Invited Talks at Meetings and Workshops Andreas Albrecht Updated 12/29/2020

- 1. **Inflation 1984**, Fifth Workshop on Grand Unification Providence RI, April 1984.
- 2. **Particle Physics Turns to Cosmology**, *Meeting of the AAAS*, Los Angeles, May 1985
- 3. Cosmic String Evolution, Aspen Winter Conference, Aspen CO, January 1986.
- 4. Evolution of Cosmic Strings: Possible Seeds of Galaxies, Spring Meeting of the APS, Washington DC, April 1986.
- 5. **Formation and Evolution of Cosmic Strings**, *Nearly Normal Galaxies:* From the Plank Time to the Present. Santa Cruz CA, 1986.
- 6. **Cosmology for high-energy physicists**. Lectures presented at *the Theoretical Advanced Studies Inst.*, Santa Fe, NM, Jul 5 Aug 1, 1987.
- 7. **New simulations of cosmic string evolution**, *Cosmic Strings: the Current Status New Haven*, CT May 6-8, 1988.
- 8. **Cosmic String Review** *CITA Computing Cosmologies Workshop*. Toronto, Ont. April 28-29, 1989.
- 9. **Small scale structure on cosmic strings**. *Formation and Evolution of Cosmic Strings*, Cambridge, Eng., Jul 2-7, 1989.
- 10. Density perturbations from cosmic strings: Can you see the strings above the noise? First International Symposium on Particles, Strings, and Cosmology, Boston, MA; March 27-31, 1990.
- 11. **The Zeldovich spectrum, from scaling arguments to computer Simulations** ...and back again Workshop on the Legacy of Ya. B. Zeldovich for Astrophysics and Cosmology. Lawrence Kansas; May 2-7, 1990.
- 12. **The Emergence of Classical Behavior** *UBC Workshop on Quantum Cosmology*, Vancouver BC; May 11-12, 1990.
- 13. **Perturbations from Strings Don't Look Like Strings**! *Particles and Fields 91*, Vancouver BC; August 18-22, 1991.

- 14. **Two perspectives on a decohering** *spin Workshop on the Physical Origins of Time Asymmetry* Mazagon Spain, September 30 to October 4 1991.
- 15. **Structure formation with cosmic strings and** *neutrinos The Many Aspects of Neutrino Physics* Fermilab, November 15-17, 1991.
- 16. Cosmic structure from cosmic strings *Theoretical Trends in Particle Physics* sponsored by the Institute of Physics. Kings College London, June 11, 1993.
- 17. **Dark mater and structure formation** *Dark Matter Workshop*. Imperial College, December 9, 1993.
- 18. **Quantum Cosmology and Astrophysics** *Birth of the Universe and Fundamental Forces.* Rome, May 18-21, 1994.
- 19. Current status of cosmic strings American Physical Society DPF meeting on future directions in particle cosmology. Snowmass CO, July 1994.
- 20. **Inflation and squeezed quantum states** *American Physical Society DPF meeting on future directions in particle cosmology.* Snowmass CO, July 1994.
- 21. **The theory of everything vs the theory of anything**. *American Physical Society DPF meeting on future directions in particle cosmology*. Snowmass CO, July 1994.
- 22. Coherence and Sakharov Oscillations in the Microwave Sky Microwave Background Anisotropies. XXXIst Rencontre de Moriond, Microwave Background Anisotropies Les Arcs March 1996
- 23. **Defect Signatures in the Microwave Background** *National Astronomy Meeting*. Liverpool. April 1996
- 24. How to falsify scenarios with primordial fluctuations from inflation *Critical Dialogues in Cosmology: Princeton 250th Anniversary conference*, Princeton, June 1996.
- 25. **Questions and answers about coherence in the** *CMB* 18th Texas Symposium on Relativistic Astrophysics. Chicago, December 1996.
- 26. **Defects and the CMB** *Particle Physics and the Early Universe Conference*. University of Cambridge, April 1997
- 27. Cosmic defects and the CMB Birth of the Universe II Rome, May 1997
- 28. **What is the future of causal models of cosmic structure?** *Cosmo- 97*, Ambleside, September 1997

- 29. **The cosmic defect story** Review talk at the 1998 Moriond meeting: Fundamental Parameters in Cosmology, Les Arcs January 1998
- 30. New paradigms in active structure formation CAPCC 98, CERN, June 1998
- 31. Cosmology with a time varying speed of light Cosmo-98, Asilomar 1998
- 32. Cosmology with a time varying speed of light 19th Texas meeting on relativistic Astrophysics Paris, December 1998
- 33. Varying speed of light as a solution to cosmological problems *Pritzker Symposium Workshop* Chicago, January 1999
- 34. What have cosmic defects taught us about Inflation? *Pritzker Symposium Workshop* Chicago, January 1999
- 35. **The use of probabilities in cosmology.** *Inner Space/Outer Space II, David Schramm memorial symposium* Fermilab, May 1999
- 36. The current status of defect models of structure formation. Inner Space/Outer Space II, David Schramm memorial symposium Fermilab, May 1999
- 37. **Irreversibility: from bit to bang.** *Workshop on Complexity, Computation, and the physics of information.* Isaac Newton Institute, Cambridge, July 1999 (Slides)
- 38. **Review of Cosmic Inflation.** *NATO advanced studies institute on Cosmology.* Isaac Newton Institute, Cambridge, July 1999
- 39. Cosmic Coherence and structure formation. *NATO advanced studies institute on Cosmology*. Isaac Newton Institute, Cambridge, July 1999
- 40. A phenomenology of the dark energy without fine tuning. *NATO advanced studies institute on Cosmology*. Isaac Newton Institute, Cambridge, July 1999
- 41. Phenomenology of a realistic accelerating universe using only Planck-scale physics. *COSMO 99*. Trieste September 1999
- 42. Cosmic Acceleration and the Planck Scale Cosmic Genesis and Fundamental Physics Sonoma October 1999
- 43. Cosmology with a time-varying speed of light Cosmic Genesis and Fundamental Physics Sonoma October 1999
- 44. Cosmic Defects and the future of cosmology Cosmic Genesis and Fundamental Physics Sonoma October 1999

- 45. Current Status of Defect models of Cosmic Structure Formation *PASCOS 99* Granlibakken (December 1999)
- 46. **Cosmic Acceleration from Planck-Scale** *physics Energy Densities in the Universe* Les Arcs, France (January 22-29, 2000)
- 47. Using Cosmological Data to Pin Down Planck-Scale Physics Way beyond the standard models of particle physics and cosmology, Aspen (Jan-Feb 2000)
- 48. Opportunities to expose the nature of the dark energy with future CMB and m(z) experiments Texas Symposium on Relativistic Astrophysics Austin (Dec 2000)
- 49. Characterizing Models of the Dark Energy with SNAP. 197th Meeting of the American Astronomical Society San Diego (January 2001).
- 50. Cosmic Acceleration and Fundamental Physics. PASCOS 2001 Chapel Hill (April 2001)
- 51. **Latest Developments in Cosmology**. PHENO 2001 Symposium Madison (May 2001).
- 52. **Natural quintessence from large extra dimensions**. M Theory Cosmology, Cambridge UK (August, 2001)
- 53. **The arrow of time, entropy, and the origins of the Universe.** Symposium in honor John Wheeler's 90th birthday, Princeton (March 2002)
- 54. **Cosmic Acceleration: Theory and Practice.** APS Division of Particles and Fields annual meeting, Williamsburg VA (May 2002)
- 55. **Models of Cosmic acceleration.** COSMO-02, Chicago (September 2002)
- 56. **Inflation, the arrow of time, and theories of initial conditions.** Maryland meeting on Cosmic Structure. University of Maryland, (October 2002)
- 57. **Introduction to the debate on inflation and alternatives.** National Academy of Sciences Colloquium on Cosmology, Irvine (November 2002) [Albrecht was the moderator of the debate]
- 58. **Testing Inflation: The next generation.** Carnegie Observatories Centennial Symposium No. 2 "Measuring And Modeling The Universe". Pasadena, CA (November 2002)
- 59. **Inflation at 22.** The Davis Meeting on Cosmic Inflation, Davis CA (March 2003)

- 60. **Cosmic acceleration and fundamental physics.** April APS meeting, Philadelphia, PA, 2003
- 61. What does it take to compete with inflation? "The Future Of Cosmology", Oct 10-12,2003, CWRU, Cleveland, OH
- 62. **Inflation and Causal Patch Physics** "Superstring Cosmology" (Oct 20-24, 2003) KITP, Santa Barbara, CA (see http://online.kitp.ucsb.edu/online/strings03/ for slides and video from talk)
- 63. **Can the universe afford inflation?** "The Quest for Concordance Cosmology and Beyond" (July 4-17, 2004)
- 64. **Report from the Dark Energy Task Force** April APS Meeting, Dallas (April 22-25, 2006)
- 65. **Report from the Dark Energy Task Force** "From Quantum to Cosmos", Airlie, VA (May 22-24, 2006)
- 66. **Strategies for Learning the Nature of Dark Energy** April meeting of the American Astronomical Society (Calgary, June 4-8 2006)
- 67. **Current perspectives on Dark Energy Theory** "Particles Strings and Cosmology (PASCOS) (Columbus, September 10-15, 2006)
- 68. **Probing the Nature of Dark Energy** "The Origins of Dark Energy" (Hamilton Ontario May 2007)
- 69. Current Status of Theories of Dark Energy "Particles Strings and Cosmology" (PASCOS) (London, UK July 2007)
- 70. The Clock Ambiguity and the Emergence of Physical Laws "Everett at 50" (Oxford, UK, July 2007)
- 71. **The Clock Ambiguity and the Emergence of Physical Laws** "The Origin of Time's Arrow" (New York, October 2007)
- 72. What can we learn from future dark energy probes? "STSI Spring Symposium" (Baltimore, 2008)
- 73. **The Clock Ambiguity and the Emergence of Physical Laws** "Conference on the Multiverse" (Perimeter Institute, September 2008)
- 74. **The Clock Ambiguity and the Emergence of Physical Laws** "DICE2008 From Quantum Mechanics Through Complexity to Spacetime: The Role of Emergent Dynamical Structures" (Castiglioncello, Tuscany, September 2008)

- 75. Report from the Joint Dark Energy Mission Figure of Merit Science Working Group "APS April Meeting" (Denver, May 2009)
- 76. Dark Energy: Current Status "PASCOS 2009" (Hamburg, July 2009)
- 77. **Challenges for a quantum theory of the Universe** "FQXI 2nd International Conference" (Ponta Delgada, Spain, July 2009)
- 78. Challenges for a quantum theory of the Universe "Conference on Holographic Cosmology" (Waterloo, July 2009)
- 79. Cosmic Acceleration: Current theoretical issues and progress toward future observations "Galileo-Xu Guangqui Meeting" (Shanghai, October 2009)
- 80. **Challenges for Inflation:** "Princeton workshop on Cosmic Inflation" (Princeton, January 2011)
- 81. **Panelist** "Experimental and Theoretical Challenges to Probing Dark Energy" (Palo Alto December 2011)
- 82. **New Results from de Sitter Equilibrium Cosmology** "Return of de Sitter" (Stockholm, Feb-March 2011)
- 83. **Panelist: Dark Energy** "Experiments on the Cosmic Frontier: Astrophysical Studies of Matter, Energy, Space and Time" (Fermilab, March 2011)
- 84. **Infinity, Finiteness and Inflationary Cosmology** "Challenges for Early Universe Cosmology" (Waterloo, July 2011) *Available online at http://pirsa.org/11070039/*
- 85. **Dynamics, typicality and the arrow of time** "Setting Time Aright" (Bergen, Copenhagen and points in-between, Aug 27-Sep 2 2011) Available online here
- 86. **Time, Infinity and Inflation** "Inflationary Theory and its Confrontation with Data in the Planck Era", (Aspen, Feb 2012)
- 87. **Cosmology vs. Equilibrium** "Physics with a Positive Cosmological Constant" (Penn State, May 2012) Available online here
- 88. Panelist "Mining the Cosmic Frontier at the Planck Era" Davis, May, 2013
- 89. **Challenges for Theoretical Cosmology** "Fundamental Questions in Cosmology" Davis, May 2013.
- 90. **Lectures on Cosmic Inflation** "Les Houches School on Post-Planck Cosmology", Les Houches, July-Aug 2013 (slides posted here)

- 91. **New results on probabilities and measures for eternal inflation** "Cosmology After Planck", Ann Arbor, September 2013.
- 92. **Origin of probabilities and their application to the multiverse** "FQXi 4th international Conference" Vieques Island, Puerto Rico, January 2014
- 93. Finite Inflation "Searching for Simplicity" Princeton, NJ, May 2014
- 94. **Origin of probabilities and their application to the multiverse** "DICE 2014 Conference" Castillgioncello, Italy September 2014
- 95. **Origin of probabilities and their application to the multiverse** The Spacetime Odyssey continues Stockholm, June 2015 (Slides)
- 96. **Panel discussion of Open Skies/Open Data** IAU General Assembly, Honolulu, Aug 2015
- 97. **Inflation Tuning and Measures** CosmoCruise, Barcelona, Sep 2015 (Slides)
- 98. Some provocative comments on emergent time Time in Cosmology, Waterloo June 2016
- 99. What Exists Panel Discussion FQXi Conference, Banff August 2016
- 100. Reflections on Cosmic Inflation, Cosmological Quests for the Next Decade, Korea Cosmology and Space Sciences Institute, April 2017
- 101. Cosmic Inflation, Reflections on Motivations, Accomplishments and Future Opportunities, Advances in Theoretical Cosmology in Light of Data, NORDITA July 21, 2017, Stockholm
- 102. The arrow of time in cosmology, cosmic inflation and the emergence of classicality_Simons Program: Quantum Information in Cosmology, April 2018, Copenhagen (Video)
- 103. **Cosmic Inflation Tutorial** Simons Program: Quantum Information in Cosmology, April 2018, Copenhagen (<u>slides</u> and <u>video</u>)
- 104. **The case of inflation in cosmology**_Seven Pines Symposium XXII "What Counts as Evidence?" May 16–20, 2018 Stillwater MN
- 105. **What is cosmic inflation?** Quantum Universe Symposium November 2018 CECs, Valdivia Chile

- 106. **Decoherence, einselection and equilibrium in an adapted Caldeira-Leggett model.** Workshop on quantum entanglement in cosmology, PIMU, Tokyo May 2019.
- 107. **The arrow of time in a stationary quantum state,** 2019 FQXi meeting, Barga Italy July 2019
- 108. **Review of approaches to the initial state of the universe** A mathematical home for our out-of-equilibrium world, NBIA, Copenhagen Oct 2019
- 109. **The arrow of time in a stationery quantum state,** A mathematical home for our out-of-equilibrium world, NBIA, Copenhagen Oct 2019
- 110. **Quantum-to-classical transition of the primordial perturbations,** Physics of the early Universe an online precursor ICTS, Aug/Sep 2020. Video here