ASSOCIATION FOR SYMBOLIC LOGIC
2015-2016 WINTER MEETING

Washington State Convention Center
Seattle, WA

January 6-9, 2016

Program Committee: Jeffry 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://jointmathematicsmeetings.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 Berkeley), *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 – 3:50 Contributed Talks, Session II:

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 Erhlich 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.*