In Memoriam: Georg Kreisel. Georg Kreisel died in Salzburg on March 1, 2015, aged 91. Born on September 15, 1923 in Graz, he came to England before the outbreak of World War II to escape Nazi persecution. He completed his secondary education at Dulwich College, in London, and then studied mathematics at Trinity College Cambridge, where A.S. Besicovitch was his director of studies. During this time, and again in 1946-47, in addition to studying mathematics, Kreisel also discussed philosophy of mathematics with Ludwig Wittgenstein, a Fellow of Trinity College (who in 1944 said of Kreisel that he was the most able philosopher he had ever met who was also a mathematician). Kreisel took his B.A. in Mathematics in 1944 (and was in contention to be Senior Wrangler). He then used his training as a mathematician, particularly in fluid dynamics, for war service as an Experimental Officer in the British Admiralty, and continued in that post until 1946, when he returned to Cambridge. He submitted a dissertation for a Research Fellowship at Trinity College but was not elected. Kreisel never took a Ph.D., though in 1962 he was awarded the Cambridge degree of Sc.D., a ‘higher doctorate’ given on the basis of published research. In 1949 he was appointed Lecturer in Mathematics at the University of Reading, a post he held until 1960, during which time and thereafter he also held visiting positions at the University of Paris (intermittently throughout the 1950s, 60s, and 70s), at the Institute for Advanced Study in Princeton (1955-7 and 1962-3)—where he was closely associated with Kurt Gödel, who had invited him, Stanford University (1958-9 and 1962-3), All Souls College Oxford (1967), and the University of California at Los Angeles (1968). In 1966 he was elected Fellow of the Royal Society. In 1964 he accepted appointment as Professor of Logic and the Foundations of Mathematics at Stanford University, a post he held until taking early retirement in 1985.

Throughout his thirty years of retirement Kreisel remained passionately committed to the pursuit of his research interests, though no longer through supervision of doctoral theses and less often than before by presenting papers in conferences, but continuing through discussions with individuals, through publication of papers—increasingly of a reflective nature, and through his, as it had always been, amazingly voluminous correspondence (ten letters in a day would not be unusual, each in his meticulous though difficult to read handwriting), developing his own research interests and helping his correspondents to develop theirs. Throughout these years he was of no fixed address, moving between Oxford, Cambridge, Salzburg, occasionally Zurich, Vienna, and Munich, always in need wherever he stayed of a place to sleep that would be completely dark and silent, the former easy to manage by keeping blackout material in each place he visited, the latter the responsibility of his hosts and far harder to assure. His most extended stays, except for his last two and a half years, when he lived continually in Salzburg, no longer physically able to continue his peregrinations, were in Oxford, where he held various one-year Visiting Fellowships, at Magdalen College (1988-89), Exeter College (1989-90), and All Souls College (1992-93).

Kreisel published some 200 papers and wrote several books, only one of which, Elements of Mathematical Logic (Model Theory), coauthored with J.L. Krivine, is published (lecture notes on Elements of Proof Theory and on Principles of Constructive Mathematics are unpublished), and he published an uncounted number of reviews. His first publication in mathematical logic, “Note on arithmetic models for consistent formulae of the predicate calculus”, came in 1950 (preceded by two papers the previous year in applied mathematics). As with much of his early work in logic, it goes back to his reading of Hilbert and Bernays, Grundlagen der Mathematik Volume II while he was an undergraduate (which must have been the first time this book was studied in Great Britain), and includes a footnote citing an idea concerning diagonal arguments by Wittgenstein from their discussions.

Hilbert’s program is considered by many to have been stopped dead in its tracks by Gödel’s Second Incompleteness Theorem. Kreisel saw that what had been stopped was Hilbert’s misguided philosophical claims for
what would have been achieved by his program, but that the mathematics of the program could be mathemati-
cally fruitful, namely to extract constructive content from non-constructive proofs, and so began what one might
call Kreisel’s program, leading to results in proof unwinding, also now called proof mining. Kreisel’s second
paper in logic, “On the interpretation of non-finitist proofs I” began this program. This led on to his work
on functionals and his No Counterexample Interpretation, which he developed in the period when he was in
close contact with Gödel at the Institute for Advanced Study. These interests of Kreisel further developed in
the direction of generalized recursion theory, in which his ideas had a seminal impact, and to investigations of
predicativity, and of intuitionistic mathematics and logic.

Though eschewing the title of philosopher of mathematics, Kreisel was that (as were Dedekind and Hilbert).
Kreisel has written how his interest in foundations of mathematics was “forced” upon him: “Since my school
days I had had those interests in foundations that force themselves on beginners when they read Euclid’s El-
ements (which was then still done at school in England), or later when they are introduced to the differential
calculus.” Few of his writings contain extensive overtly philosophical discussion, but there is much philosophy of
mathematics to be found in many of them, for example in his paper, “Informal rigour and completeness proofs”
(1967), and in the two appendices of his book with Krivine (1967). Kreisel’s last public lecture was at the
Gödel centenary conference in Vienna in April 2006, and his last published paper was in the Proceedings of that

Kreisel’s impact and influence was at its height during his years at Stanford, especially in the heyday of
the Stanford Logic Group in the 1960s when it comprised Sol Feferman, Dana Scott, and Kreisel, with brilliant
graduate students, post-docs and visitors around them. Here is a list of some logicians and philosophers of
mathematics whose work has been influenced, in some cases massively, by Kreisel’s results and ideas, both in the
Stanford Logic Group and beyond: Matthias Baaz, Henk Barendregt, Jon Barwise, Michael Beeson, Paul Bernays,
Paul Cohen, John Crossley, Charles Delzell, Burton Dreben, Michael Dummett, Solomon Feferman, Harvey
Friedman, Dov Gabbay, Robin Gandy, Jean-Yves Girard, C.A. Goad, Nicholas Goodman, William Howard,
Martin Hyland, Daniel Isaacson, Robert Jeroslov, Stephen Cole Kleene, Ulrich Kohlenbach, J.L. Krivine, Daniel
Leivant, Angus Macintyre, Per Martin-Löf, Grigori Mints, Charles Parsons, Richard Platek, Dag Prawitz, Hartley
Rogers, Gerald Sacks, Dana Scott, Stewart Shapiro, Craig Smorynski, Stephen Simpson, Clifford Spector, Rick
Statman, Jonathan Stavi, William Tait, Gaisi Takeuti, Anne Troelstra, Jean van Heijenoort, Richard Vesley,
Hao Wang, Paul Weingartner, Piotr Wojtylak.

Kriesel could be extremely kind, and generous, though also at times acerbic and harsh, and with many of
those in the list above that he influenced and helped, he eventually fell out. An anecdote about Kreisel in
1949 told by Francis Crick, Kreisel’s life-long friend from when they met during the war, is also recognizably
characteristic of Kreisel in later life: Crick recalled talking to Kreisel after he returned from his interview for the
job at Reading, “How did it go?” Crick asked. After a pause Kreisel replied, “By the end they were thinking
before they asked a question.” A remark by Georg von Wright about Wittgenstein could apply equally to
Kreisel: ‘Each conversation with Wittgenstein was living through the day of judgement,” despite which, as with
Wittgenstein, Kreisel inspired great loyalty and affection among those close to him with whom he remained on
good terms, and those who have engaged with Kreisel’s ideas have found in them fruitful and exciting new ways
of thinking.

• 2016 Shoenfield Prizes. The ASL invites nominations for the Shoenfield Prizes for outstanding expository
writing in the field of logic. There are two Shoenfield prizes, one for books and one for expository articles, each
to be awarded simultaneously every three years; the Shoenfield Prizes were first awarded in 2007. Any book first
published in the past 9 years may be considered for the book award. Any article published in the past 6 years
may be considered for the article award. Nominations should be submitted to Simon Thomas (stho
mas@math.
rutgers.edu), Chair of the ASL Committee on Prizes and Awards. The deadline for nominations for the 2016
Prizes is November 1, 2016.

The Shoenfield prizes were established by the ASL to honor the late Joseph R. Shoenfield for his many
outstanding contributions to logic and to the ASL. Generations of logicians have especially valued Shoenfield’s
expository gifts, and his writings provide models of lucidity and elegance. The fund on which the Prize is based
is administered by the ASL and the award is made by the Association upon the recommendation of the ASL Committee on Prizes and Awards. For general information about the Prize, visit http://www.aslonline.org/info-prizes.html.

• **2016 Sacks Prize.** The ASL invites nominations for the 2016 Sacks Prize for the most outstanding doctoral dissertation in mathematical logic. Nominations must be received by September 30, 2016. The Sacks Prize was established to honor Professor Gerald Sacks of MIT and Harvard for his unique contribution to mathematical logic, particularly as adviser to a large number of excellent Ph.D. students. The Prize was first awarded in 1994 and became an ASL Prize in 1999. The Fund on which the Prize is based is now administered by the ASL and the selection of the recipient is made by the ASL Committee on Prizes and Awards. The Sacks Prize will consist of a cash award plus five years free membership in the ASL. For general information about the Prize, visit http://www.aslonline.org/info-prizes.html.

Anyone who wishes to make a nomination for the 2016 Sacks Prize should consult the webpage http://www.aslonline.org/Sacks nominations.html for the precise details of the application process. A brief summary of the procedure is provided below.

Students who defend their dissertations (equivalent to the American doctoral dissertation) between October 1, 2015, and September 30, 2016, are eligible for the Prize this year. This is an international prize, with no restriction on the nationality of the candidate or the university where the doctorate is granted. Nominations should be made by the thesis adviser, and consist of: name of student, title and 1–2 page description of dissertation, date and location of the thesis defense, letter of recommendation from the adviser, an electronic copy of the thesis in .pdf form, or the address of a web site from which an electronic copy in .pdf form can be downloaded, and an independent second letter of recommendation. Nominations should be sent to the Committee Chair, Simon Thomas; .pdf files sent as attachments by email to sthomas@math.rutgers.edu are preferred. The form of such letters and other pertinent details can be found at the web site above, and need to be read prior to submitting a nomination. Correspondence should be addressed to Simon Thomas, Department of Mathematics, Rutgers University, Hill Center - Busch Campus, 110 Frelinghuysen Road, Piscataway, NJ 08854-8019, USA.

Those wishing to contribute to the Sacks Prize Fund may send contributions to the ASL office (ASL, Box 742, Vassar College, 124 Raymond Avenue, Poughkeepsie, New York 12604); All such contributions they are tax-deductible within the USA.

• **Call for Proposals: 2019 North American Annual Meeting.** The ASL Committee on Logic in North America requests proposals for the 2019 ASL North American Annual meeting, to be held sometime in the first five months of 2019. The committee seeks a university somewhere in North America and a local committee to host the meeting and handle the local arrangements. The ASL meetings ordinarily cycle geographically in the pattern: east (2016), west (2017), midwest (2018). Thus, for 2019 the committee seeks a location in the east. Any reasonable proposal, however, will be considered. For more information, interested parties should contact the Committee Chair, Reed Solomon (email: david.solomon@uconn.edu) no later than November 2, 2016.

• **Call for Proposals: 2018 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 San Diego, January 10–13, 2018. 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 4, 2017.

ASL MEETINGS

• **Student Travel Awards: The 2016 ASL European Summer Meeting and other ASL or ASL-Sponsored Meetings.** The ASL will make available modest travel awards to graduate students in logic and (for the European Summer Meeting only) to recent Ph.D.s so that they may attend the 2016 ASL European Summer Meeting in Leeds, England; see below for information about this meeting. Student members of the ASL also may apply for travel grants to other ASL or ASL-sponsored meetings. See below for information about these 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 2016 ASL European Summer Meeting, applications and recommendations should be received before the deadline of May 2, 2016, by the Organizing Committee: Logic Colloquium 2016, School of Mathematics, University of Leeds, Leeds LS2 9JT, United Kingdom; email: lc2016@leeds.ac.uk. For applications by email, please put “ASL travel application” in the subject line of your message. Applications by email are preferred.

For ASL student member travel grants to other ASL or ASL-sponsored meetings, 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.

• 2016 ASL North American Annual Meeting. May 23–26, 2016, Storrs, Connecticut. The invited speakers include: Z. Chatzidakis, M. Kaufmann, K. Lange, I. Neeman, M. Rathjen, and S. Shapiro. Alasdair Urquhart will give an ASL retiring presidential address. Tutorials will be offered by D. Hirschfeldt and M. Malliaris. Special sessions (with organizers in parentheses) include: Computability theory (B. Csima and M. Soskova), Model theory (C. Hill and R. Nagloo), History and philosophy of logic (dedicated to the memory of Aldo Antonelli) (G. Russell and R. Zach), and Set theory (C. Conley and G. Sargsyan). The members of the Program Committee include: P. Blanchette (Chair), D. Dzhafarov, R. Lubarsky, A. Montalban, J. Moore, and C. Wood. The members of the Local Organizing Committee are: Jc. Beall, D. Dzhafarov, D. Ripley, M. Rossberg, and R. Solomon (Chair). Electronic registration is available at http://www.aslonline.org/meeting_registrationsecure.html. The complete program for this meeting is included in this Newsletter mailing (as a .pdf attachment for those receiving the Newsletter via email). For further information, visit http://aslonline.org/meeting_registrationsecure.html.

For ASL members of the North American Chapter, the deadline for travel grants is May 2, 2016.

• 2016 ASL European Summer Meeting (Logic Colloquium ’16). July 31–August 6, 2016, Leeds, England. The twenty-seventh annual Gödel Lecture will be delivered by S. Todorcevic. The invited speakers include: B. van den Berg, L. Bienvenu, R. Garner, R. Goldblatt, I. Kaplan, T. Pitassi, F. Schlutzenberg, D. Sinapova, H. Towsner, T. Williamson, and B. Zilber. Tutorials (with the topic in parenthesis) will be offered by U. Andrews (Computable model theory) and T. Coquand (Univalent foundations). The following special sessions will be offered (with organizers in parentheses): Computability theory (I. Kalimullin and S. Terwijn); Formal theories of truth (O. Hjortland and D. Ripley); Homogeneous structures: model theory meets universal algebra (G. Cherlin and M. Pinsker); Model theory and limit structures (C. Hill and R. Patel); Proof theory and reverse mathematics (A. Montalban and A. Weiermann); and, Set theory (I. Neeman and B. Veličković). The Program Committee members are: M. Bodirsky, S. Buss, N. Gambino, R. Iemhoff (Chair), H. Leitgeb, S. Lempp, M. Malliaris, R. Schindler, and Y. Venema. The Local Organizing Committee includes: O. Beyersdorff, S.B. Cooper, N. Gambino (Chair), I. Halupczok, H.D. Macpherson, V. Mantova, M. Rathjen, J.K. Truss, and S.S. Wainer. For further information, visit http://www.lc2016.leeds.ac.uk.

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 can be submitted at http://www.lc2016.leeds.ac.uk/submission.html; the deadline for submission is April 29, 2016.

• 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 imme-

Newsletter continued on separate sheet
diately to the authors who submitted them. Revised abstracts that follow the rules will be considered if they are received by the announced deadline.

**ASL SPONSORED MEETINGS**


- **Computability in Europe 2016 (CiE 2016): Pursuit of the Universal.** June 27–July 1, 2016, Paris, France. The conference will open with a special session in honor of the memory of the former Computability in Europe (CiE) president, Barry Cooper (M. Soskova, organizer). Tutorials will be offered by M. Bojanczyk and B. Chazelle. A public lecture will be offered by M. Dumitru. The invited speakers include: N. Alechina, V. Brattka, D. Kahrobaei, S. Lempp, A. Nies, D. Perrin, and R. Solomon. The following special sessions are planned (with organizers in parentheses): Computable and constructive analysis (D. Graça and E. Mayordomo); Computation in bio-chemical systems (A. Carbone and I. Petre); Cryptography and information theory (D. Gligoroski and C. Padro); History and philosophy of computing (A. Naibo and K. Tatarchenko); Symbolic dynamics (J. Kari and R. Yassawi); and Weak arithmetics (L. Beklemishev and A. Speranski). The Program Committee Co-chairs are L. Bienvenu and N. Jonoska, and the Chair of the Steering Committee is A. Beckmann. For more information, visit [http://lics.rwth-aachen.de/lics16/](http://lics.rwth-aachen.de/lics16/).

- **Logic, Algebra and Truth Degrees (LATD) 2016.** June 28–30, 2016, Phalaborwa, South Africa. The featured topics for this meeting are: algebraic semantics and abstract algebraic logic, applications and foundational issues, first, higher-order and modal formalisms, geometric and game theoretic aspects, and proof theory and computational complexity. The invited speakers are: L. Cabrer, M. Gehrke, H. Hosni, P. Jipsen, and N. Preining. The Chair of the Program Committee is J. Rašković, the Honorary Chair of the Steering Committee is P. Hájek, and the Chair of the Local Organizing Committee is C. van Alten. For further information, visit [http://www.latd2016.co.za/index.html](http://www.latd2016.co.za/index.html).

- **Thirty-first Annual ACM/IEEE Symposium on Logic in Computer Science (LICS 2016).** July 5–8, 2016, New York, New York. This symposium is an annual forum on theoretical and practical topics in computer science that relate to logic. This event marks the thirtieth anniversary of LICS. The Program Committee Chair is N. Shankar, the Conference Chair is E. Koskinen, the Workshop Chair is P. Bouyer-Decitre, and the General Chair is M. Grohe. The Kleene Award for the best student paper, as judged by the Program Committee, will be presented at the symposium. For more information, see [http://lics.rwth-aachen.de/lics16/](http://lics.rwth-aachen.de/lics16/).

“What are criteria for a suitable foundation of mathematics?–Homotopy Type Theory, a new interesting alternative to set theory?”. July 18–23, 2016, Bielefeld, Germany. This interdisciplinary workshop, designed as a hybrid between summer school and research conference, is aimed at students and researchers from the fields of mathematics, philosophy and computer science. The confirmed invited speakers include: P. Aczel, B. Ahrens, T. Altenkirch, C. Ballarin, M. Bezem, S. Centrone, J. Ladyman, M. Leng, A. Pitts, B. Spitters, T. Streicher, C. Ternullo, and V. Voevodsky. The organizers are: B. Grabmayr, D. Kant, L. Kühne, D. Sarikaya, and M. Viehstädt. For further information, visit http://fomus.weebly.com.

Hilbert-Bernays Summer School on Logic and Computation. July 24–30, 2016, Göttingen, Germany. This summer school is intended for students of mathematics, philosophy and computer science. The following mini-courses will be offered (with the speakers in parentheses): Computational contents of proofs (H. Schwichtenberg), From Hilbert to Gentzen and beyond (R. Kahle), Lambda-calculus (S. Ronchi della Rocca), and Proof mining (U. Kohlenbach). The deadline to apply for financial support is April 30, 2016. For further information, write to summer@math.uni-goettingen.de or visit http://www.uni-goettingen.de/en/530211.html.


Twenty-eighth European Summer School in Logic, Language and Information (ESSLLI-2016). August 15–26, 2016, Bolzano, Italy. 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 C. Gardent. ESSLLI-2016 is organized under the auspices of the European Association for Logic, Language and Information (FoLLI). For more information about ESSLLI-2016, visit http://esslli2016.unibz.it; for further information about FoLLI, visit http://www.folli.info.

Twenty-third Workshop on Logic, Language, Information and Computation (WoLLIC 2016). August 16–19, 2016, Puebla, Mexico. This is the twenty-third in a series of workshops intended to foster interdisciplinary research in pure and applied logic. The invited speakers are: P. Barceló, D. Bartošová (to be confirmed), J.A. Makowsky, A. Palmigiano, S. Smets, K. Tent (to be confirmed), and A. Villaveces. The Chair of the Program Committee is J. Väänänen. The Co-chairs of the (Local) Organizing Committee are C. Zepeda Cortés, A.G. de Oliveira, M. Osorio, and R. de Queiroz. For more information, visit http://www.wollic.cs.buap.mx.

Syntax Meets Semantics 2016 (SYSMICS2016). September 5–9, 2016, Barcelona, Catalonia, Spain. This conference will focus on interactions between syntactic and semantic methods in substructural logics. It is the first of a series planned in the SYMSICS RISE project during 2016-2019 (see http://logica.dmi.unisa.it/symsics/). The invited speakers include: M. Busaniche, R. Cignoli, J.M. Font, D. Mundici, A. Palmigiano, J. Raftery, and K. Terui, C. Tsinakis, and Y. Venema. The Program Committee Chair is L. Spada, and the Chair of the Organizing Committee is L. Godo. For more information, visit http://sysmics-16.iiia.csic.es/.

Workshop on Set-theoretical Aspects of the Model Theory of Strong Logics. September 26–30, 2016, Bellaterra, Catalonia, Spain. The workshop is one of two main events of the research program on Large Cardinals and Strong Logics that will take place at the Centre de Recerca Matemàtica, September 5–December 16, 2016. The Scientific Committee includes: J. Bagaria, M. Magidor, and J. Väänänen. For further information, visit http://www.crm.cat/en/Activities/Curs_2016-2017/Pages/W1_LargeCardinals.aspx.

The next Newsletter will be sent in September 2016. Items to be included should reach the Secretary-Treasurer before August 31, 2016.

Submitted by Charles Steinhorn, Secretary-Treasurer.