T.A. Halpin, S.W. Liddle, and H.C. Mayr (eds.): *Information Systems Technology and its Applications, 3rd International Conference, ISTA 2004*, vol. 48 of *Lecture Notes in Informatics*, pp. 205–211, Salt Lake City UT, USA, July 2004. GI.

[15] A. Lyaletski, K. Verchinine, and A. Paskevich: *On verification tools implemented in the System for Automated Deduction.* In *Implementation Technology for Computational Logic Systems, 2nd CoLogNet Workshop, ITCLS 2003*, pp. 3–14, Pisa, Italy, Sept. 2003.

[16] K. Verchinine, A. Lyaletski, and A. Paskevich: *Applying the System for Automated Deduction to mathematical text verification.* International Journal "Iskustvennyj Intellekt", 3:57–69, 2003. In Russian.

[17] Z. Aselderov, K. Verchinine, A. Lyaletski, A. Paskevich, V. Klimenko, and Yu. Fishman: *Deductive, inductive, and analytic methods of presentation and processing of computer knowledge in the intellectual systems (1. Deductive methods and tools).* "Matematychni mashyny i systemy", (3,4):51–74, 2003. In Ukrainian.

[18] A. Paskevich: *A notion of local truth and its applications in automated theorem proving.* Bulletin of the University of Kiev (physics and mathematics series), 1:199–203, 2003. In Ukrainian.

[19] K. Verchinine, A. Degtyarev, M. Morokhovets, A. Lyaletski, and A. Paskevich: *Evidence Algorithm and processing of formalized mathematical texts.* International Journal "Problemy upravleniya i informatiki", 5:80–95, 2002. In Russian.

[20] Z. Aselderov, K. Verchinine, A. Degtyarev, A. Lyaletski, A. Paskevich, and A. Pavlov: *Linguistic tools and deductive technique of the System for Automated Deduction.* In *Implementation of Logics, 3rd International Workshop, WIL 2002*, pp. 21–24, Tbilisi, Georgia, Oct. 2002.

[21] A. Lyaletski, K. Verchinine, A. Degtyarev, and A. Paskevich: *System for Automated Deduction (SAD): Linguistic and deductive peculiarities.* In M.A. Klopotek, S.T. Wierzchon, and M. Michalewicz (eds.): *Intelligent Information Systems, 11th International Symposium, IIS 2002*, Advances in Soft Computing, pp. 413–422, Sopot, Poland, June 2002. Physica-Verlag.

[22] Z. Aselderov, K. Verchinine, A. Degtyarev, A. Lyaletski, and A. Paskevich: *Peculiarities of mathematical text processing in the System for Automated Deduction (SAD).* International Journal "Iskustvennyj Intellekt", 4:163–171, 2002. In Russian.

[23] A. Lyaletski and A. Paskevich: *Goal-driven inference search in classical propositional logic.* In *Proc. International Workshop STRATEGIES'2001*, pp. 65–74, Siena, Italy, June 2001.

[24] A. Lyaletski and A. Paskevich: *On some strategies of logical inference search that are driven by goals.* Bulletin of the University of Kiev (physics and mathematics series), 2:277–285, 2001. In Ukrainian.

[25] K. Vershinin and A. Paskevich: *ForTheL — the language of formal theories.* International Journal of Information Theories and Applications, 7(3):120–126, 2000.

[26] A. Paskevich: *Peculiarities of the implementation of a high-level language for processing of mathematical texts.* Bulletin of the University of Kiev (physics and mathematics series), 2:284–288, 1999. In Ukrainian.