

Deep Beauty

Mathematical Innovation & the Search for an
Underlying Intelligibility of the Quantum World

Day 1

Wednesday, October 3, 2007

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| 8:30 – 9:00 | Continental Breakfast |
| 9:00 – 9:30 | Welcome and Introductory Comments
<i>Charles Harper (Convener), Hans Halvorson (Chair)</i> |
| 9:30 – 10:20 | Session #1: Keynote Presentation: “Spans in Quantum Theory”
<i>John Baez</i> |
| 10:20 – 10:45 | Session #1: Q&A and Open Discussion |
| 10:45 – 11:05 | Break |
| 11:05 – 11:50 | Session #2: Presentation Title TBA
<i>Simon Kochen</i> |
| 11:50 – 12:10 | Session #2: Q&A and Open Discussion |
| 12:10 – 1:20 | Informal Buffet Lunch |
| 1:20 – 2:05 | Session #3: “The Principle of General Covariance”
<i>Klaas Landsman</i> |
| 2:05 – 2:25 | Session #3: Q&A and Open Discussion |
| 2:25 – 3:10 | Session #4: “The Logic of Quantum Mechanics—Take II”
<i>Bob Coecke</i> |
| 3:10 – 3:35 | Break |
| 3:35 – 3:55 | Session #4: Q&A and Open Discussion |
| 3:55 – 4:40 | Session #5: “Topos Theory in the Foundations of Physics”
<i>Andreas Döring</i> |
| 4:40 – 5:00 | Session #5: Q&A and Open Discussion |
| 5:00 – 5:20 | General Group Discussion and Wrap-Up, Day 1 |
| 6:00 – 8:00 | Reception and Dinner |

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Day 2

Thursday, October 4, 2007

- 8:30 – 9:00** Continental Breakfast
- 9:00 – 9:45** Session #6: “Yet More Ado About Nothing:
The Remarkable Relativistic Vacuum State”
Stephen Summers
- 9:45 – 10:05** Session #6: Q&A and Open Discussion
- 10:05 – 10:50** Session #7: “An Operational Framework for
a Theory of Quantum Gravity”
Lucien Hardy
- 10:50 – 11:10** Break
- 11:10 – 11:30** Session #7: Q&A and Open Discussion
- 11:30 – 12:15** Session #8: “Von Neumann on Probability in Quantum Mechanics”
Jeffrey Bub
- 12:15 – 12:35** Session #8 Q&A and Open Discussion
- 12:35 – 1:45** Informal Buffet Lunch
- 1:45 – 2:30** Session #9: “Operational Independence of Quantum Systems”
Miklós Rédei
- 2:30 – 2:50** Session #9 Q&A and Open Discussion
- 2:50 – 3:35** Session #10: “Quantum Physics and the Finiteness of Information”
Časlav Brukner
- 3:35 – 3:55** Break
- 3:55 – 4:15** Session #10: Q&A and Open Discussion
- 4:15 – 5:00** General Group Discussion and Future Possibilities
- 6:00 – 8:00** Reception and Dinner