

The Incomputable

Tuesday June 12, 2012				
09:00 – 10:00	Robert Soare Turing Computability and Information Content		Wolfson Lecture Theatre 1	
10:00 – 11:00	Seth Lloyd A Turing Test for Free Will		Wolfson Lecture Theatre 1	
11:00 – 11:30	<i>Coffee Break</i>			
11:30 – 12:00	Philip Welch: Generalised Transfinite Turing Machines and Strategies for Games	WLT 2	Christof Teuscher: From Intrinsic to Designed Computation with Turing's Unorganized Machines	WLT 1
12:00 – 12:30	Denis Hirschfeldt: Categoricity Properties for Computable Algebraic Fields	WLT 2	Aaron Sloman: The Meta-Morphogenesis of Virtual Machinery with "Physically Indefinable" Functions	WLT 1
12:30 – 14:30	<i>Lunch Break</i>			
14:30 – 15:00	Andrea Sorbi: Relative Computability of Partial Functions	WLT 1	Peter Wegner: Modern Computation	WLT 2
15:00 – 15:30	Ivan Soskov: Definability Properties of Marker's Extensions	WLT 1	Kumaraswamy (Vela) Velupillai: Incomputability in Economic Theory	WLT 2
15:30 – 16:00	Andrew Lewis: The Complexity of Computable Categoricity	WLT 1	Vincent Danos: Equilibrium and Termination	WLT 2
16:00 – 16:30	<i>Tea Break</i>			
16:30 – 17:30	Yuri Matiyasevich Turing Machines vs Diophantine Machines		Wolfson Lecture Theater 1	
17:30	<i>Welcome Reception</i>			

Wednesday June 13, 2012				
09:00 – 10:00	Martin Davis Contributions of E. L. Post to the Study of the Incomputable		Wolfson Lecture Theatre 1	
10:00 – 11:00	Philip Maini Turing's Theory for Biological Pattern Formation		Wolfson Lecture Theatre 1	
11:00 – 11:30	<i>Coffee Break</i>			
11:30 – 12:00	Rodney Downey: Strong Jump Traceability, Part 1	WLT 2	Ursula Martin: What Can We Learn from Online Math?	WLT 1
12:00 – 12:30	Noam Greenberg: Strong Jump Traceability, Part 2	WLT 2	Elham Kashefi: Title: Quantum Turing Test	WLT 1
12:30 – 14:30	<i>Lunch Break</i>			
14:30 – 15:00	Valentina Harizanov: Injections, Orbits, and Complexity	WLT 1	Steven Ericsson-Zenith: Computing With Structure	WLT 2
15:00 – 15:30	André Nies: Ten Years of Triviality	WLT 1	Giuseppe Longo: Turing, from the "Discrete State Machine" to the "Continuous Systems" for Morphogenesis	WLT 2
15:30 – 16:00	Alexandra Soskova: Enumeration Degree Spectra	WLT 1	Mike Stannett: Hypercomputation, Physics and Computation	WLT 2
16:30 – 17:30	István Németi/ Hajnal Andréka Relativistic Computing Beyond the Turing Barrier		Wolfson Lecture Theater 1	

Thursday June 14, 2012				
09:00 – 10:00	Fay Dowker A Framework for Logic in Physics	Wolfson Lecture Theatre 1		
10:00 – 11:00	Cris Moore P vs NP, Phase Transitions, and Incomputability in the Wild	Wolfson Lecture Theatre 1		
11:00 – 11:30	Coffee Break			
11:30 – 12:00	Richard A Shore: Interpreting Arithmetic in the Turing Degrees Below Generics and Randoms	WLT 2	Mehrnoosh Sadrzadeh: Compact Closed Categories and Frobenius Algebras for Computing Natural Language Meaning	WLT 1
12:00 – 12:30	Julia Knight: Classification of Countable Structures and the Effective Borel Hierarchy	WLT 2	Mark Hogarth: Would You Please Stop Talking About the Church-Turing Thesis, Please	WLT 1
12:30 – 14:30	Lunch Break			
14:30 – 15:00	Sy Friedman: Computational Complexity and Set Theory	WLT 1	Cristian Calude : The Halting Problem Revisited	WLT 2
15:00 – 15:30	Douglas Cenzer: Structures and Isomorphisms in the Difference Hierarchy	WLT 1	Jiří Wiedermann: Computability and Non-Computability Issues in Amorphous Computing	WLT 2
15:30 – 16:00	Antonio Montalban: A Computability Theoretic Equivalent to Vaught's Conjecture	WLT 1	Mark Bishop: Trouble with Computation	WLT 2
16:00 – 16:30	Tea Break			
16:30 – 17:30	Vlatko Vedral What Features of Living Systems Can We Simulate on a Quantum Computer?	Wolfson Lecture Theater 1		
19:00	Conference Dinner			

Friday June 15, 2012				
09:00 – 10:00	Samson Abramsky Title: tba		Wolfson Lecture Theatre 1	
10:00 – 11:00	Theodore A Slaman The Mathematics of Relative Computability		Wolfson Lecture Theatre 1	
11:00 – 11:30	Coffee Break			
11:30 – 12:00	Peter Cholak: The Computably Enumerable Sets: a Survey	WLT 2	John Tucker: Computation, Measurement and the Interface Between Physical Systems and Algorithms	WLT 1
12:00 – 12:30	Klaus Ambos-Spies: On the Strongly Bounded Turing Degrees of C.E. Sets: Degrees Inside Degrees	WLT 2	Antonina Kolokolova: How Hard is Proving Hardness? Logic Approach to Barriers in Complexity	WLT 1
12:30 – 14:30	Lunch Break			
14:30 – 15:00	Antonin Kucera: Randomness and Classes of PA and DNC Functions in Computability	WLT 1	Bob Coecke: How Computer Science Helps to Bring Quantum Physics to the Masses	WLT 2
15:00 – 15:30	Marat Arslanov: Definable Relations in the Turing Degree Structures	WLT 1	José Félix Costa: Classifying the Theories of Physics	WLT 2
15:30 – 16:00	Joel David Hamkins: The Hierarchy of Equivalence Relations on the Natural Numbers Under Computable Reducibility	WLT 1		WLT 2
16:00 – 16:30	Tea Break			