

NOTICES

- **IN MEMORIAM: JEFFREY B. REMMEL.** It is with great sadness that we report the passing of Jeffrey B. Remmel. Remmel earned his doctorate in mathematics at Cornell University in 1974. He was a student of Anil Nerode. Remmel's dissertation was entitled *Co-recursively Enumerable Structures*. After completing his Ph.D. Remmel joined the faculty at the University of California at San Diego, where he spent his entire career.

Remmel published more than 300 articles with more than 90 collaborators. About half of his publications were in mainstream mathematical logic and about half were in mainstream algebraic combinatorics. Among these papers were 19 articles in *The Journal of Symbolic Logic* and 24 articles in the *Annals of Pure and Applied Logic*. His wide-ranging research interests in logic included computability theory, computable algebra, and computable model theory. His research in logical methods applied to computer science included knowledge representation theory, non-monotonic logics, complexity theory, and hybrid systems. He was co-editor of the two-volume *Handbook of Recursive Mathematics*, published in 1998, to which he contributed two long survey articles, one on effectively closed sets and the other on complexity-theoretic model theory and algebra.

Remmel was adviser to more than 30 Ph.D. students. He served as the Chair of the Mathematics Department and was the longtime Associate Dean for Physical Sciences at UCSD. He was also a leader in the field of STEM education. He was a founding director of the Science and Math Teacher Initiative (CalTeach) at UCSD. Later he served as chair of the system-wide Committee for CalTeach for the State of California. He also spent several years in private industry as a contributor to commercial hybrid systems software.

Jeff is survived by his wife Paula, and their children Sara-Maria and Christopher. His friends and close collaborators feel deep pain by the enormous and unexpected loss his passing represents.

- **IN MEMORIAM: VLADIMIR VOEVODSKY.** Vladimir Voevodsky, a truly extraordinary and original mathematician, who made remarkable advances in algebraic geometry, and whose most recent work concerned rewriting the foundations of mathematics to make them suitable for computer proof verification, died at age 51 on September 30, 2017 in Princeton, New Jersey. Voevodsky was a Professor in the School of Mathematics at the Institute for Advanced Study, a position he held since 2002.

Born in Moscow on June 4, 1966, Voevodsky earned his Ph.D. in 1992 at Harvard University under David Kazhdan. Voevodsky spent time at Harvard University as a junior fellow in the Harvard Society of Fellows from 1993 to 1996 and as a visiting scholar from 1996 to 1997 and again from 2006 to 2008. He was also a visiting scholar at the Max-Planck Institute in 1996 to 1997 and associate professor at Northwestern University from 1997 to 1998. He was awarded the Fields Medal in 2002 at age thirty-six, shortly after his appointment as Professor in the School of Mathematics. He had spent the prior three years (1998–2001) as a long-term Member.

Voevodsky earned the Fields Medal for developing motivic cohomology, involving new cohomology theories for algebraic varieties, which have provided new insights into number theory and algebraic geometry. Voevodsky was able to handle highly abstract ideas to solve concrete mathematical problems. He had a deep understanding of classical homotopy theory, where the objects considered are flexible, and was able to transpose its methods in the very rigid world of algebraic geometry. This enabled him to construct new cohomology theories for algebraic varieties, which he used to prove the Milnor and Bloch-Kato conjectures, relating K-theory groups of fields and Galois cohomology, which for three decades were the main outstanding problems in algebraic K-theory.

More recently, Voevodsky had worked in type-theoretic formalizations of mathematics and automated proof verification. He was working on new foundations of mathematics based on homotopy-theoretic semantics of Martin-Löf type theories. This led him to introduce a new, very powerful, and interesting “univalence” axiom. Examples of mathematical errors in his own past work and the work of other mathematicians became a growing concern for Voevodsky, and he determined that he needed to use computers to verify his abstract, logical, and mathematical constructions. He applied ideas from homotopy theory to the type theory used in computer proofs and said that the main goal of his most recent work was “to advance the mathematical theory of dependent type theories to the level where it can be used for rigorous study of the complex type theories that are in use today and of the even more complex ones that will appear in the future.” Voevodsky formalized much of the mathematics in his newer papers using the proof assistant Coq and the UniMath library of formalized mathematics, of which he was the founder and primary developer.

Voevodsky is survived by his former wife, Nadia Shalaby, their two daughters, Natalia Dalia Shalaby and Diana Yasmine Voevodsky, his aunt, Irina Voevodskaya, and extended family in Russia and around the world. A funeral service will be held in Moscow on December 27th, followed by a mathematical conference in honor of his work on December 28th at the Steklov Mathematical Institute of the Russian Academy of Sciences. The Institute for Advanced Study will convene an international conference on Voevodsky’s extraordinary and original work on September 29–30, 2018.

- **THE 2017 ASL ELECTION.** At the end of this year the ASL will elect two members of the Executive Committee of the Council and two members of the Council. All terms are for three years beginning January 1, 2018. The ballot was sent to all ASL members with the November ASL Newsletter. The 2017 Nominating Committee has nominated Philip Ehrlich (Ohio) and Maryanthe Malliaris (Chicago) for the Executive Committee positions, and Mariya Soskova (Madison) and Yang Yue (Singapore) for the Council positions. The Nominating Committee consisted of Sam Buss, Zoé Chatzidakis, Su Gao, Antonio Montalbán, Justin Moore, Byunghan Kim, and Alasdair Urquhart (Chair).
- **PH.D. ABSTRACTS IN LOGIC TO BE PUBLISHED IN THE BULLETIN OF SYMBOLIC LOGIC.** Beginning in 2018, the Association for Symbolic Logic will begin publishing abstracts of Ph.D. theses in logic in the *Bulletin of Symbolic Logic*. Christian Rosendal is the editor for this new section of the *BSL*. For further information, visit <http://aslonline.org/LogicThesisAbstracts.html>.
- **CALL FOR PROPOSALS: 2019 AMS-ASL JOINT SPECIAL SESSION.** The ASL Committee on Logic in North America seeks proposals for an AMS-ASL Joint Special Session to be held at the Joint Mathematics Meetings in Baltimore, Maryland, January 16–19, 2019. Proposals or requests for more information should be sent to the Committee Chair, Reed Solomon (email: david.solomon@uconn.edu). The deadline for receipt of proposals is January 5, 2018.
- **2017 ALONZO CHURCH AWARD FOR OUTSTANDING CONTRIBUTIONS TO LOGIC.** The 2017 Alonzo Church Award for outstanding contributions to logic and computation has been awarded jointly to Samson Abramsky, Martin Hyland, Radha Jagadeesan, Pasquale Malacaria, Hanno Nickau, and Luke Ong for providing a fully-abstract semantics for higher-order computation through the introduction of game models, thereby fundamentally revolutionizing the field of programming language semantics, and for the applied impact of these models. The Alonzo Church Award, presented annually, was established in 2015 by the ACM Special Interest Group for Logic and Computation (SIGLOG), the European Association for Theoretical Computer Science, the European Association for Computer Science Logic, and the Kurt Gödel Society.
- **DISCOUNTED DUES FOR NEW ASL INDIVIDUAL MEMBERS.** The ASL 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, 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, as long as their country of residence is on the ASL's list of developing economies (see <http://www.aslonline.org/worldbankeconomies.html>).

- **REDUCED DUES FOR INDIVIDUALS AND INSTITUTIONS IN DEVELOPING ECONOMIES.** The ASL offers reduced dues for individuals and institutions in developing economies. For 2018, 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 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 more 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 2018 are US\$51. The privileges attached to Retired 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>.
- **NEW ASL BOOKS.** 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.
- **BOOK AND JOURNAL DISCOUNTS FOR ASL MEMBERS.** Several publishers offer discounts on books and journals to ASL members. For a detailed description of these discounts, visit <http://www.aslonline.org/members-discounts.html>, or write to the ASL Business Office.
- **STUDENT TRAVEL AWARDS: THE 2018 ASL NORTH AMERICAN ANNUAL MEETING, 2018 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 2018 ASL North American Annual Meeting in Macomb, Illinois, or the 2018 ASL European Summer Meeting in Udine, Italy; see below for information about these meetings. Student members of the ASL may also 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 2018 ASL North American Annual Meeting, applications and recommendations should be received before the deadline of March 9, 2018, by the Program Chair: David Marker, email: marker@uic.edu. Applications are to be submitted by email only.

For the 2018 ASL European Summer Meeting, applications for student travel grants and recommendations should be received between January 1, 2018, and the deadline of May 4, 2018. They should be submitted electronically, by email to LC18grant@uniud.it (see the application instructions at <https://lc18.uniud.it/applications>, beginning in January 2018). If electronic submission is not possible, applications and recommendations should be mailed to: Prof. H. Dugald Macpherson, PC chair: Logic Colloquium 2018, School of Mathematics, University of Leeds, Leeds LS2 9JT, UK.

For ASL student member travel grants to ASL or ASL-sponsored meetings (other than the 2018 North American Annual Meeting and the 2018 European Summer Meeting), applications and recommendations should be received at least three months prior to the start of 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.

- 2017–18 ASL WINTER MEETING (WITH JOINT MATHEMATICS MEETINGS). *January 12–13, 2018, San Diego, California*. This meeting will take place in conjunction with the Joint Mathematics Meetings taking place January 10–13, 2018. The invited speakers include C. Hill, A. Kolokolova, A. Panagiotopoulos, E. Riehl, S. Thomas, S. Vasey, and K. Yokoyama. The Joint Mathematics Meetings program includes a joint AMS-ASL special session, *Set Theory, Logic and Ramsey Theory*, organized by A. Caicedo and J. Mijares. The members of the Program Committee are J. Reimann (Chair), P. Scowcroft, and A. Tserunyan.
- 2018 ASL NORTH AMERICAN ANNUAL MEETING. *May 16–19, 2018, Macomb, Illinois*. The invited speakers include JC Beall, A. Chernikov, B. Hart, J. Knight, J. Nagloo, D. Sinapova, S. Solecki, and A. Weiermann. Tutorials will be offered by A. Marks and T. Slaman. The special sessions planned (with organizers in parentheses) include Computability (L. Bienvenu and K. Lange), Logic and Philosophy (C. Franks), Model Theory (J. Freitag and J. Mäříková), Proof Theory (H. Towsner), and Set Theory (D. Sinapova and A. Tserunyan). The members of the Program Committee include T. Carlson, B. Csima, T. Eisworth, M. Glanzberg, I. Kalantari, D. Marker (Chair), and M. Soskova. The members of the Local Organizing Committee are J. Chisholm, R. Dimitrov, C. Ealy, D. Haugen, I. Kalantari (Chair), D. LaFountain, J. Mäříková, S. Martinelli, M. Moniri, G. Pettit, B. Powell, C. Pynes, N. Vakil, G. Weitkamp, and L. Welch. For further information, visit <http://wiu.edu/cas/math/asl-conference-2018/index.php>.

Abstracts for 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 23, 2018, 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.

- 2018 ASL EUROPEAN SUMMER MEETING (LOGIC COLLOQUIUM '18). *July 23–28, 2018, Udine, Italy*. The twenty-ninth annual Gödel Lecture will be delivered by R. Downey. The invited speakers include M. Antonutti Marfori, A. Atserias, V. Brattka, A. Ciabatonni, P. D’Aquino, P. Oliva, L. Patey, A. Tserunyan, S. Unger, M. Viale, and D. Westerståhl. Tutorials will be offered by U. Sattler and K. Tent. Special sessions (with organizers in parentheses) include Computability theory (A. Sorbi and P. Shafer), Descriptive set theory and dynamical systems (B. Miller and A. Törnquist), Model theory (E. Casanovas and F. Wagner), Philosophy of logic and mathematics (J. Kennedy and G. Sagi), Proof theory and constructivism (S. Ghilardi and G. Sambin), and Temporal and multivalued logics (B. Gerla and M. Lange). The Program Committee members are S. Demri, A. Kechris, C. Laskowski, D. Macpherson (Chair), A. Marcone, A. Montalbán, P. Pudlak, G. Sher, and D. Sinapova. The Local Organizing

Committee includes G. D'Agostino (Co-Chair), V. Dimonte, M. Fiori Carones, G. Gherardi, N. Gigante, A. Marcone, A. Montanari (Co-Chair), A. Molinari, F. Parlamento, C. Piazza, and M. Valenti. For further information, visit <https://lc18.uniud.it>.

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 as pdf files at <https://easychair.org/conferences/?conf=lc18>; for submission instructions see <https://lc18.uniud.it>, beginning in January 2018. The deadline for submissions is April 27, 2018. If electronic submission is not possible, abstracts should be mailed to: Prof. H. Dugald Macpherson, PC chair: Logic Colloquium 2018, School of Mathematics, University of Leeds, Leeds LS2 9JT, UK.

- **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 who submitted them. Revised abstracts that follow the rules will be considered if they are received by the announced deadline.
- **OUROBOROS: FORMAL CRITERIA OF SELF-REFERENCE IN MATHEMATICS AND PHILOSOPHY.** *February 16–18, 2018, Bonn, Germany.* The meeting is designed as a hybrid between winter school and research conference and will consist of plenary talks as well as introductory workshops which are intended to give insight into related areas of current research. The invited speakers include E. Brendel, A. Cantini, M. Godziszewski, V. Halbach, J.D. Hamkins, P. Koepke, L. Picollo, G. Priest, L. Rossi, T. Schindler, A. Visser, and P. Welch. The members of the Organizing Committee are B. Grabmayr, R. Krapf, A. Njegomir, D. Sarikaya, and M. Sarikaya. For further information, visit www.ouroboros2018.weebly.com. (ASL Sponsored Meeting.)
- **CONFERENCES DURING THE MODEL THEORY, COMBINATORICS AND VALUED FIELDS: TRIMESTER AT THE INSTITUT HENRI POINCARÉ.** *January 8–April 6, 2018, Paris, France.* The three themes of trimester-long program are Model theory and application to combinatorics, Model theory of valued fields and applications, and Applications of model theory in geometry, analysis, and number theory. In addition to weekly seminars and courses, the trimester will have three meetings at IHP (with dates in parentheses), all ASL sponsored: *Model theory and combinatorics* (January 29–February 2, 2018), *Model theory of valued fields* (March 5–9, 2018), and *Model theory and applications* (March 26–30, 2018). The Scientific Committee includes E. Bouscaren, E. Breuillard, E. Hrushovski, F. Loeser, A. Pillay, and T. Scanlon. The members of the Organizing Committee are E. Bouscaren, Z. Chatzidakis, M. Hils, D. Macpherson, and F. Wagner. For further information visit <http://modvac18.math.ens.fr/>. (ASL Sponsored Meetings.)
- **THIRTY-THIRD ANNUAL ACM/IEEE SYMPOSIUM ON LOGIC IN COMPUTER SCIENCE (LICS 2018).** *July 9–12, 2018, Oxford, UK.* The LICS Symposium is an annual international forum on theoretical and practical topics in computer science that relate to logic. LICS 2018 will be organized as part of the the Seventh Federated Logic Conference (FLoC 2018; see below). The Program Committee Chair is M. Hofmann, the Workshop Chair is P. Bouyer, the Publicity and Proceedings Chair is S. Staton, and the General Chair is M. Grohe. The Kleene Award for the best student paper, sponsored by the European Association for Theoretical Computer Science, will be presented at the meeting. For more information, visit <http://lics.siglog.org/lics18/index.shtml>. (ASL Sponsored Meeting.)
- **SEVENTH FEDERATED LOGIC CONFERENCE (FLoC 2018).** *July 6–19, 2018, Oxford, UK.* This event brings together several international conferences related to mathematical logic and computer science. These conferences include the following: the Thirtieth International Conference on Computer-Aided Verification (CAV), the Thirty-first IEEE Computer Security Foundations Symposium (CSF), the Twenty-third International Symposium on Formal Methods (FM), the Third International Conference on Formal Structures for Computation and Deduction (FSCD), the Thirty-fourth International Conference on Logic Programming (ICLP), the Ninth International Joint Conference on Automated Reasoning (IJCAR), the Ninth International Conference on Interactive Theorem Proving (ITP), the ASL-sponsored

Thirty-third IEEE Symposium on Logic in Computer Science (LICS; see above), and the Twenty-first International Conference on Theory and Applications of Satisfiability Testing (SAT). Pre-conference workshops will be held on July 7–8, 2018. The General Chair is M. Vardi and the Steering Committee Co-Chairs are D. Kroening and M. Kwiatkowska. For more information, visit <http://www.floc2018.org>.

- THIRTIETH EUROPEAN SUMMER SCHOOL IN LOGIC, LANGUAGE, AND INFORMATION (ESSLLI-2018). *August 6–17, 2018, Sofia, Bulgaria*. The European Summer School in Logic, Language, and Information brings together logicians, linguists, computer scientists, and philosophers to study language, logic, and information, and their interconnections. Introductory and advanced courses, together with workshops, cover a wide variety of topics within the three areas of interest: Language and Computation, Language and Logic, and Logic and Computation. The Chair of the Program Committee is L. Kallmeyer and the Local Co-Chair is G. Angelova. The Chair of the Organization Committee is P. Osenova and the Co-Chair is K. Simov. ESSLLI-2018 is organized under the auspices of the Association for Logic, Language, and Information (FoLLI). For more information about ESSLLI-2018, visit <http://esslli2018.folli.info>; for further information about FoLLI, visit <http://www.folli.info>.
- TWELFTH INTERNATIONAL CONFERENCE ON ADVANCES IN MODAL LOGIC (AiML 2018). *August 27–31, 2018, Bern, Switzerland*. This conference series is an initiative aimed at presenting the state of the art in modal logic and its various applications. The invited speakers include A. Ciabatonni, R. Goldblatt, R. Iemhoff (joint AiML-LATD), S. Kikot, and D. Scott. The Co-Chairs of the Program Committee are G. Bezhanishvili and G. D'Agostino, and the Co-Chairs of the Organizing Committee are G. Metcalfe and T. Studer. The deadline for abstracts of full papers is March 11, 2018; for short presentations the deadline is May 20, 2018. AiML 2018 will be co-located with Logic, Algebra and Truth Degrees (LATD 2018, see below). For further information, visit <http://www.aiml2018.unibe.ch>.
- LOGIC, ALGEBRA AND TRUTH DEGREES (LATD 2018). *August 28–31, 2018, Bern, Switzerland*. The invited speakers include M. Bílková, N. Galatos, R. Iemhoff (joint AiML-LATD), T. Moraschini, and D. Petrisan. The Chair of the Program Committee is G. Metcalfe, and the Co-Chairs of the Organizing Committee are G. Metcalfe and T. Studer. LATD 2018 will be co-located with AiML 2018 (see above). For further information, visit <http://www.latd2018.unibe.ch/>.