Curriculum Vitae

Kazushige Terui, Associate Professor.

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Personal Data

Birth Place: Kanagawaka

Birth Day: 10th August, 1971.

Nationality: Japanese

Education

February 2002	Ph.D in Philosophy, Faculty of Letters, Keio University
March 1997	MA in Philosophy, Faculty of Letters, Keio University
March 1995	BA in Philosophy, Faculty of Letters, Keio University

Professional Experiences

March 2009 – April 2009	Visiting Researcher, Vienna University of Technology
June 2008 –	Guest Associate Professor, National Institute of Informatics
May 2008 –	Associate Professor, Research Institute for Mathematical Sciences, Kyoto University
March 2008	Visiting Researcher, Université de Paris 13
September 2007 – February 2008	Researcher, Centre National de la Recherche Scientifique (CNRS)
September 2006	Invited Researcher, Laboratoire d'Informatique de Paris-Nord
April 2006 – April 2008	Assosiate Professor, National Institute of Informatics
April 2006 – April 2008	Assosiate Professor, the Graduate University for Advanced Studies
September 2005	Invited Researcher, Institut de Mathématique de Luminy
January 2002 – March 2006	Assistant Professor, National Institute of Informatics
November 2001 – June 2006	Postdoctoral Fellow, Institut de Mathématique de Luminy
April 2000 – December 2001	Research Fellow PD, Japan Society of the Promotion of Science (JSPS)
April 1999 – July 2007	Part-time Lecturer, Faculty of Letters, Keio University
September 1998 – October 1998	Visiting Researcher, Institute for Logic, Language and Computation, University of Amsterdam
April 1998 – March 2000	Research Fellow DC2, Japan Society of the Promotion of Sciences (JSPS)

Award

June 2001   The Kleene Award, 16th Annual IEEE Symposium on Logic in Computer
Science, Boston University, USA.

Academic Activities

- Member of Philosophy of Science Society Japan, Mathematical Society of Japan, European
  Association for Theoretical Computer Science.

- Program Committee Member of:
  Workshop on Developments in Implicit Computational Complexity (DICE 2010),
  Workshop on Geometry of Interaction, Traced Monoidal Categories and Implicit Complexity (2009), 7th Asian Symposium on Programming Languages and Systems (APLAS
  2009),
  Conference on Non-Classical Mathematics (2009),
  Workshop on Structures and Deduction (2009),
  17th EACSL Annual Conference on Computer Science and Logic (CSL 2008),
  8th Conference on Typed Lambda Calculi and Applications (TLCA 2007),
  9th International Workshop on Logic and Computational Complexity (LCC 2007),
  11th Annual Asian Computing Science Conference (Asian 2006).

Grants

- Algebraic and coalgebraic proof theory. Grant-in-aid for young scientists (B): 21700014,
  JSPS, April 2009 –.

- Fuzzy set theory as a foundation of fuzzy mathematics. JSPS-ASCR Joint Research
  Project, April 2009 – March 2011.

- Research on computational complexity of fuctional programs based on linear logic. Grant-in-aid for young scientists (B): 16700020, JSPS, April 2004 – March 2007.

Publications

Thesis

1. K. Terui, *Light Logic and Polynomial Time Computation*, Phd Thesis, Keio University,
   March 2002.

Journal Articles

1. K. Terui. Computational ludics. To appear in *Theoretical Computer Science*.

2. P. Baillot and K. Terui. Light types for polynomial time computation in lambda calculus. *Information and Computation*, Vol. 207, No. 1, pp. 41-62, 2009.

3. V. Atassi, P. Baillot and K. Terui. Verification of Ptime reducibility for system F terms: type inference for Dual Light Affine Logic. *Logical Methods in Computer Science*, Vol. 3, No. 4, 2007.

4. K. Terui. Which Structural Rules Admit Cut Elimination? — An Algebraic Criterion. *Journal of Symbolic Logic*, Vol. 72, No. 3, pp. 738 – 754, 2007.

5. K. Terui. Light affine lambda calculus and polynomial time strong normalization. *Archive for Mathematical Logic*, Vol. 46, Num. 3 – 4, pp. 253 – 280, 2007.

6. M. Kanovich, M. Okada and K. Terui. Intuitionistic phase semantics is almost classical. Mathematical Structures in Computer Science, Vol.16, pp.1–20, 2006.

7. A. Ciabattoni and K. Terui. Towards a semantic characterization of cut-elimination. *Studia Logica*, Vol. 82, pp.95–119, 2006.

8. K. Terui. Light Affine Set Theory: A Naive Set Theory of Polynomial Time. *Studia Logica*, Vol. 77, pp. 9-40, 2004.

9. K. Terui. Naive Set Theory and Contraction (in Japanese). *Philosophy of Science*, Vol. 36, No. 2, pp. 49 – 64, January 2004.

10. M. Okada and K. Terui. The Finite Model Property for Various Fragments of Intuitionsitic Linear Logic. *Journal of Symbolic Logic*, Vol. 64, No. 2, pp. 790 – 802, 1999.

Refereed Conference Papers

1. A. Ciabattoni, L. Straßburger and K. Terui. Expanding the realm of systematic proof theory. To appear in *Proceedings of 18th International Workshop on Computer Science Logic (CSL'09)*.

2. M. Basaldella and K. Terui. On the meaning of logical completeness. *Proceedings of the 9th International Conference on Typed Lambda Calculi and Applications (TLCA'09)*, pp. 50–64, 2009.

3. A. Ciabattoni, N. Galatos and K. Terui. From axioms to analytic rules in nonclassical logic. *Proceedings of 23rd Annual IEEE Conference on Logic in Computer Science (LICS'08)*, pp. 229–240, 2008.

4. A. Ciabattoni and K. Terui. Modular Cut-Elimination: Finding Proofs or Counterexamples. *Proceedings of 13th International Conference on Logic for Programming and Automated Reasoning (LPAR'06)*, LNAI 4246, pp. 135 – 149, 2006.

5. V. Atassi, P. Baillot and K. Terui. Verification of Ptime reducibility for system F terms via Dual Light Affine Logic. *Proceedings of 20th International Workshop on Computer Science Logic (CSL'06)*, LNCS 4207, pp. 150–166, 2006.

6. P. Baillot and K. Terui. A feasible algorithm for typing in Elementary Affine Logic. *Proceedings of the 7th International Conference on Typed Lambda Calculi and Applications (TLCA'05)*, pp. 55–70, April 2005.

7. K. Terui. Proof Nets and Boolean Circuits. *Proceedings of the 19th Annual IEEE Symposium on Logic in Computer Science (LICS'04)*, pp. 182 – 191, July 2004.

8. P. Baillot and K. Terui. Light types for polynomial time computation in lambda-calculus. *Proceedings of the 19th Annual IEEE Symposium on Logic in Computer Science (LICS'04)*, pp. 266 – 275, July 2004.

9. H. Mairson and K. Terui. On the Computational Complexity of Cut-Elimination in Linear Logic. *Theoretical Computer Science (Proceedings of ICTCS 2003)*, LNCS 2841, pp. 23–36, October 2003.

10. K. Terui. Light Affine Lambda Calculus and Polytime Strong Normalization. *Proceedings of the 16th Annual IEEE Symposium on Logic in Computer Science (LICS'01)*, pp. 209 – 220, June 2001.

Popular Articles (all in Japanese)

1. K. Terui. The Birth of Linear Logic. *Mathematics*, Mathematical Society of Japan, to appear.

2. K. Terui. Basics of logic. *Dictionary of Mathematical Sciences*, Maruzen, to appear.

3. K. Terui. Welcome to the World of Computation. *Science*, Vol. 77, No. 10, pp. 1038 – 1047, Iwanami, October 2007.

4. K. Terui. A Letter in 1956: Gödel and P$\neq$ NP conjecture. *Special Issue on Gödel, Contemporary Philosophy*, Seidosha, February 2007.

5. K. Terui. Computation and Logic. *Philosophy of Logic* (ed. by T. Iida), Kodansha Metier, September 2005.

Other Papers

1. K. Terui. Labelled Tableau Calculi Generating Simple Models for Substructural Logics. ILLC Research Report PP-1999-04, University of Amsterdam, February 1999.

2. K. Terui. Anaphoric Linking at Run Time: A Type-Logical Account of Discourse Representation. ILLC Research Report LP-1998 17, University of Amsterdam, December 1998.

3. M. Okada and K. Terui. Completeness Proofs for Linear Logic Based on the Proof Search Method (Preliminary Report). *Type Theory and its Applications to Computer Systems* (ed. by J. Garrigue), RIMS Kokyuuroku 1023, Kyoto University, pp. 57 – 75, January 1998.

4. M. Okada and K. Terui. Semantic Characterizations for Reachability and Trace Equivalence in a Linear Logic-Based Process Calculus. *Proof Theory and Ordinals*, RIMS Kokyuuroku 976, Kyoto University, pp. 146 – 168, February 1997.

Invited Talks

1. Algebraic completions and cut elimination (in Japanese). *Summer School on Foundations of Mathematics*, Tokyo Institute of Technology, August 2009.

2. Algebraic proof theory for nonclassical logics II. *Topology, Algebra and Categories in Logic*, Amsterdam, July 2009.

3. Semantic methods in substructural and fuzzy logics. *Conference on Non-Classical Mathematics*, Hejnice (Czech Republic), June 2009.

4. Algebraic proof theory for nonclassical logics. *10th Asian Logic Conference*, Kobe University, September 2008. Also at *Conference on Logic, Algebra and Truth Degrees*, University of Siena, September 2008, and *BLAST conference*, University of Denver, August 2008.

5. Towards a logical foundation of computational complexity. Special session on logic and computer science, *Logic Colloquium 2008*, Bern, July 2008.

6. From Axioms to Rules: A Coalition of Fuzzy, Linear and Substructural Logics. *23rd Incontro di Logica* (Italian Association of Logic and its Applications), Genova, February 2008.

7. A logical foundation for the theory of computational complexsity. *Workshop on Linear Logic, Ludics, Implicit Complexity, Operator Algebras*, Siena, May 2007.

8. Special Lecture: Semantic Investigations into Cut Elimination Theorems in Non Classical Logics (in Japanese). Annual Meeting of Mathematical Society of Japan, Chuo University, March 2006.

9. Intersection Types for Implicit Computational Complexity. *Workshop on Implicit Computational Compexity* (as part of Geocal06), Marseille, February 2006.

10. Proof nets and Boolean Circuits. *Workshop on Implicit Complexity and Logic*, University Paris-Nord, September 2004.

11. Decomposition of Computation via Linear Logic. *6th International Workshop on Logic and Computational Complexity* (LICS'04 affiliated workshop), July 2004.

12. Lectures on Linear Logic. *Summer School on Foundations of Mathematics*, Shizuoka University, September 2003.

13. Naive Set Theory Based on Light Logics and Computational Complexity. *100 years after Russell's Paradox*, Annual Meeting of Philosophy of Science Society Japan, Niigata University, November 2002.

14. On the complexity of cut-elimination in linear logic. *Linear Logic 2002* (LICS'02 affiliated workshop), July 2002.