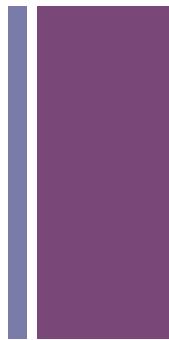


## To Infinite Possibilities and Beyond..

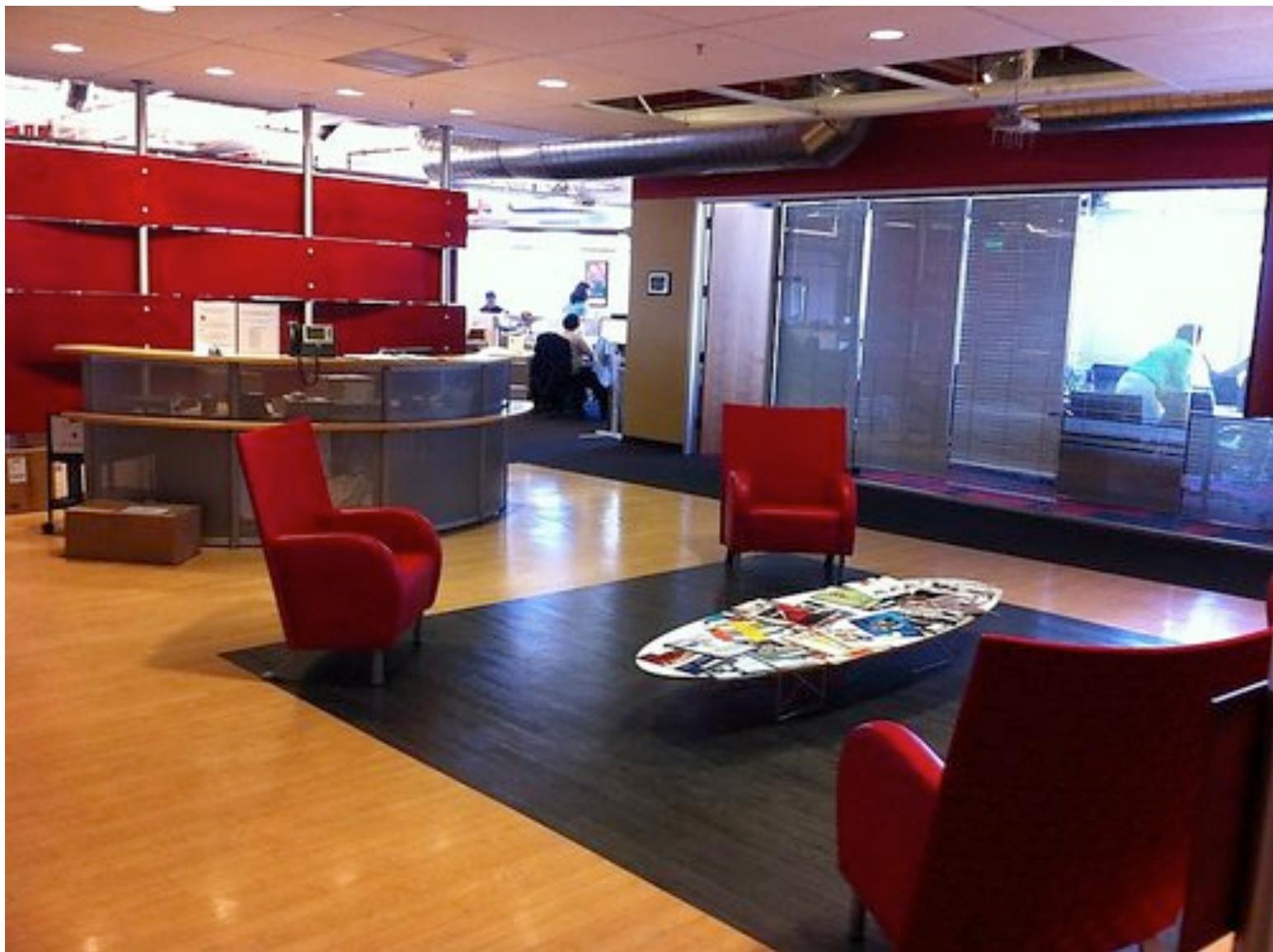
Valeria de Paiva

Rearden Commerce, Foster City, CA, USA  
& School of Computer Science,  
Birmingham University, UK

+

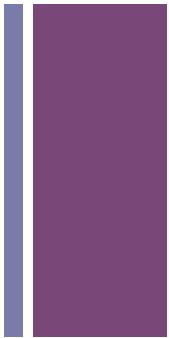


## REARDEN COMMERCE, Foster City, CA, USA





# Engineering Women at Rearden





# Diversity...

Diwali celebration 2011



What do we do? I hear you ask....

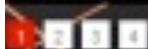
The screenshot shows the Rearden Commerce website. At the top left is the logo 'REARDEN COMMERCE' with a red stylized 'R'. The top navigation bar includes links for 'Business Solutions', 'Consumer Solutions', 'Merchant Services', 'Mobile', 'News', and 'Company'. To the right of the navigation are two small icons. The main content area features a large red banner with white text that reads 'WELCOME TO SMART COMMERCE.' Below the banner, a black callout box contains the text 'Seamless. Integrated. Relevant. Empowering.' followed by 'Say "hello" to Deem. Watch the video. >' and a small video thumbnail showing a person's face. The background of the page is a dark image of a city at night with glowing lights from buildings and streets.

REARDEN  
COMMERCE

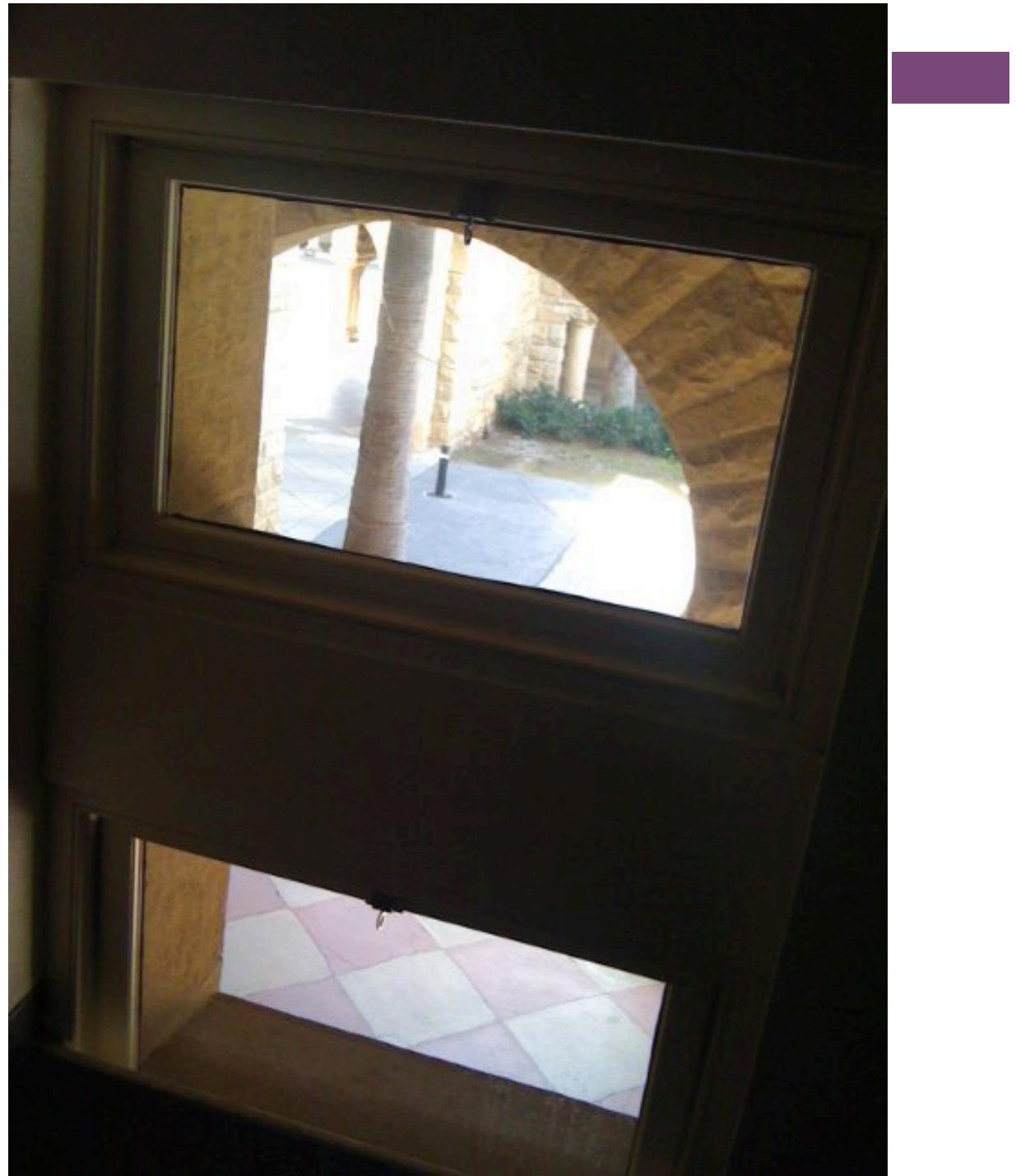
Business Solutions Consumer Solutions Merchant Services Mobile News Company

WELCOME TO SMART COMMERCE.

Seamless. Integrated. Relevant. Empowering.  
Say "hello" to Deem. Watch the video. >



Stanford  
and...





# Santa Clara University



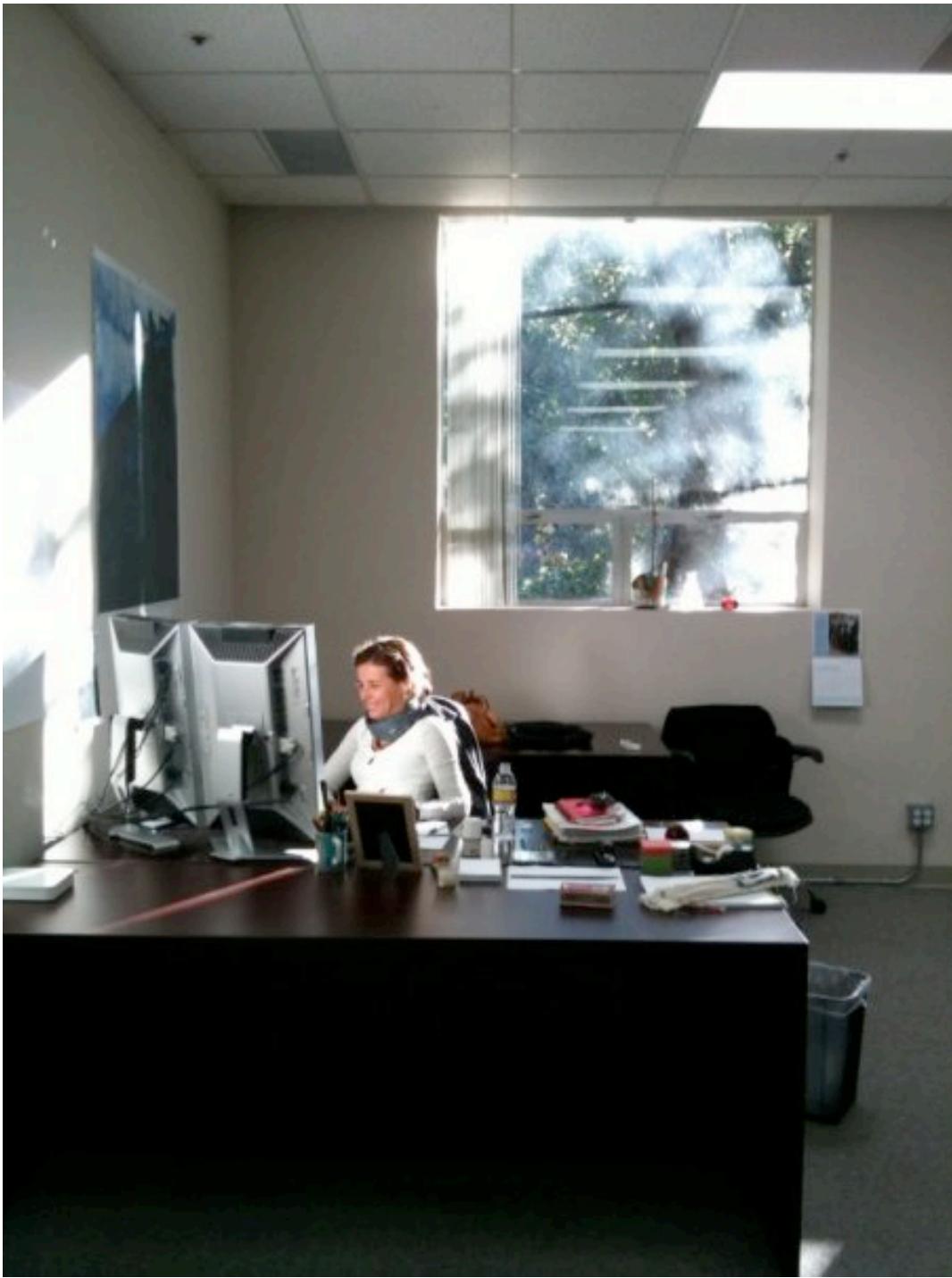
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**PARC Forum:  
Adventures in  
Searchland, Aug 2009**  
[http://www.parc.com/event/934/  
adventures-in-searchland.html](http://www.parc.com/event/934/adventures-in-searchland.html)

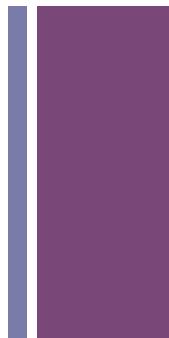
# + NLTT: Natural Language Theory and Technology

October 2000-May 2008



+

Jumped?



**Powerset**  
NATURAL LANGUAGE SEARCH





# University of Birmingham, UK

## Computer Science 1996-2000



# + University of Cambridge Computer Lab 1989-1995



<sup>+</sup> PUC—Rio de Janeiro  
Dept of Informatica 1984-1990

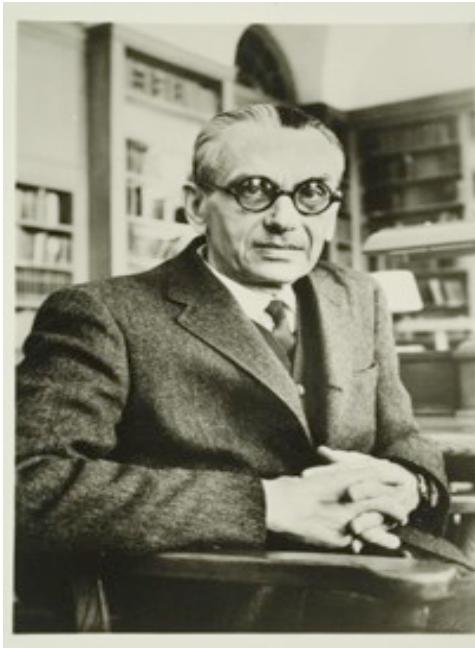
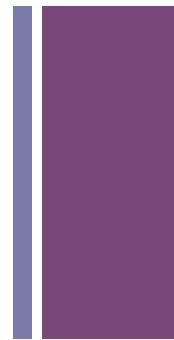


+

# Universidade de Cambridge

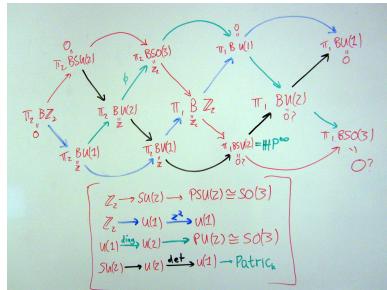
## DPMMMS

### 1984-1989





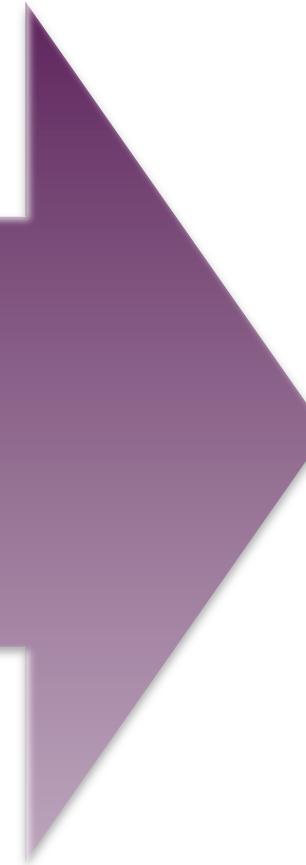
# Bridges?



culum avencimento in  
membrum tuum iustum  
meum iustitudo  
quibus a falso capite  
in hoc ad unum pede  
iustificatus fui et  
ab impunitate et  
scabie laniatus et si  
assimile sanguine tuo  
rubratur quia man  
intudinem dolere in  
magnum carne tua  
pro nobis pertulisti  
Pie Iesu quid ultra de  
benti facere quod non



Translation





NOT TOY BRIDGES ...

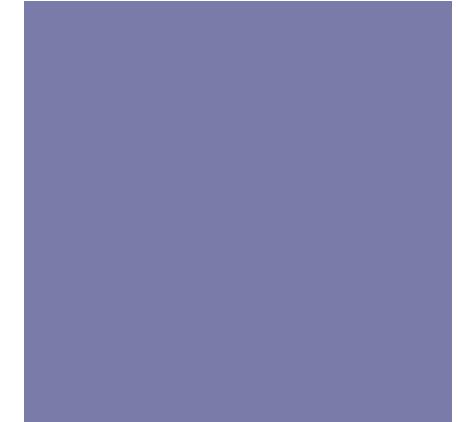
Categorical Logic, Dialectica  
Categories and Their Applications

Automated Theorem Proving and  
Semantics of Programming Languages

Linear Functional Programming,  
Abstract Machines and Modal Type  
Theories

Logics for NLP, for Linguistic Inference  
and for Contexts in AI

Combining symbolic methods and  
analytics to solve big data problems





## Are we there yet?

Working in interdisciplinary areas is hard,  
but rewarding.

- The frontier between logic, computing, linguistics and categories is a fun place to be.
- Mathematics teaches you a way of thinking, more than specific theorems.
- Barriers: proprietary software and unwillingness to 'waste time' on formalizations
- Enablers: international scientific communities, open access NLP and other software, growing interaction between fields,...
- Handsome payoff expected...
- Fall in love with your ideas and enjoy talking to many about them...

+

Thanks!





# NASSLI 2012: Come to Texas for the fun...

The Fifth North American  
Summer School of Logic,  
Language, and Information

at the University of Texas at Austin

**Johan van Benthem** University of Amsterdam /  
Stanford University  
Logical Dynamics of Information and Interaction

**Craig Roberts** Ohio State University  
Questions in Discourse

**Noah Goodman** Stanford University  
Stochastic Lambda Calculus  
and its Applications in Semantics and Cognitive Science

**Mark Steedman** University of Edinburgh  
Combinatory Categorial Grammar: Theory and Practice

**Chris Potts** Stanford University  
Extracting Social meaning and Sentiment

June 18–22, 2012

**nasslli2012.com**

Registration: \$175 (academic rate) / \$400 (professional rate)  
Student scholarships available, see website for application instructions  
Accommodation provided for \$70 / night (single) or \$35 / night (double)

**Additional Courses:**

**Catherine Legg** - University of Wollongong  
Possible Worlds: A Course in Metaphysics  
(for Computer Scientists and Linguists)

**Adam Lopez** - Johns Hopkins University  
Statistical Models for Translation

**Eric Pacuit** - Stanford University  
Social Choice Theory for Logicians

**Valeria de Paiva** - Rearden Commerce  
Intuitionistic Type Theory

**Adam Poerwanto** - Rearden Commerce  
Ontology Development and Application with SUMO

**Ed Zeevat** - University of Frankfurt  
Intensionality

**Thomas Icard** - Stanford University  
Surface Reasoning

**Nina Gierasimczuk** - University of Groningen  
Belief Revision Meets Formal Learning Theory

**Jonathan Ginsburg** - University of Paris  
Robia Cooper - Grifugy University  
Type theory with records for natural language semantics

**Jeroen Groenendijk** - University of Amsterdam  
Inquisitive semantics

**Flores Roelen** - University of Amsterdam  
Inquisitive semantics

**Shalom Lappin** - King's College London  
Abstraction and Adjudication for Computational Semantics

**Tandy Warnow** - University of Texas  
Estimating phylogenetic trees in linguistics and biology

**Hans Kamp** - University of Texas  
Modality

**Mark Johnson** - University of Texas  
Vagueness and context

**Steve Wechsler** - University of Texas  
Eric McCrady - Osuka University  
WordOrder: Meaning and Modality and  
Explanation (Spartacus, Eric McCrady, Steve  
Wechsler, Hans Kamp, Chris Potts, Peter  
Anand, Sarah Murray)

June 14–17: Bootcamp Session

June 23–24: Texas Linguistics Conference  
Special Session on American Sign Language,  
Semantics, and Computational Linguistics  
Details regarding Call for Papers at nasslli2012.com

June 23: Turing Centennial Symposium

<http://www.cs.bham.ac.uk/~vdp/>  
<http://www.valeriadepaiva.org/>