

**ASSOCIATION FOR SYMBOLIC LOGIC
2015-2016 WINTER MEETING**

Washington State Convention Center
Seattle, WA

January 8-9, 2016

Program Committee: Jeffrey Hirst (Chair), Clinton Conley, Clifton Ealy.

All ASL meeting participants are urged to register. The URL for advanced registration for the JMM can be found at

http://jointmathematicsm meetings.org/meetings/national/jmm2016/2181_reg.

The Meetings Registration Desk for JMM will be located on the the fourth floor of the Washington State Convention Center.

The Joint Mathematics Meetings will include two AMS/ASL co-sponsored Special Sessions. A session on **Surreal Numbers** will be held on Thursday, January 7, 1:00-4:00 p.m. and Friday, January 8, 1:00-6:00 p.m. in Room 602, Washington State Convention Center. A session on **Applications of Logic, Model Theory, and Theoretical Computer Science to Systems Biology** will be held on Saturday, January 9, 1:00-6:00 p.m. in Room 602, Washington State Convention Center. The schedules for these Special Sessions appear on pages 3 and 4 of this program.

All talks in the ASL meeting will be held in Room 4C-1, Washington State Convention Center.

The ASL Reception will take place on Friday, January 8, 2016, 5:30-7:00 pm in the Cedar Room on the second floor of the Sheraton Seattle Hotel.

FRIDAY, JANUARY 8
Room 4C-1, Washington State Convention Center

Morning

- 9:00 – 9:50 Invited Lecture: **Lou van den Dries** (University of Illinois at Urbana-Champaign), *Transseries: algebra and model theory*.
- 10:00 – 10:50 Invited Lecture: **James Freitag** (University of California Los Angeles), *Differential algebra and special points conjectures*.

FRIDAY, JANUARY 8
Room 4C-1, Washington State Convention Center

Afternoon

- 1:00 – 1:50 Invited Lecture: **Carl Jockusch** (University of Illinois at Urbana-Champaign), *Imperfect algorithms, asymptotic density, and Turing degrees.*
- 2:00 – 2:50 Invited Lecture: **Bakh Khoussainov** (University of Auckland), *Algorithmically random infinite structures.*
- 3:30 – 5:20 Contributed Talks, Session I: *See below.*

Friday Evening

- 5:30 – 7:00 ASL Reception in the Cedar Room on the second floor of the Sheraton Seattle Hotel.

SATURDAY, JANUARY 9
Room 4C-1, Washington State Convention Center

Morning

- 9:00 – 9:50 Invited Lecture: **Jindřich Zapletal** (University of Florida), *Interpretations of topological spaces.*
- 10:00 – 10:50 Invited Lecture: **Natasha Dobrinen** (University of Denver), *Inner topological Ramsey spaces.*
- 11:00 – 11:50 Invited Lecture: **Dana Bartošová** (Instituto de Matemática e Estatística, Universidade de São Paulo), *Ramsey properties in topological dynamics.*

Afternoon

- 2:00 – 4:50 Contributed Talks, Session II: *see page 3.*

CONTRIBUTED TALKS - SESSION I

Friday, January 8
Room 4C-1, Washington State Convention Center

- 3:30 – 3:50 **Caroline Terry**, *Asymptotic structure of edge weighted graphs.*
- 4:00 – 4:20 **Gabriel Conant**, *Unstable theories without the strict order property.*
- 4:30 – 4:50 **Mary Leah Karker**, *Products of metric structures.*
- 5:00 – 5:20 **Vince Guingona**, *A local characterization of VC-minimality.*

CONTRIBUTED TALKS - SESSION II

Saturday, January 9

Room 4C-1, Washington State Convention Center

- 2:00 – 2:20 **Justin Brody**, *Amalgamation classes with \exists -closures and a conjecture of Moss.*
- 2:30 – 2:50 **Chris Lambie-Hanson**, *Robust reflection principles.*
- 3:00 – 3:20 **Katalin Bimbó**, *Connections between relational semantics for E_{\rightarrow} and E .*
- 3:30 – 3:50 **Joachim Mueller-Theys**, *Does the consistency sentence really state consistency?*
- 4:00 – 4:20 **Ronald Fuller*** and **Peter Cardon**, *Sophotaxis.*
- 4:30 – 4:50 **Ronald Fuller**, *Logic is the missing link in information management.*

AMS-ASL SPECIAL SESSION

Surreal Numbers

Organizers: Philip Ehrlich and Ovidiu Costin

SESSION I

Thursday, January 7

Room 602, Washington Convention Center

- 1:00 – 1:20 **Alessandro Berarducci***, **Vincenzo Mantova**, *Transserial derivations on surreal numbers.*
- 1:30 – 1:50 **Alessandro Berarducci**, **Vincenzo Mantova***, *Transserial derivations on surreal numbers.*
- 2:00 – 2:20 **Lou van den Dries**, *The surreals as a differential field.*
- 2:30 – 2:50 **Ovidiu Costin**, **Philip Ehrlich***, **Harvey M. Friedman**, *Integration on the Surreals: A Conjecture of Conway, Kruskal and Norton.*
- 3:00 – 3:20 **Ovidiu Costin***, **Philip Ehrlich**, **Harvey M. Friedman**, *Integration on the Surreals: A Conjecture of Conway, Kruskal and Norton.*
- 3:30 – 3:50 **John H Conway**, *The History of the Surreal Numbers.*

SESSION II

Friday, January 8

Room 602, Washington Convention Center

- 1:00 – 1:50 **Salma Kuhlmann**, *Exponential-logarithmic power series fields and the surreal numbers.*
- 2:00 – 2:50 **Joel David Hamkins**, *The hypnagogic digraph, with applications to embeddings of the set-theoretic universe.*

- 3:00 – 3:20 **Phillip Ehrlich, Elliot Alexander Kaplan***, *Number systems with simplicity hierarchies: a generalization of Conway’s theory of surreal numbers II.*
- 3:30 – 3:50 **Simon Rubinstein-Salzedo***, **Ashvin Anand Swaminathan**, *Analysis on surreal numbers.*
- 4:00 – 4:20 **Simon Rubinstein-Salzedo, Ashvin Anand Swaminathan***, *Analysis on Surreal Numbers: Functions and Integration.*
- 4:30 – 4:50 **Tobias Kaiser**, *Lebesgue measure and integration theory on arbitrary real closed fields.*
- 5:00 – 5:20 **Julia F. Knight, Karen M. Lange***, *Lengths of developments in $K((G))$.*
- 5:30 – 5:50 **Julia F. Knight***, **Karen M. Lange**, *Lengths of roots of polynomials in Hahn fields.*

AMS-ASL SPECIAL SESSION

Applications of Logic, Model Theory, and
Theoretical Computer Science to Systems Biology

Organizers: James Lynch and Leo Marcus

Saturday, January 9

Room 602, Washington Convention Center

- 1:00 – 1:50 **Solomon Feferman**, *Many-sorted first-order model theory as a conceptual framework for complex dynamical systems.*
- 2:00 – 2:50 **Erwin Engeler**, *Neural Algebra and Modelling.*
- 3:00 – 3:50 **Jouko A. Väänänen**, *Dependence logic and biology.*
- 4:00 – 4:50 **Ilya Shmulevich** *Probabilistic Boolean Networks as Models of Gene Regulatory Networks.*
- 5:00 – 5:50 **Carolyn L. Talcott**, *Datum Logic: A Formal Executable Semantics for Experimental Evidence.*