(2013　　-2018　　)

Research Laboratory Reference Data
for External Review

April 2013 - March 2019

(FY.2013-2018)

Research Institute of Electrical Communication

Tohoku University

Software Construction

1 研究業績 / Research Activities

Notation for Japanese publications.

- The items with the "(in Japanese)" annotation are those Japanese publications that carry English titles in the original articles.
- The items with the "(**translation:**)" annotation are those that do not carry English titles.

(1) 学術論文（査読付き） / Refereed Journal Papers

[1-1] Masanori Endo, Yuto Mukade, Akimasa Morihata, Katsuhiro Ueno, Atsushi Ohori: Code Reading Assistance for Functional Programming based on Variable Def-use Relationships. Computer Software, Vol.32, No.1, pp.1_194-1_212, February, 2015. (in Japanese)

[1-2] Koichi Sato, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Automated Inductive Theorem Proving using Transformations of Term Rewriting Systems. Computer Software, Vol.32, No.1, pp.1_179-1_193, 2015. (in Japanese)

[1-3] Katsuhiro Ueno, Atsushi Ohori, and Toshiaki Otomo.
An Efficient Non-Moving Garbage Collector for Functional Languages,
Higher-Order and Symbolic Computation, Springer,
40 pages, accepted for publication on Dec. 17th, 2015.

[1-4] Katsuhiro Ueno, Atsushi Ohori: A Type Safe Access to Key-value Stores from Functional Languages, Journal of Information Processing, Vol. 24(2016), No. 1, pp.141-151, Jan. 2016

[1-5] Katsuhiro Ueno, Atsushi Ohori. A foreign language interface from ML to shell. New Generation Computing, Vol. 34, No. 3, pp. 239–256, 2016

[1-6] Mifuyu Osaka, Katsuhiro Ueno, Atsushi Ohori: Typed template engine based on partially dynamic records. Computer Software, Vol.35, No.3, pp.3_79-3_95, July, 2018. (in Japanese)

[1-7] Kazuki Ono, Katsuhiro Ueno, Atsushi Ohori: Implementation Method of Native Code Level Debugging Environment for SML#. IPSJ Transactions on Programming (PRO), Vol.11, No.3, pp.1-13, September, 2018. (in Japanese)

(2) 論文誌に相当する査読付き国際会議発表論文
Full papers in refereed conference proceedings equivalent to journal papers

[1-8] Kentaro Kikuchi: Proving Strong Normalization via Non-deterministic Translations into Klop's Extended λ-Calculus, Proceedings of the 22nd Annual Conference of the European Association for Computer Science Logic (CSL 2013), LIPIcs 23, pp.395-414, September, 2013.

[1-9] Atsushi Ohori, Katsuhiro Ueno, Kazunori Hoshi, Shinji Nozaki, Takashi Sato, Tasuku Makabe, Yuki Ito. SML# in Industry: A Practical ERP System Development. Proceedings of the ACM International Conference on Functional Programming (ICFP), pages 167 - 173, 2014.

[1-10] Takaki Suzuki, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Confluence of Orthogonal Nominal Rewriting Systems Revisited, Proceedings of the 26th International Conference on Rewriting Techniques and Applications (RTA 2015), LIPIcs 36, pp.301-317, 2015.

[1-11] Koichi Sato, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Correctness of Context-Moving Transformations for Term Rewriting Systems, Proceedings of the 25th International

Symposium on Logic-Based Program Synthesis and Transformation (LOPSTR 2015), LNCS 9527, pp.331-345, 2015.

[1-12] Atsushi Ohori, Katsuhiro Ueno, Tomohiro Sasaki, Daisuke Kikuchi. A Calculus with Partially Dynamic Records for Typeful Manipulation of JSON Objects Proceedings of the 30th European Conference on Object-Oriented Programming (ECOOP 2016), pp. 18:1–18:25, 2016

[1-13] Katsuhiro Ueno, Atsushi Ohori. A fully concurrent garbage collector for functional programs on multicore processors. Proceedings of the 21st ACM SIGPLAN International Conference on Functional Programming (ICFP 2016), pp. 421–433. 2016

[1-14] Atsushi Ohori, Katsuhiro Ueno, Hisayuki Mima: Finitary Polymorphism for Optimizing Type-Directed Compilation, In Proceedings of the 23rd Proceedings of the ACM SIGPLAN International Conference on Functional Programming (ICFP'18), St. Louis, 2018.

(3)   / Papers in refereed conference proceedings

[1-15] Atsushi Ohori: Record Polymorphism: Its Development and Applications, In Search of Elegance in the Theory and Practice of Computation, Lecture Notes in Computer Science, Volume 8000, pp 432-444, University of Edinburgh, Oct. 28th, 2013.

[1-16] Akimasa Morihata, Masato Koishi, Atsushi Ohori Dynamic Programming via Thinning and Incrementalization. Proceedings of the International Symposium on Functional and Logic Programming (FLOPS), pages 186 - 202, June 2014.

[1-17] Kentaro Kikuchi, Takafumi Sakurai: A Translation of Intersection and Union Types for the μ -Calculus (short paper), Proceedings of the 5th International Workshop on Classical Logic and Computation (CL&C 2014), 2014.

[1-18] Katsuhiro Ueno, Atsushi Ohori. Compiling SML# with LLVM: a Challenge of Implementing ML on a Common Compiler Infrastructure. ACM SIGPLAN ML Family Workshop 2014.

[1-19] Kentaro Kikuchi, Takafumi Sakurai: A Translation of Intersection and Union Types for the μ -Calculus, Proceedings of the 12th Asian Symposium on Programming Languages and Systems (APLAS 2014), LNCS 8858, pp.120-139, 2014.

[1-20] Katsuhiro Ueno, Atsushi Ohori: A foreign language interface from ML to shell. Symposium on Trends in Functional Programming 2014 (TFP 2014), 2014.

[1-21] Katsuhiro Ueno, Yutaka Fukasawa, Akimasa Morihata, Atsushi Ohori. The Essence of Ruby. Asian Symposium on Programming Languages and Systems (APLAS), pages 78 - 98, Nov. 2014.

[1-22] Kentaro Kikuchi: Uniform Proofs of Normalization and Approximation for Intersection Types, Proceedings of the 7th Workshop on Intersection Types and Related Systems (ITRS 2014), EPTCS 177, pp.10-23, 2015.

[1-23] Koichi Sato, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Context-Moving Transformation for Term Rewriting Systems (Extended Abstract), Participant's Proceedings of the 2nd International Workshop on Rewriting Techniques for Program Transformations and Evaluation (WPTE 2015), pp.3-7, 2015.

[1-24] Takaki Suzuki, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Critical Pair Analysis in Nominal Rewriting, Proceedings of the 7th International Symposium on Symbolic Computation in Software Science (SCSS 2016), EPiC 39, pp.156-168, 2016.

[1-25] Takahito Aoto, Kentaro Kikuchi: A Rule-Based Procedure for Equivariant Nominal Unification, Proceedings of the 8th International Workshop on Higher-Order Rewriting (HOR 2016), 2016.

[1-26] Takahito Aoto, Kentaro Kikuchi: Nominal Confluence Tool, Proceedings of the 8th International

Joint Conference on Automated Reasoning (IJCAR 2016), LNAI 9706, pp.173-182, 2016.

[1-27] Tomohiro Sasaki, Katsuhiro Ueno, Atsushi Ohori. SML# with Natural Join. ACM SIGPLAN Workshop on ML, 2016.

[1-28] Kentaro Kikuchi: Confluence by Strong Commutation with Disjoint Parallel Reduction, Participant's Proceedings of the 4th International Workshop on Rewriting Techniques for Program Transformations and Evaluation (WPTE 2017), 2017.

[1-29] Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Parallel Closure Theorem for Left-Linear Nominal Rewriting Systems, Proceedings of the 11th International Symposium on Frontiers of Combining Systems (FroCoS 2017), LNAI 10483, pp.115-131, 2017.

[1-30] Atsushi Ohori, Kenjiro Taura, Katsuhiro Ueno: Making SML# a general-purpose high-performance language. ACM SIGPLAN Workshop on ML, 2017.

(4) 　　　　　　　　　　　　　　　　　　 / Papers in unrefereed conference

(5) 　　　　　　 / Review articles

[1-31] Atsushi Ohori: Principles of LR Parsing. Computer Software, Vol.31, No.1, pp.1_30-1_42, 2014. (in Japanese)

(6) 　　　　　　　　　　 / Refereed domestic conferences

[1-32] 　　　　, 　　　　, 　　　　, 　　　. SML# SQL 　　　　　　　　　　　　　　　　. 16 　　　　　　　　　　　　　　　　　　　, 2014 3 　(translation: Hikaru Saito, Katsuhiro Ueno, Akimasa Morihata, Atsushi Ohori: Integration of the SQL row aggregation feature into SML#, 16th JSSST Workshop on Programming and Programming Languages, March, 2014.)

[1-33] 　　　　, 　　　　, 　　　, 　　　　: 　　　　　　　　　　　　　　　　　　　　　　 , 16 　　　　　　　　　　　　　　　　(PPL 2014), 2014 3 5 . (translation: Koichi Sato, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Automated Transformations of Term Rewriting Systems for Automated Inductive Theorem Proving. 16th JSSST Workshop on Programming and Programming Languages, March, 2014.)

[1-34] 　　　　, 　　　, 　　　, 　　　　: 　　　　　　　　　　　　　　　　　　, 16 　　　　　　　　　　　　　(PPL 2014), 2014 3 5 . (translation: Takaki Suzuki, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: On Confluence of Nominal Rewriting Systems. 16th JSSST Workshop on Programming and Programming Languages, March, 2014.)

[1-35] 　　　　, 　　　, 　　　: Java PathFinder? 　　ML 　　　　　　　　　　　　　 , The 2nd. cross-disciplinary Workshop on Computing Systems, Infrastructures, and Programming (xSIG 2018), 　　　, 　　　, 2018 5 29 . (translation: Kota Uotani, Katsuhiro Ueno, Atsushi Ohori: Verification of uncaught exceptions in ML by Java PathFinder, The 2nd cross-disciplinary Workshop on Computing Systems, Infrastructures, and Programming (xSIG 2018), May, 2018.)

[1-36] 　　　　, 　　　, 　　　: ML 　　　　　　　　　　　　　 , The 2nd. cross-disciplinary Workshop on Computing Systems, Infrastructures, and Programming (xSIG 2018), 　　　, 　　　, 2018 5 29 . (translation: Kohei

Takagi, Katsuhiro Ueno, Atsushi Ohori: Integration of an ML-family language and streaming database, The 2nd. cross-disciplinary Workshop on Computing Systems, Infrastructures, and Programming (xSIG 2018), May, 2018.)

[1-37]   ,   ,   ,   ,   : Progress report: Ruby 3
                    ,   21   PPL2019   ,
                    , 2019   3   6 . (**translation:** Yusuke Endo, Soutaro Matsumoto, Katsuhiro Ueno, Eijiro Sumii, Yukihiro Matsumoto: Progress report: Toward static analysis in Ruby 3 The 21st JSSST Workshop on Programming and Programming Languages, March, 2019.)

(7)   / Unrefereed domestic conferences

[1-38]   ,   ,   ,   :   ,
                    30   ,   , 2013   9   10 . (**translation:** Koichi Sato, Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: Program Transformation for Automated Verification. Annual Meeting of the Japan Society for Software Science and Technology, September, 2013.)

[1-39]   ,   .
                    30   2013   9   11   (**translation:** Katsuhiro Ueno, Atsushi Ohori: Type-safe access from an functional language to a key-value store. Annual Meeting of the Japan Society for Software Science and Technology, September, 2013.)

[1-40]   ,   ,   ,   ,   .
                                              30   2013   9   11
(**translation:** Masanori Endo, Yuto Mukade, Akimasa Morihata, Katsuhiro Ueno, Atsushi Ohori: Assisting reading functional program code by def-use relationship of variables. Annual Meeting of the Japan Society for Software Science and Technology, September, 2013.)

[1-41]   31   Atsushi Ohori, Katsuhiro Ueno, Kazunori Hoshi, Shinji Nozaki, Takashi Sato, Tasuku Makabe, Yuki Ito SML# in Industry: A Practical ERP System Development (ACM ICFP 2014   )   , 2014   9
10 . (**translation:** Atsushi Ohori, Katsuhiro Ueno, Kazunori Hoshi, Shinji Nozaki, Takashi Sato, Tasuku Makabe, Yuki Ito: SML# in Industry: A Practical ERP System Development (invited special lecture of a top-conference paper). Annual Meeting of the Japan Society for Software Science and Technology, September, 2014.)

[1-42]   ,   , Charles Mejia Cruz,   ,   .   SML#   64
                    ,   31   ,   2014   9   10 .
(**translation:** Mifuyu Osaka, Tomohiro Sasaki, Charles Mejia Cruz, Katsuhiro Ueno, Atsushi Ohori: Progress report on 64-bit SML#. Annual Meeting of the Japan Society for Software Science and Technology, September, 2014.)

[1-43]   ,   ,   :   ,
                    32   ,   , 2015   9   8 . (**translation:** Kentaro Kikuchi, Takahito Aoto, Yoshihito Toyama: On the Correctness of Context-Moving Transformations. Annual Meeting of the Japan Society for Software Science and Technology, September, 2015.)

[1-44]   ,   :   ,
           ,   104   , 2015   6   5 . (**translation:** Katsuhiro

Ueno, Atsushi Ohori: A Type Safe Access to Key-value Stores from Functional Languages. The 104th meeting of Special Interest Group on Programming (PRO), Information Processing Society of Japan, June, 2015.)

[1-45]   ,   ,   ,   ,   :   Web   ,   104   , 2015   6   5   . (**translation:** Mifuyu Osaka, Daisuke Kikuchi, Katsuhiro Ueno, Atsushi Ohori, Kanako Sasaki: A Web application development environment in a functional language. The 104th meeting of Special Interest Group on Programming (PRO), Information Processing Society of Japan, June, 2015.)

[1-46]   ,   ,   .   .   108   , 8 pages, 2016   2   . (**translation:** Yuji Nitta, Katsuhiro Ueno, Atsushi Ohori: Automatic generation of expressions including variables of nested function and tuple types. The 108th meeting of Special Interest Group on Programming (PRO), Information Processing Society of Japan, February, 2016.)

[1-47]   ,   ,   .   .   108   , 5 pages, 2016   2   . (**translation:** Kenta Tabata, Katsuhiro Ueno, Atsushi Ohori: Approach to writing an intermediate representation in a language for compiler implementation. The 108th meeting of Special Interest Group on Programming (PRO), Information Processing Society of Japan, February, 2016.)

[1-48]   ,   ,   . SML#   Vertex-centric   .   33   , 2016   9   . (**translation:** Hisayuki Mima, Katsuhiro Ueno, Atsushi Ohori: Toward Vertex-centric Programming in SML#, Annual Meeting of the Japan Society for Software Science and Technology, September, 2016.)

[1-49]   ,   ,   .   .   33   , 2016   9   . (**translation:** Mifuyu Osaka, Katsuhiro Ueno, Atsushi Ohori: Prototype of a typed template engine using partially-dynamic records, Annual Meeting of the Japan Society for Software Science and Technology, September, 2016.)

[1-50]   ,   ,   . OS   .   33   , 2016   9   . (**translation:** Kohei Tokunaga, Katsuhiro Ueno, Atsushi Ohori: Toward developing an OS only in a functional language, Annual Meeting of the Japan Society for Software Science and Technology, September, 2016.)

[1-51]   ,   ,   .   .   33   , 2016   9   . (**translation:** Tomohiro Sasaki, Katsuhiro Ueno, Atsushi Ohori: Implementation of a type inference algorithm with natural join constraint, Annual Meeting of the Japan Society for Software Science and Technology, September, 2016.)

[1-52]   ,   ,   . SML   .   33   , 2016   9   . (**translation:** Tomoaki Sato, Katsuhiro Ueno, Atsushi Ohori: Toward making SML# foreign function interface more seamless, Annual Meeting of the Japan Society for Software Science and Technology, September, 2016.)

[1-53]   ,   ,   :   ,   34   ,   , 2017   9   21   . (**translation:** Hisayuki Mima, Katsuhiro Ueno, Atsushi Ohori: Optimization for programs including polymorphic functions by abstract interpretation, Annual Meeting of the Japan Society for Software Science and Technology, September, 2017.)

[1-54] 　　　　, 　　　, 　　　: SML# 　　　　　　　　　　　　　　　　　　　　　　, 　　　　34　　　, 　　　　　　　　　　　　　, 2017　9　20　. (**translation:** Kazuki Ono, Katsuhiro Ueno, Atsushi Ohori: Toward code-level debugging environment for SML#, Annual Meeting of the Japan Society for Software Science and Technology, September, 2017.)

[1-55] 　　　, Karim HAMDI, 　　　, 　　　: 　　IoT 　　　　　　　　　　, The 2nd. cross-disciplinary Workshop on Computing Systems, Infrastructures, and Programming (xSIG 2018), 　　　, 2018　5　29　. (**translation:** Yuki Otsuka, Krim Hamdi, Katsuhiro Ueno, Atsushi Ohori: Toward a high level programming environment for IoT, The 2nd. cross-disciplinary Workshop on Computing Systems, Infrastructures, and Programming (xSIG 2018), May, 2018.)

[1-56] 　　　, 　　: 　　　　　　　　　　　　　　　　　　　, 　　35　　, 　　　　　　　　　　　, 2018　8　30　. (**translation:** Kentaro Kikuchi, Isao Sasano: Inductive Theorem Proving for Equations with Infinite Data. Annual Meeting of the Japan Society for Software Science and Technology, September, 2018.)

(8) 　　/ Books

None

(9) 　　/ Patents

None

(10) 　　　/ Invited Talks

[1-57] 　　　. 　　　　SML# 　　　　　　　　　　　. 　　　　　　　　　30　　　　　　　2013　9　12　 (**translation:** Atsushi Ohori. Development of the functional language SML# – toward contributing revitalization of Japanese software industry. Keynote speech, The 30th Annual Meeting of the Japan Society for Software Science and Technology, September, 2013.)

[1-58] Katsuhiro Ueno: The SML# compiler backend: compiling ML to C-compatible low-level code, Syntax and Semantics of Low-Level Languages (LOLA 2015), Invited talk, July, 2015.

2 　　　　/ Activities in academic societies

(1) 　　　　　/ Activities on committees of academic societies

[2-1] Atsushi Ohori, Conference Chair, The 33rd JSSST (Japan Society for Software Science and Technology) Annual Conference, 2016

[2-2] Katsuhiro Ueno, Organizing Committee Chair, The 33rd JSSST Annual Conference, 2016

[2-3] Atsushi Ohori, Councilor of Japan Society for Software Science and Technology, 2004 – present

[2-4] Katsuhiro Ueno, Program Committee Member, ACM ICFP, 2018.

(2)
Planning and organizing academic international conferences

None

3 / Contributions to society

(1) / Educational activities outside university

None

(2) / Instruction and education for industry

[3-1] Development of ERP System based on SML#. Research collaboration and consultation to NEC Software Tohoku, 2012 – 2014.

[3-2] High-level Programming Framework for Highly Available Storage System. Research collaboration and consultation to Hitachi Solutions Higashinihon, 2013 – 2017.

(3)
Activities for national and local governments, and public organizations

[3-3] 2011 10 (**translation:** A member (   ) of Science Council of Japan, Oct. 2011 – present)

(4) / Outreach activities

[3-4] 2017 (**translation:** "Information Representation and Principles of Computing". Special Lecture for Tsuruoka High School Students. March, 2017.)

[3-5] 2017 10 (**translation:** "Introduction to Mathematical Logic: what is the meaning of 'being logical'" Special Lecture for Tsuruoka High School Students. October, 2017.)

4 / Research funds/grants received

(1) / Grant-in-Aid for Scientific Research (KAKENHI)

[4-1] Atsushi Ohori (chief investigator), "Basic research on implementation technology for making SML# a practical polymorphic language" Grant-in-Aid for Basic Research (B), 2013-4 – 2018-3, total amount 8,190,000 yen.

[4-2] Atsushi Ohori (chief investigator), "Development of a Massively Parallel Functional Language by Integrating Massively Parallel Technology into the ML-style polymorphic languageSML#", Grant-in-Aid for Basic Research (C), 2018-4 – 2022-3, total amount 4,290,000 yen

[4-3] Katsuhiro Ueno (chief investigator), "Realizing a systematic infrastructure for practical programming language development", Grant-in-Aid for Young Scientists (B), 2015-4 – 2019-3, total amount: 3,900,000 yen

[4-4] Katsuhiro Ueno (chief investigator), "A study on high-level and safe interoperability of programming languages" Grant-in-Aid for Young Scientists (B), 2012-4 – 2015-3, total amount: 2,730,000 yen

[4-5] Kentaro Kikuchi (chief investigator), "Program Verification Methods based on Context-Moving Transformation and Higher-Order Rewriting Theory", Grant-in-Aid for Scientific Research (C), 2016-4 – 2019-3, total amount 3,510,000 yen

(2) 　　　　　 / Other grants and subsidies

[4-6] "Application of reliable programming language to system development" 2013-1 – 2014-3 research Fund received from NEC Tohoku, total amount 1,363,132 yen.

[4-7] "High-level Programming Framework for Highly Available Storage System" Contract researcher Kikuchi Daisuke from Hitachi Solutions Higashinihon, 2014-11 – 2015-3, total amount 232,000 yen.

[4-8] "High-level Programming Framework for Highly Available Storage System" Contract researcher Kikuchi Daisuke from Hitachi Solutions Higashinihon, 2015-4 – 2016-3, total amount 464,000 yen.

5 　　　　　　　　　 / International joint research, collaborative research, and collaborative education

6 　　　　 / Research supervision

(1) 　　　　 / List of lectures

1. Lectures in undergraduate schools　Course title Year Instructor
   - Compiler, 2013 – 2018, Atsushi Ohori
   - System Software Engineering, 2013　2018, Atsushi Ohori jointly with one professor.
   - Team-based Engineering Design Course 2013 - 2018 Katsuhiro Ueno
   - Programming Course B, 2013 - 2018 Katsuhiro Ueno with 3 other people
   - Basic seminar for first year undergraduate students, 2013 - 2018, Atsushi Ohori jointly with 5 professors.
2. Lectures in graduate schools　Course title Year Instructor
   - Software Construction 2013 - 2018 Atsushi Ohori and Katsuhiro Ueno (from 2018 –)

(2) 　　　　　　　 // List of bachelor's, master's and doctoral degree students supervised

1. 　　　　 /List of bachelor's degree
   - 　　　　　　　　　　　　　　　　　　　　 2019　3　(**translation:** Masahiro Hayashita, "A Study on programming environment for semantic processing of natural languages", 2019-3.　)

- 　　　　　　2019 3 (**translation:** Gaku Yamazaki, "A Study on automatic template generation from data" 2019-3.)
- 　　　Java PathFinder? 　ML 　　　　　　2018 3 (**translation:** Kota Uotani, "A study on analyzing uncaught exception using Java PathFinder" 2018-3.)
- 　　　　　　IoT 　　　　　2018 3 (**translation:** Yuki Otuka, "A study on IoT programming environment for high-level languages" 2018-3.)
- 　　ML 　　　　　　2018 3 (**translation:** Kohei Takagi "A study on integrating streaming databases into an ML-style language" 2018-3.)
- 　　SML# JSON 　　　　Web 2017 3 (**translation:** Yuya Sasaki, "A study on static typing of Web request data based on SML# JSON support" 2017-3.)
- 　　　　　web 2017 3 (**translation:** Kota Hashimoto, "A user authentication system for a functional language web server" 2017-3.)
- 　　　Web 　　　　2016 3 (**translation:** Kazuki Ono "A study on template engine for highly reliable web programming" 2016-3.)
- 　OS 　　　　2016 3 (**translation:** Kohei Tokunaga, "A method for running a functional language program without OS support" 2016-3.)
- 　　　　Web 2015 3 (**translation:** Mifuyu Osaka, "A study on high-level data representation method for functional languages based on Web technologies" 2015-3.)
- 　　　　　　　2015 3 (**translation:** Tomoaki Sasaki, "Introduction of Natural Join to a functional language", 2015-3.)
- 　SML# 　　　　　2014 3 (**translation:** Kenta Tabata, "Introducing parallel computing interface to SML#", 2014-3.)
- 　　　　　　2014 3 (**translation:** Yuji Nitta, "Completing assistance for incomplete program based on type inference", 2014-3.)

2. 　　　/List of master's degree
- Yuya Sasaki, "A Study on Technology to Construct Secure Client-side in Web Applications" 2019-3. (in Japanese)
- Kota Hashimoto, "A Study on a High-level Declarative Image Processing Programming Environment with SML# and OpenCV", 2019-3. (in Japanese)
- Hisayuki Mima, "A Study on Static Analysis for Optimizing Polymorphic Languages" 2018-3.
- Kazuki Ono, "A Study on Code Level Debugging Environment for Functional Languages", 2018-3. (in Japanese)
- Kohei Tokunaga, "A Study on Developing a Functional Language for Describing Operating Systems", 2018-3. (in Japanese)

- Mifuyu OSAKA, "Developing a Web Application Developing Environment with Type System and Compiling Method", 2017-3. (in Japanese)
- Tomohiro Sasaki, "A Study on Integrating Natural Join into a ML-style Programming Language", 2017-3.
- Tomoaki SATO "Implementation of a More Complete and Convenient Foreign Function Calling Method", 2017-3. (in Japanese)
- Kenta Tabata. "A study on representing and manipulating compiler intermediate languages" 2016-3.
- Yuji Nitta, "A study on systematic testing method for functional languages" 2016-3.
- Masanori Endo, "A study on static typing for resource identity", 2015-3.
- Yuto Mukade, "A study on compiler support for functional program understanding", 2015-3.
- Hikaru Saito, "A study on integrating advanced SQL features in a functional language", 2014-3.
- Yutaka Fukasawa, "A study on formal semantics of Ruby", 2014-3.

3. 　　　　　　/List of doctor's degree
- 　　　　　　　　　　　　　　　　　　　　　　　　　　2013
  (**translation:** Masatoshi Aizawa, "A study on open mission critical system development methodology" 2013-7. (Doctoral Degree by Dissertation))

7 　　　　　　　　　 / Honors, awards, and prizes

[7-1] 　　　　　　　　　　　　　　　　　　　　　　　　(**translation:** Katsuhiro Ueno, Tokin foundation award, "Implementation methodology for reliable programming languages and development of a next-generation programming language system", 2014-3.)

[7-2] Best Review Paper Award, "Principles of LR Parsing" (in Japanese), Computer Software, vol31, no 1, 2016.

[7-3] 　　　　　　　　　　　　　　　　　　　　　　(**translation:** Atsushi Ohori, Recognition of Excellent Evaluation Committee Member of JSPS Kakenhi Grant, 2017.)

8 　　　　 / Others

[8–1]
　　　　　　　　　　　　　　　　　　　23
　　　　　　　　　2017　　　　　　86　　　　　　25-2　2017　　2
(**translation:** "Development of software production infrastructure by integrating reliable programming languages and specification languages on massively parallel programming environment" (contact: Atsushi Ohori) Recommendation : Japanese Master Plan of Large Research Projects, Science Council of Japan, February, 2017.)

[8–2]
　　　　　　　　　　　　　　　　　　　22
　　　　　　　　　2014　　　　　　115　　　　　　25-2　2014　　2　．

(**translation:** "Development of software production infrastructure by integrating reliable programming languages and algebraic specification languages" (contact: Atsushi Ohori) Recommendation : Japanese Master Plan of Large Research Projects, Science Council of Japan, February, 2017.)