



ASSOCIATION FOR SYMBOLIC LOGIC

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ASL NEWSLETTER

November 2013

- **In Memoriam: Mikhail A. Taitslin.** Mikhail A. Taitslin passed away on July 20, 2013 in Tver, Russia, where he had lived and worked for the last three decades of his life. He was a devoted husband and father, whose high-level research bridged areas of mathematics and computer science. He was a well-respected educator and mentor of students.

Mikhail Taitslin was born into a family of medical research scientists on January 30, 1936 in Kiev, Ukraine. His father perished in WWII while serving as a doctor, and his mother raised their son alone. He received his undergraduate degree from the Lugansk Pedagogical Institute in 1957, and then started work as a school mathematics teacher while maintaining and developing an interest in higher mathematics. His continuing interest in higher mathematics led Taitslin to read a paper by Anatoly I. Maltsev, a leading Soviet algebraist and logician. The young mathematics teacher noticed an inaccuracy within the article of which he immediately wrote to the author. This started a correspondence between the young Taitslin and Maltsev which led to Taitslin's move to the Ivanovo Pedagogical Institute, where Maltsev worked at the time. Later in 1960, he followed Maltsev to Akademgorodok, the newly opened scientific and educational centre in Novosibirsk.

M.A. Taitslin earned his Ph.D in 1963, under the direction of Maltsev, and the Doctor of Sciences degree in 1968. He was a member of the Novosibirsk Institute of Mathematics of the Academy of Sciences of the USSR and lectured at the Novosibirsk State University, reaching the rank of a full professor. Mikhail had fond memories of those years in Akademgorodok when he was enthusiastically engaged in mathematics and where he also played an active role in its social life. But in the early 1970s the political atmosphere in Akademgorodok had undergone dramatic change, and cases of injustice based on anti-semitism became a regular feature of academic life. In several instances Taitslin fought to defend those individuals against such injustices, ultimately resulting in his losing his professorial position with the university. He was forced to leave Akademgorodok in 1976 and had been offered a position at Kazakh State University in Alma-Aty, Kazakhstan. In 1984 he moved to Tver State University in Tver, Russian Federation. In Alma-Aty and Tver, he put all his energy and talent in what he did best: conducting high-level research and teaching mathematics to young people. At both universities he was admired for his efforts and dedication.

M.A. Taitslin's scientific research extended across several areas of mathematics and computer science in which he made notable contributions. In the early 1960s Taitslin produced significant results in the then popular study of problems on decidability of elementary theories. A 1965 survey article on this topic, published jointly with Yu. L. Ershov, I. A. Lavrov and A. D. Taimanov in the *Uspekhi of Mathematical Sciences*, played an important role in the development of the area. Taitslin explored decision problems for commutative semigroups and, in particular, proved that the isomorphism problem for commutative semigroups is equivalent to the problem of conjugacy of tuples in the groups of integer matrices, which later was positively solved by algebraists.

In 1969-70, Taitslin taught a course on model theory at the Novosibirsk State University, followed by his own book, in which he, for the first time in the USSR, presented Morley's theory of categoricity and related results. With a group of dedicated students he started a seminar which began the studies in stability theory in the former USSR. One of the topics, the study of which he initiated, was the theory of categorical quasi-varieties. This topic later developed into a rich area of research carried out in Novosibirsk mainly by Taitslin's student Eugeny Palyutin, as well as by other mathematicians in the USA. The study of uncountably categorical groups, proposed by Taitslin to his Ph.D. student Boris Zilber, started the actively studied theory of groups of finite Morley rank. Subsequently, it led Zilber to the creation of geometric stability theory - one of the most important areas of present-day model theory. Another theme of the seminar was existentially closed structures, where Taitslin and

his students Oleg Belegradek and Vladimir Belyaev obtained several important results. After his move to Kazakh State University in 1976, Taitslin's main research interest shifted to logic in computer science, more specifically to the field of dynamic logic and finite model theory. Together with his student Alexei Stolboushkin, he solved a number of open problems in this area and, in particular, proved the indispensability of non-determinism and recursion in programming logic. Together with his student Ilmir Musikaev, he solved the problem of the impact of finiteness of memory on the expressive power of program logics.

Taitslin's seminar at Tver in the early 1990s discussed issues related to the multiplicative fragment of Girard's linear logic and some of its generalizations. Taitslin offered an interesting semantics of "barter deals" for this fragment and developed the concept of networks with limited resources. Jointly with his student Dmitry Arkhangelsky, he studied linear modal logic as well as other modal logics as the descriptive languages for relational databases and parallel computing with fixed resources. Amongst other things, they established the polynomial time complexity for the problem of parallel transformation of a resource defined by a formula in the Horn subset of linear logic. In the mid-1990s, Taitslin, jointly with Stolboushkin, proved the absence of syntax for safe formulas in the theory of databases and programs for safe stratified Datalog. At the same time he became interested in the question of the expressive power of various query languages. In this area of study, an important role belongs to the so-called "translation theorems", which show for the various universes the ability to translate queries in the extended language that includes the database relations and the universal relations into an equivalent query in the limited language that uses only the database relations and linear order. In their joint work, Belegradek, Stolboushkin and Taitslin used advanced model theory to describe a number of universes for which the translation theorems hold true. A comprehensive survey of the current state of affairs in this area, written jointly with his pupil Sergei Dudakov, is one of the last of the numerous publications by Mikhail Taitslin.

Mikhail A. Taitslin was a wonderful teacher and mentor who touched the lives of all who knew him. It was an honor and privilege for those who were his friend and who studied with him.

- **The 2013 ASL Election.** Enclosed with this Newsletter is the ballot for the 2013 election for Secretary-Treasurer, two members of the Executive Committee of the Council, and two members of the Council. For those receiving the Newsletter via email, the ballot is included as a pdf attachment. All terms are for three years beginning January 1, 2014. The Nominating Committee consisted of Julia Knight (Chair), Stephan Kreutzer, Penelope Maddy, Alf Onshuus, Martin Otto, Richard Shore, Katrin Tent, Andreas Weiermann, and Philip Welch.
- **ASL Membership/Subscription Fulfillment and Journal Production now at Cambridge University Press.** The ASL is pleased to announce that its membership/subscription fulfillment functions, beginning with 2014 memberships and subscriptions, will be handled by Cambridge University Press. Individual membership renewals now have been sent either by email or, to those members without email addresses, by post. All three ASL journals—*The Bulletin*, *The Journal*, and *The Review*—beginning with the 2014 volumes will be printed and distributed by Cambridge as well. Questions about these new arrangements can be directed to: Association for Symbolic Logic, c/o Membership Services Department, Cambridge University Press, 100 Brook Hill Drive, West Nyack, NY 10994, USA; Tel: 1-800-872-7423; email: USmemberservices@cambridge.org.
- **Call for Proposals: 2015 AMS-ASL Joint Special Session.** The ASL Committee on Logic in North America requests proposals for an AMS-ASL Joint Special Session to be held at the Joint Mathematics Meetings in San Antonio, January 10–13, 2015. Proposals or requests for further information should be sent to the Committee Chair, Matt Valeriote (email: matt@math.mcmaster.ca). The deadline for receipt of proposals is January 6, 2014.
- **Chatzidakis awarded Leconte Prize.** Zoé Chatzidakis, of the Équipe de Logique Mathématique of the Institut de Mathématiques de Jussieu of the Université Paris Diderot (Paris 7) has been awarded the 2013 Leconte Prize. The Prize was created in 1886 by the French Academy of Sciences to recognize important discoveries in mathematics, physics, chemistry, natural history or medicine. In recent years the prize has been awarded in the specific categories of mathematics, physics, and biology.
- **Onshuus Awarded Mathematical Congress of the Americas (MCA) Prize.** Alf Onshuus of the Universidad de los Andes (Bogotá, Colombia) is one of five mathematicians awarded the MCA Prize for outstanding

mathematical contributions in the early stages of their careers. The prizes were presented at the Mathematical Congress of the Americas held in Guanajuato, Mexico, August 5-9, 2013. The MCA prize is for mathematicians who obtained their Ph.D. no more than twelve years prior to the beginning of the Congress from an institution in the American continent, or who hold a position in one or more of its countries. Onshuus was cited for his research that has given common ground to the two major subareas in model theory: stability theory and o-minimality.

- **Discounted Dues for New ASL Individual Members.** The ASL now offers a 50% discount on dues for new individual members during each of the first two years of membership. For more information, visit <http://www.aslonline.org/membership-individual.html>.
- **Free Individual ASL Membership Program for Individuals in Developing Economies.** The ASL invites applications for an initial two-year free membership in the Association for new and lapsed members from countries classified as developing economies. The list, found at <http://www.aslonline.org/worldbankeconomies.html> includes Brazil, Bulgaria, China, Colombia, India, Iran, Russia, South Africa, and many other countries classified as ‘upper middle income’ or below on the World Bank’s annual list for four of the last five years. To apply, please send an email to the ASL Committee on Membership at asl-membership@googlegroups.com. Include your name, full mailing address, and your academic affiliation. For information about the ASL and membership benefits visit <http://www.aslonline.org/membership-individual.html>. After the initial two year period new members under this program will pay the reduced membership dues, currently at US\$18 (see below), as long as their country of residence is on the ASL’s list of developing economies.
- **Reduced Dues for Individuals and Institutions in Developing Economies.** The ASL offers reduced dues for individual and institutional members in developing economies. For 2014, the reduced dues are US\$18 for individuals and US\$130 for institutional basic membership, US\$180 for full membership. These dues apply to individuals and institutions residing in countries whose economies are classified as ‘upper middle income’ or below on the World Bank’s annual list for four of the last five years. For further information, visit <http://www.aslonline.org/membership-outreach.html> or contact the ASL Business Office: ASL, Box 742, Vassar College, 124 Raymond Avenue, Poughkeepsie, New York 12604, USA; Tel: 1-845-437-7080; Fax: 1-845-437-7830; email: asl@vassar.edu.
- **Emeritus ASL Individual Membership.** The ASL offers retired individual members two membership options. Emeritus membership includes all the privileges of regular individual membership and is available to retired individuals who have been members of the ASL for 15 years. The dues for Emeritus membership for 2014 are US\$44. The privileges attached to Retired membership (previously called emeritus membership) include the ASL Newsletter and the right to vote in ASL elections, but do not include subscriptions to the ASL journals. Retired membership is offered to retired individuals who have been members of the Association for 20 years and is free. For more information about both options, visit <http://www.aslonline.org/membership-individual.html>.

ASL MEETINGS

- **Student Travel Awards: The 2014 ASL North American Annual Meeting, 2014 ASL European Summer Meeting, and other ASL or ASL-Sponsored Meetings.** The ASL will make available modest travel awards to graduate students in logic so that they may attend the 2014 ASL North American Annual Meeting in Boulder, Colorado and the 2014 ASL European Summer Meeting in Vienna, Austria. Student members of the ASL also may apply for travel grants to other ASL or ASL-sponsored meetings. To be considered for a travel award, please (1) send a letter of application, and (2) ask your thesis supervisor to send a brief recommendation letter. The application letter should be brief (preferably one page) and should include: (1) your name; (2) your home institution; (3) your thesis supervisor’s name; (4) a one-paragraph description of your studies and work in logic, and a paragraph indicating why it is important to attend the meeting; (5) your estimate of the travel expenses you will incur; (6) (for citizens or residents of the USA) citizenship or visa status; and (7) (voluntary) indication of your gender and minority status. Women and members of minority groups are strongly encouraged to apply. In addition to funds provided by the ASL, the program of travel grants is supported by a grant from the US National Science Foundation; NSF funds for meetings outside of North America may be awarded only to

students at USA universities and to citizens and permanent residents of the USA. Air travel paid for using NSF funds must be in accordance with the Fly America Act. Application by email is encouraged; put “ASL travel application” in the subject line of your message.

For the 2014 ASL North American Annual Meeting, applications and recommendations should be received before the deadline of March 10, 2014, by the Program Chair: Marcia Groszek, Department of Mathematics, 6188 Kemeny Hall, Dartmouth College, Hanover, NH 03755-3551 USA; Fax: 603-646-1312; email: marcia.groszek@dartmouth.edu. Applications by email are preferred.

For the 2014 ASL European Summer Meeting, applications and recommendations should be received before the deadline of March 31, 2014, by the Organizing Committee: Kurt-Gödel-Gesellschaft, c/o Technische Universität Wien, Institut für Computersprachen E185.2, Favoritenstraße 9-11, A-1040 Vienna, Austria; email: lc2014@logic.at. Applications by email are preferred.

For ASL student member travel grants to ASL or ASL-sponsored meetings (other than the 2014 North American Annual Meeting and the 2014 European Summer Meeting), applications and recommendations should be received at least three months prior to the meeting at the ASL Business Office: ASL, Box 742, Vassar College, 124 Raymond Avenue, Poughkeepsie, New York 12604, USA; Fax: 1-845-437-7830; email: asl@vassar.edu. Decisions will be communicated at least two months prior to the meeting.

- **2013-14 ASL Winter Meeting (with Joint Mathematics Meetings).** *January 17–18, 2014, Baltimore, Maryland.* This meeting will take place in conjunction with the Joint Mathematics Meetings, to be held on January 15–18, 2014. The invited speakers include: J. Avigad, D. Dzhafarov, S. Gao, J. Hamkins, M. Malliaris, and A. Medvedev. The Program Committee members are A. Dow (Chair), K. Lange, and D. Lippel. The meeting also includes the joint AMS-ASL Special Session, *Logic and probability*, co-chaired by W. Calvert, D. Cenzer, J. Franklin, and V. Harizanov. The complete program for this meeting is included in this Newsletter mailing.
- **2013-14 ASL Spring Meeting (with APA).** *April 16–17, 2014, San Diego, California.* This meeting will be held jointly with the Annual Meeting of the Pacific Division of the American Philosophical Association, April 16–20, 2014. The invited portion of the program includes three panels: *New work on intensional and epistemic logic*, chaired by S. Walsh with the speakers S. Artemov, J. Horty, and D. Tucker; *Formalism today*, chaired by Z. Damjanovic with the speakers M. Ganea, E. Nelson, and A. Weir; and, *Metalogic and early analytic philosophy*, chaired by E. Reck with the speakers P. Blanchette, G. Schiemer, and R. Zach. The members of the Program Committee are Z. Damjanovic, E. Reck (Chair), and S. Walsh.
- **2014 ASL North American Annual Meeting.** *May 19–22, 2014, Boulder, Colorado.* The invited speakers are: L. Barto, B. Csima, V. de Paiva, J. Hirst, M. Hrusak, A. Kolesnikov, A. Marks, M.C. Laskowski, and S. Walsh. Alex Wilkie will give an ASL retiring presidential address. Special sessions (with organizers in parentheses) include: Higher-order computation: semantics and algorithmics (L. Ong), Model theory (P. Hieronymi and J. Marikova), Philosophical aspects of games and social algorithms (E. Pacuit and R. Parikh), Recursion theory (O. Levin and R. Solomon), Set theory in honor of Rich Laver (J. Larson and W. Mitchell), and Universal Algebra and Constraint Satisfaction (A. Szendrei and R. Willard). The members of the Program Committee are: M. Groszek (Chair), A. Kanamori, K. Kearnes, J. Marikova, S. Thomas, and H. Towsner. The Local Organizing Committee includes: N. Dobrinen, G. Forbes, N. Galatos, K. Kearnes (Chair), D. Monk, and A. Szendrei.

Abstracts of contributed talks submitted by ASL members will be published in *The Bulletin of Symbolic Logic* if they satisfy the Rules for Abstracts (see below). Abstracts must be received by the deadline of February 21, 2014, at the ASL Business Office: ASL, Box 742, Vassar College, 124 Raymond Avenue, Poughkeepsie, New York 12604, USA; Fax: 1-845-437-7830; email: asl@vassar.edu.

- **2014 ASL European Summer Meeting (Logic Colloquium '14).** *July 14–19, 2014, Vienna, Austria.* Logic Colloquium '14 will take place during the Vienna Summer of Logic (see below). The invited speakers include: A. Bauer, P. Blanchette, V. Fischer, N. Greenberg, L. Kołodziejczyk, B. Miller, M. Reynolds, M. Soskova, and A. Visser. The twenty-fifth annual Gödel Lecture also will be delivered. Tutorials will be offered by K. Apt and A. Miquel. Special Sessions (with organizers in parentheses) that are planned include: Logic of

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ASL MEETINGS (continued)

games/rational choice (R. Ramanujam), Model theory (Z. Chatzidakis), Philosophy of mathematics (M. Leng), Recursion theory (E. Fokina and D. Turetsky), and Set theory (M. Goldstern and J. Kellner). The Program Committee members are: Z. Adamowicz, J. Avigad (Chair), M. Bezem, S. Friedman, J. Koenigsmann, K. Lodaya, P. Oliva, T. Slaman, and R. Zach. The Local Organizing Committee includes: M. Baaz (Chair), A. Ciabattoni, S. Eberhard, M. Goldstern, and S. Hetzl (Co-chair). For further information, visit <http://vs12014.at/>.

Abstracts of contributed talks submitted by ASL members will be published in *The Bulletin of Symbolic Logic* if they satisfy the Rules for Abstracts (see below). Abstracts should be submitted by the deadline of March 28, 2014 at <https://www.easychair.org/conferences/?conf=1c2014>.

- **Rules for Abstracts.** The rules for abstracts of contributed talks at ASL meetings (including those submitted “by title”) may be found at http://www.aslonline.org/rules_abstracts.html. Please note that abstracts *must* follow the rules as set forth there; those which do not conform to the requirements will be returned immediately to the authors submitting them. Revised abstracts that follow the rules will be considered if they are received by the announced deadline.

ASL SPONSORED MEETINGS

- **Twenty-Third EACSL Annual Conference (CSL) and Twenty-ninth Annual ACM/IEEE Symposium on Logic in Computer Science (LICS 2014).** *July 14–18, 2014, Vienna, Austria.* The organizers of these two series of meetings will join the 2014 editions into a single event within the Sixth Federated Logic Conference (FLoC 2014) that will take place during the Vienna Summer of Logic 2014 (see below). CSL is the annual meeting of the European Association for Computer Science Logic (EACSL) intended for computer scientists whose research activities involve logic, as well as for logicians working on issues significant for computer science. The LICS Symposium is an annual international forum on theoretical and practical topics in computer science that relate to logic. The Program Committee Chairs are T.A. Henzinger and D. Miller, the Workshop Chairs are P. Bouyer-Decitre and G. Moser, and the members of the Local Organizing Committee are K. Chatterjee and J. Otop. For further information, visit <http://l1i.rwth-aachen.de/lics/csl-lics14/index.html>.
- **XVI Latin American Symposium on Mathematical Logic (SLALM 2014).** *July 28–August 1, 2014, Buenos Aires, Argentina.* The members of the Program Committee are: J. Bagaria, X. Caicedo, W. Carnielli, R. Cignoli (Chair), R. de Queiroz, C. Di Prisco, J. Iovino, F. Montagna, T. Slaman, and C. Steinhorn. The Local Organizing Committee includes: M. Busaniche, J. Legris, R. Rodríguez, H. San Martín, and P. Sánchez Terraf.

CALENDAR OF OTHER MEETINGS (Also see <http://www.aslonline.org>.)

- **Nineteenth International Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR-19).** *December 14–19, 2013, Stellenbosch, South Africa.* This conference series provides a forum where researchers in the areas of logic, automated reasoning, computational logic, programming languages and their applications come together to discuss advances in these fields. The Program Chairs are K. McMillan, A. Middeldorp, and A. Voronkov; the General Chairs are B. Fischer and G. Sutcliffe; and the Workshop Chair is L. Kovacs. For further information, visit <http://www.LPAR-19.info>.
- **Mathematical Structures of Computation (SMC 2014).** *January 13–February 14, 2014, Lyon, France.* This program consists of the following five consecutive workshops (with dates in parentheses): Recent Developments in Type Theory (January 13-17), Algebra and Computation (January 20-24), Directed Algebraic Topology and Concurrency (January 27-31), Formal Proof, Symbolic Computation and Computer Arithmetic (February 3-7), and Concurrency, Logic and Types (February 10-14). The organizers are P. Baillot, Y. Guiraud, and P. Malbos. For further information, visit <http://smc2014.univ-lyon1.fr>.
- **Vienna Summer of Logic 2014.** *July 9–24, 2014, Vienna, Austria.* This event consists of several co-located conferences organized in three streams: Logic in Computer Science / Federated Logic Conference; Mathematical

Calendar of other meetings continued on reverse side

CALENDAR OF OTHER MEETINGS (continued)

Logic; and Logic in Artificial Intelligence. Eight conferences are included in the Logic in Computer Science / Federated Logic Conference stream: the Twenty-sixth International Conference on Computer-Aided Verification (CAV), the Twenty-seventh IEEE Computer Security Foundations Symposium (CSF), the Thirtieth International Conference on Logic Programming (ICLP), the Seventh International Joint Conference on Automated Deduction (IJCAR), the Fifth Conference on Interactive Theorem Proving, the ASL-sponsored Joint meeting of the Twenty-third EACSL Annual Conference on Computer Science Logic (CSL) and the Twenty-ninth ACM/IEEE Symposium on Logic in Computer Science (LICS), the Twenty-fifth International Conference on Rewriting Techniques and Applications (RTA) joint with the Twelfth International Conference on Typed Lambda Calculi and Applications (TLCA), and the Seventeenth International Conference on Theory and Applications of Satisfiability Testing (SAT). The Mathematical Logic stream includes four conferences: the European Summer Meeting of the ASL (Logic Colloquium 2014), the Infinity Workshop, Logic, Algebra and Truth Degrees 2014, and the Kurt Gödel Fellowship Conference. The three conferences in the Logic in Artificial Intelligence stream are: the Fourteenth International Conference on Principles of Knowledge Representation and Reasoning (KR), the Twenty-seventh International Workshop on Description Logics (DL), and the Fifteenth International Workshop on Non-Monotonic Reasoning (NMR). The Organizing Committee for the Vienna Summer of Logic includes: M. Baaz (Chair), A. Ciabattoni, T. Eiter, G. Gottlob, T. Henzinger, A. Leitsch, V. Sabljakovic-Fritz, S. Szeider, H. Veith, and S. Woltran. For further information, visit <http://vs12014.at/>.

NEW BOOKS AND JOURNALS (Also see <http://www.aslonline.org/>)

- **New ASL Perspectives in Logic Volume: *Lambda Calculus with Types*.** Authors: H. Barendregt, W. Dekkers, and R. Statman (Cambridge University Press, 2013, ISBN: 9780521766142) <http://www.cambridge.org/us/academic/subjects/mathematics/logic-categories-and-sets/lambda-calculus-types?format=HB>.

To see all new books in the ASL's *Lecture Notes in Logic* and *Perspectives in Logic* series, visit <http://www.aslonline.org/books-lnl-available.html> for LNL volumes, and http://www.aslonline.org/books-perspectives_cup_springer.html for Perspectives volumes.

OTHER ANNOUNCEMENTS (Also see <http://www.aslonline.org/>)

- **Assistant or Associate Professorship, Kurt Gödel Research Center, Vienna.** A position is available for a tenure-track assistant professor or a tenured associate professor in mathematical logic. Applicants should show an outstanding record in research, teaching, and acquisition of research funding, as well as the potential for enhancing the scientific profile of the University of Vienna. Applications consist of a description of prior achievements and future plans in research and teaching, together with a complete cv, including a list of publications, lectures given and grants received. Applications are made at the job website of the University of Vienna, <http://jobcenter.univie.ac.at/> (click on "English" on the right side of the page, then on "Tenure-Track positions" near the bottom of the page). The deadline to apply is January 31, 2014. For further information about the position contact the Gödel Center director, S.-D. Friedman, at sdf@logic.univie.ac.at.
- **Call for Papers: *Making Automated Reasoning Practical: Essays in Memory of Mark Stickel*.** This volume, planned for publication as an LNAI Festschrift with Springer, is intended to be a collection of articles presenting research in all aspects of automated reasoning, in particular the design of automated reasoning systems and their applications. The editors are P. Baumgartner and R. Waldinger. The deadline for submission is March 1, 2014. Electronic submission via EasyChair may be made at <https://www.easychair.org/conferences/?conf=festschriftmarkstick>.

The next Newsletter will be sent in January 2014. Items to be included should reach the Secretary-Treasurer before January 10, 2014.

Submitted by Charles Steinhorn, Secretary-Treasurer.