# Invited International Talks

1. **Les Houches Workshop, Atom Optics Applications**
   Les Houches (France), 23-28 May 1999
   *"Atom lasers and coherence properties of BECs"*

2. **9th Annual International Laser Physics Workshop, LPHYS'2000**
   Bordeaux (France), 17-21 July, 2000
   *"Atom lasers and phase coherence of Bose-gases"*

3. **Quantum Optics and Spectroscopy Seminar**
   Institute for Experimental Physics, University of Innsbruck, Austria
   Innsbruck, 17 January 2001
   *"Atom lasers"*

4. **5th RIKEN International Conference, Coherent Control in Matter**
   Shonan Village Center, Hayama (Japan), 22-25 April 2001
   *"Atom lasers and phase coherence of Bose-gases"*

5. **Euresco Conference, Bose-Einstein condensation**
   San Feliu de Guixols (Spain), 15-20 September 2001
   *"Quantum phase transition from a superfluid to a Mott insulator"*

6. **Physics Colloquium of the University of Innsbruck**
   Innsbruck, 30 October 2001
   *"Quantum phase transition from a superfluid to a Mott insulator"*

7. **CUA/ITAMP Workshop, Beyond BEC: Ultracold Atoms beyond Mean-Field Physics**
   Harvard, Cambridge (USA), 2-3 November 2001
   *"Quantum phase transition from a superfluid to a Mott insulator"*

8. **Physics Colloquium of the University of Trento**
   Trento (Italy), 17 January 2002
   *"Quantum phase transition from a superfluid to a Mott insulator in an ultracold gas of atoms"*

9. **Yale Phyics Club, (Physics Colloquium of Yale University)**
   Yale, New Haven (USA), 22 February 2002
   *"Quantum phase transition from a superfluid to a Mott insulator in an ultracold gas of atoms"*

10. **Stanford University, Physics & Applied Physics Department**
    Stanford (USA), 6 May 2002
    *"Quantum phase transition from a superfluid to a Mott insulator in an ultracold gas of atoms"*

11. **DAMOP 2002 Meeting, Williamsburg**
    Williamsburg (USA), May 2002
    *"Quantum phase transition from a superfluid to a Mott insulator in an ultracold gas of atoms"*

12. **NIST Workshop on Quantum Computing**
    Gaithersburg (USA), June 2002
    *"Beyond mean field physics with Bose-Einstein condensates in optical lattices"*

13. **International Conference on Laser Physics LPHYS 2002**
    Bratislava (Slovakia), July 2002
    *"Quantum phase transition from a superfluid to a Mott insulator in an ultracold gas of atoms"*

14. **International Conference on Atomic Physics (ICAP) 2002**
    Boston (USA), August 2002
    *"Seeing the particles beneath the waves – Beyond mean field physics with Bose-Einstein condensates in optical lattices"*

15. **University of California Berkeley, Physics Department**
    Berkeley (USA), August 2002
    *"Quantum phase transition from a superfluid to a Mott insulator in an ultracold gas of atoms"*

16. **7th International Workshop on Atom Optics and Interferometry**
    Lunteren (Netherlands), September/October 2002
    *"Beyond mean field physics with Bose-Einstein condensates in optical lattices"*

17. **Stanford University, Physics Colloquium**
    Stanford (USA), 5 November 2002
    *"Seeing the particles beneath the waves"*

18. **NIST Seminar**
    Gaithersburg (USA), 7 November 2002
    *"Controlled collisions with neutral atoms in optical lattices"*

19. **Royal Society workshop on "Practical realizations of quantum computing"**
    London (UK), 13-14 November 2002
    *"Controlled collisions with neutral atoms in optical lattices"*

20. **Collège de France Symposium "Cold atoms and quantum information"**
    Paris (France), 7 February 2002
    *"Controlled collisions with neutral atoms in optical lattices"*

21. **American Association for the Advancement of Science (AAAS) Quantum Phases and Quantum Phase Transitions**
    Denver (USA), 15 Februar 2003
    *"Quantum phase transition from a superfluid to a Mott insulator in a gas of ultracold atoms"*

22. **Obergurgl Quantum Optics Meeting 2003**
    Obergurgl (Austria), 24 February 2003
    *"Controlled Collisions with Neutral Atoms in Optical Lattices"*

23. **University of Strathclyde, Physics Department**
    Glasgow (UK), 19 March 2003
    *"Seeing the particles beneath the waves – Beyond mean field physics with Bose-Einstein condensates in optical lattices"*

24. **Correlation Effects in Bose-Einstein Condensates and Degenerate Fermi Gases**
    University of Minneapolis, Minneapolis (USA), 2-4 May 2003
    *"Controlled Collisions with Neutral Atoms in Optical Lattices"*

25. **Harvard University - Physics colloquium**
    Harvard University, Boston (USA), 12 May 2003
    *"Seeing the Particles beneath the Waves – Beyond Mean Field Physics with Bose-Einstein-Condensates in Optical Lattices"*

26. **Center for Ultracold Atoms - Colloquium**
    Center for Ultracold Atoms, Boston (USA), 13 May 2003
    *"Controlled Collisions with Neutral Atoms in Optical Lattices"*

27. **Massachusetts Institute of Technology (MIT) – Physics colloquium**
    Massachusetts Institute of Technology, Boston (USA), 15 May 2003
    *"Seeing the Particles beneath the Waves – Beyond Mean Field Physics with Bose-Einstein-Condensates in Optical Lattices"*

28. **HANSCOM Research Laboratories**
    Boston (USA), 16 May, 2003
    *"Bose-Einstein Condensates in Optical Lattices"*

29. **IQEC-CLEO International Quantum Electronics Conference 2003**
    Baltimore (USA), 4-7 June, 2003
    *"Controlled Collisions with Neutral Atoms in Optical Lattices"*

30. **University of Oxford – Physics Department Seminar**
    Oxford (United Kingdom), 16 June, 2003
    *"Controlled Collisions for Multiparticle Entanglement"*

31. **EQEC – European Quantum Electronics Conference 2003**
    Munich (Germany), 26 June, 2003
    *"Controlled Collisions for Multiparticle Entanglement"*

32. **Plenary Talk at the Annual Meeting of the French Physical Society SFP**
    Lyon (France), 7-9 July 2003
    *"Bose-Einstein Condensates in Optical Lattices"*

33. **Gordon Research Conference – Quantum Control of Light and Matter**
    Mount Holyoke College (USA), 3-8 August 2003
    *"Control of Matter in Lattices of Light"*

34. **Quantum Challenges Conference**
    Warsaw (Poland), 4-7 September 2003
    *"Controlling Many-Body States of Neutral Atoms in Optical Lattices"*

35. **European Science Foundation - BEC2003**
    San Feliu (Spain), 13-18 September 2003
    *"Controlled Collisions with Neutral Atoms in Optical Lattices"*

36. **École-Normale-Superieure – Physics Colloquium**
    Paris (France), 20 November, 2003
    *"Exploring quantum matter in artificial crystals of light"*

37. **Plenary Talk at the Annual Spring Meeting of the AAAS**
    Seattle, (USA), 13-16 February 2004
    *"Controlling matter at the quantum limit"*

38. **Arkadi Aronov Memorial Lecture at the Weizman Institute of Science**
    Tel Aviv, (Israel), 25-29 February 2004
    *"Exploring quantum matter in optical lattices"*

39. **Workshop on Ultra Cold Gases**
    Levico, (Italy), 3-6 March 2004
    *"Fermionizing bosons in optical lattices"*

40. **QUEST-Meeting**
    La Thuile, (Suisse), 7-12 March 2004
    *"Engineering entanglement of ultra cold atoms in optical lattices"*

41. **Plenary Talk at the Annual Spring Meeting of the American Physical Society**
Montreal, (Canada), 20-26 March, 2004
*"Exploring quantum many body phases in optical lattice potentials"*

42. **Conference on Ultracold Quantum Gases**
Kavli Institute, Santa Barbara, (USA), 8-15. May 2004
*"Tonks-Girardeau gas in an optical lattice"*

43. **College de France**
College de France, Paris (France). 25-26 May 2004
*"Exploring and controlling quantum matter in artificial crystals of light"*

44. **EGAS 2004, Journal of Physics B Plenary Lecture**
Rennes, (France), 4-11. July 2004
*"Exploring quantum matter in artificial crystals of light"*

45. **ICAP 2004**
IFSC, Rio de Janeiro, (Brazil) 24 July- 1 August 2004
*"Engineering Multiparticle Entanglement with Neutral Atoms in Optical Lattices"*

46. **International Conference on Quantum Logic and Communications**
Cargese,( Corse), 22 – 26 August 2004
*"Neutral Atoms in Optical Lattices – from Quantum Simulators to MultiparticleEntanglement"*

47. **Les Houches Workshop 2004**
Les Houches (France). 20-23 September 2004
*"Neutral Atoms in Optical Lattices – from Quantum Simulators to Multiparticle Entanglement"*

48. **University of Geneva - Physics Colloquium**
Geneva (Switzerland), 15 November 2004
*"Exploring Strongly Correlated Quantum Matter with Ultracold Atoms in Optical Lattices"*

49. **Van der Waals-Zeeman-Institute (University of Amsterdam) Physics Colloquium**
Amsterdam (Netherlands), 11 January 2005
*"Exploring Strongly Correlated Quantum Systems with Ultracold Atoms in Optical Lattices"*

50. **International Seminar on Atomic Processes in Intense Laser Fields and Related Many-Body Phenomena**
    Shonan Village Center (Japan), 21-23 January 2005
    *"From Quantum Simulators to Quantum Gates with Neutral Atoms in Optical Lattices"*

51. **International Meeting on Mesoscopic Physics with Matter and Waves**
    Orsay (France), 21-22 March 2005
    *"Exploring Strongly Correlated Quantum Systems with Neutral Atoms in Optical Lattices"*

52. **IOP – Einstein Year 2005 Symposium, Plenary talk**
    Warwick (UK), 11-14 April 2005
    *"Exploring Quantum Matter with Ultracold Atoms in Optical Lattices"*

53. **Annual Meeting Finnish Optical Society, Plenary talk**
    Jväskylä (Finland), 12-13 May 2005
    *"Exploring Quantum Matter in Artificial Crystals of Light"*

54. **Aspen Workshop on Ultracold Quantum Gases**
    Aspen (USA), 4-6 June 2005
    *Lecture Series on "Correlations and Coherent Spin Oscillations"*

55. **Quantum Optics VI, EQEC**
    Munich (Germany), 17 June 2005
    *"Spatial Quantum Noise Interferometry and more…"*

56. **International Conference on Quantum Electronics, IQEC 2006**
    Tokyo (Japan), 13-16 July 2005
    *"Mott Insulators, Noise Correlations and Coherent Spin Dynamics in Optical Lattices"*

57. **Low-D Workshop Amsterdam**
    Amsterdam (Netherlands), 28-30 July 2005
    *"Strongly Correlated Quantum Matter in Optical Lattices"*

58. **Low Temperature Physics 24, Plenary talk**
    Orlando (USA), 10-12 August 2005
    *"Mott Insulators, Noise Correlations and Coherent Spin Dynamics in Optical Lattices"*

59. **OSA Invited Lecturer for Developing Countries**
    Yerevan (Armenia), 22-26 August 2005
    *Lecture Series on Ultracold Atoms*

60. **Summer School on Quantum Information**
Kochi (Japan), 1-7 September 2005
*Lecture Series on Quantum Information with Ultracold Atoms in Optical Lattices*

61. **European Science Foundation Meeting on BEC**
San Feliu (Spain), 10-15 September 2005
*"Mott Insulators, Noise Correlations and Coherent Spin Dynamics in Optical Lattices"*

62. **Technical University of Eindhoven, Physics Colloquium**
Eindhoven (Netherlands), 27-28 October 2005
*"Exploring Quantum Matter in Crystals of Light"*

63. **AMOP Meeting of the Dutch Physical Society, Plenary talk**
Lunteren (Netherlands), 11-12 November 2005
*"Mott Insulators, Noise Correlations and Coherent Spin Dynamics in Optical Lattices"*

64. **KVDS Meeting on Quantum Information**
Copenhagen (Denmark), 18-19 November 2005
*"Entangling Neutral Atoms in Optical Lattices"*

65. **DAAD/DFG organized Promotional Lecture/Dinner Talk**
London (UK), 1 December 2005
*"Ultracold Atoms – From Einstein's Dream to Reality"*

66. **Non-equilibrium Phenomena in Strongly Correlated Quantum Systems, ITAMP Workshop**
Boston (USA), 9-12 February 2006
*"Coherence, Correlations & Counting Statistics of Ultracold Atoms in Optical Lattices"*

67. **Ehrenfest Colloquium**
Leiden (Netherlands), 15 February 2006
*"Exploring Quantum Matter in Artificial Crystals of Light"*

68. **Stockholm University (KTP), Physics Colloquium**
Stockholm (Sweden), 23-24 March 2006
*"Exploring Quantum Matter in Artifical Crystals of Light"*

69. **Meeting of the Dutch and Belgian Physics Society, FYSICA 2006**
Plenary talk
Leiden (Netherlands), 28 April 2006
*"New Light on Modern Optics"*

70. **Gordon Research Conference on Quantum Information Science**
Il Ciocco, Castelvecchio (Italy), 7-12 May 2006
*"Entangling Neutral Atoms in Optical Lattices"*

71. **Varenna Summer School on "Ultracold Fermi Gases"**
Varenna (Italy), 29-30 June 2006
*"Strongly Correlated Quantum Matter in Optical Lattices"*

72. **ICAP 2006 (International Conference on Atomic Physics)**
Innsbruck (Austria), 16-21 July 2006
*"Strongly Correlated Quantum Matter in Optical Lattices"*

73. **ICO (International Commission of Optics) Meeting, Plenary Talk**
St. Petersburg (Russia), 3-6 September 2006
*"Exploring Quantum Matter in Artificial Crystals of Light"*

74. **Theory Colloquium University of Geneva**
Geneva (Swizerland), 5 October 2006
*"Strongly Correlated Quantum Matter in Optical Lattices"*

75. **7th European QIPC Workshop at the Royal Society**
London (UK), 13-14 October 2006
*"Quantum Information Processing with Neutral Atoms"*

76. **Canadian Institute of Advanced Research – Quantum Materials Meeting**
Vancouver (Canada), 19-21 October 2006
*"Strongly correlated atoms in optical lattices"*

77. **Symposium on Ultracold Quantum Gases – Talk with Elliot Lieb**
Aarhus (Denmark), 6-7 November 2006
*"Strongly correlated atoms in optical lattices"*

78. **Measurement based Quantum Computing Workshop**
Oxford (UK), 21-23 March 2007
*"Entangling Neutral Atoms in Optical Lattices"*

79. **Gordon Research Conference on Quantum Information**
Il Ciocco (Italy), 16-20 April 2007
*"Quantum Information Processing with Neutral Atoms"*

80. **KITP Workshop on "Strongly Correlated Phases in Condensed Matter and Degenerate Atomic Systems"**
Santa Barbara (USA), 22-28 April 2007
*"Strongly Correlated Quantum Phases with Ultracold Atoms in Optical Lattices"*

81. **Physics Colloquium – University of California Santa Barbara**
Santa Barbara (USA), 1 May 2007
*"Experimenting with Ultracold Atoms in Optical Lattices"*

82. **Condensed Matter Physics Seminar Boston University**
Boston (USA), 7 May 2007
*"Strongly Correlated Many Body Physics with Ultracold Atoms in Optical Lattices"*

83. **Center for Ultracold Atoms (CUA) Colloquium – Harvard University**
Boston (USA), 8 May 2007
*"Towards Quantum Magnetism with Ultracold Atoms in Optical Lattices"*

84. **International Conference on Quantum Electronics IQEC – Tutorial lecture**
München, 20 June 2007
*"Ultracold Atoms in Optical Lattices"*

85. **International Conference on Laser Spectroscopy – ICOLS**
Telluride (USA), 24-28 June 2007
*"Towards Quantum Magnetism with Ultracold Atoms in Optical Lattices"*

86. **Conference on "Recent progress in the studies of quantum gases: theory and experiments"**
Paris (Frankreich), 28 June 2007
*"Towards Quantum Magnetism with Ultracold Atoms in Optical Lattices"*

87. **Conference on "Exploring Quantum Matter: Visions and Opportunities"**
St. Andrews (UK), 2-6 July 2007
*"Exploring Quantum Matter with Ultracold Atoms in Optical Lattices"*

88. **International School on Quantum Fluids**
Brasilia (Brazil), 14-20 August 2007
*"Ultracold Atoms in Optical Lattices"*

89. **Summer School on Novel Quantum Phases and Non-equilibrium Phenomena in Cold Atomic Gases**
Trieste (Italy), 27 August-7 September, 2007
*"Exploring Quantum Matter with Ultracold Atoms in Optical Lattices"*

90. **Quantum, Atomic & Molecular Physics Conference (QuAMP)**
London (UK), 10-13 September, 2007
*"Towards Quantum Magnetism with Ultracold Atoms in Optical Lattices"*

91. **Bose-Einstein Condensation 2007 – Frontiers in Quantum Gases**
San Feliu des Guixols (Spain), 15-20 September, 2007
*"Towards Quantum Magnetism with Ultracold Atoms in Optical Lattices"*

92. **Opening of CoQus (Graduate School on Complex Quantum Systems)**
Vienna (Austria), 8 October , 2007
*"Exploring Quantum Matter with Ultracold Atoms in Optical Lattices"*

93. **Stanford Physics Colloquium**
Stanford (USA), 23 October, 2007
*"Exploring Quantum Matter with Ultracold Atoms"*

94. **Harvard Theory Seminar**
Harvard (USA), 25 October 2007
*"Exploring Quantum Matter with Ultracold Atoms in Optical Lattices"*

95. **Winter School on Theoretical Condensed Matter Physics**
Jerusalem (Israel), 26 December – 4 January 2008
*"Ultracold Quantum Gases in Optical Lattices"*

96. **Quantum Noise in Correlated Systems**
Rehovot (Israel), Weizmann Institute, 5-11 January, 2008
*"Probing Quantum Matter in Optical Lattices"*

97. **ESF Conference on Quantum Optics**
Obergurgl (Austria), 25-27 February, 2008
*"Ultracold Atoms in Optical Lattices"*

98. **APS March Meeting**
New Orleans (USA), 10-14 March, 2008
*"Exploring Quantum Matter with Ultracold Atoms in Optical Lattices"*

99. **INTERF08 Meeting**
Levico (Italy), 3-5 April, 2008
*"Noise Correlations and Spin Squeezing with Ultracold Atoms"*

100. **Lecture Series at the Technion**
Haifa (Israel), 10-15 April, 2008
*"Ultracold Quantum Gases"*

101. **Workshop on Quantum Phenomena and Information: From Atomic to Mesoscopic System**
Trieste (Italy), 5-16 May, 2008
*"Exploring Quantum Matter with Ultracold Atom in Optical Lattices"*

102. **DAMOP 2008**
Pennstate University (USA), 27-31 May, 2008
*"Towards Quantum Magnetism with Ultracold Atoms"*

103. **International Conference on Atomic Physics (ICAP) 2008**
University of Connecticut Storrs (USA), 26 July-1 August, 2008
*"Strongly Correlated Fermions and Bose-Fermi Mixtures in Optical Lattices"*

104. **Low Temperature Physics LT25**
Amsterdam (Netherlands), 10-12 August, 2008
*"Strongly Correlated Fermions and Bose-Fermi Mixtures in Optical Lattices"*

105. **Quantum Fluids and Strongly Correlated Systems**
Paris (France), 15-16 September, 2008
*"Strongly Correlated Fermions and Bose-Fermi Mixtures in Optical Lattices"*

106. **Solvay Conference on Condensed Matter Physics**
Brussels (Belgium), 11-13 October, 2008
*"Strongly Correlated Quantum Systems with Ultracold Atoms in Optical Lattices" (Rapporteur talk)*

107. **Frontiers of Degenerate Quantum Gases**
Beijing (China), 20-24 October, 2008
*"New Light on Bosons, Fermions and Bose-Fermi Mixtures in Optical Lattices"*

108. **International Symposium on Physics of Quantum Technology**
Nara (Japan), 24-28 November, 2008
*"New Light on Bosons, Fermions and Bose-Fermi Mixtures in Optical Lattices"*

109. **NordForsk Meeting**
Copenhagen (Denmark), 15-16 January, 2009
"*New Light on Bosons, Fermions and Bose-Fermi Mixtures in Optical Lattices"*

110. **LOWDIM KITP Conference**
St. Barbara (USA), 21-26 February, 2009
"*Strongly Correlated Quantum Matter in Optical Lattices*"

111. **Seminar Physics Department École Polytechnique**
Paris (France), 31 March-1 April, 2009
*"Strongly Correlated Quantum Matter in Optical Lattices"*

112. **International Conference on Laser Spectroscopy (ICOLS09)**
Memanbetsu (Japan), 8-12 June, 2009
*"Strongly Correlated Bosons and Fermions in Optical Lattices"*

113. **SCALA Summer School on Quantum Optics & Quantum Information**
Cargese (France), 22-25 August, 2009
*"Ultracold Bosonic and Fermionic Quantum Gases in Optical Lattices"*

114. **ICREA Workshop on Artificial Gauge Fiels**
San Benet (Spain), 1-4 September, 2009
*"Preparing and Manipulating Exotic Quantum States in Optical Lattices"*

115. **BEC2009 Conference**
San Feliu (Spain), 6-10 September, 2009
"*Non-Equilibrium Dynamics of Strongly Interacting Bosonic and Fermionic Quantum Gases"*

116. **FET Seminar at the European Commission**
Brussels (Beglium), 17 September, 2009
"*Quantum Simulations"*

117. **Physics Colloquim Fribourg**
Fribourg (Switzerland), 30 September, 2009
*"Exploring Quantum Matter with Ultracold Atoms"*

118. **Frontiers of Science Plenary Talk at KITPC**
Beijing (China), 13 October, 2009
"*Exploring Quantum Matter with the Coldest Objects in the Universe"*

119. **KITPC Workshop on Cold Quantm Gases**
Beijing (China), 12-15 October, 2009
"*Non-Equilibrium Dynamics of Strongly Interacting Bosonic and Fermionic Quantum Gases"*

120. **JQI Seminar (University of Maryland & NIST)**
College Park (USA), 7 October, 2009
"*Non-Equilibrium Dynamics of Strongly Interacting Bosonic and Fermionic Quantum Gases"*

121. **Physics Colloquium, Princeton University**
Princeton (USA), 10 October, 2009
*"Exploring Quantum Matter with Ultracold Atoms"*

122. **Physics Colloquium (Ohio State University OSU)**
Columbus (USA), 15-17 Februar, 2009
"*Exploring Quantum Matter with Ultracold Atoms"*

123. **Kavli Colloquium (TU Delft & Kavli Institute for Nanoscience)**
Delft (Netherlands), 14-16 April, 2010
"*Exploring Quantum Matter with Ultracold Atoms"*

124. **CIFAR Quantum Materials Program Meeting**
Montreal (Canada), 5-9 May, 2010
"*Non-Equilibrium Dynamics of Strongly Interacting Bosonic and Fermionic Quantum Gases"*

125. **OptETH Colloquium ETH Zurich**
ETH Zurich (Switzerland), 31 May, 2010
"*Exploring Quantum Matter with Ultracold Atoms"*

126. **Workshop on Dynamics of Strongly Correlated Quantum Systems**
ICTP Trieste (Italy), 21-25 June, 2010
"*Nonequilibrium Dynamics of Bosons and Fermions in Optical Lattices"*

127. **Many-body Physics with Ultracold Atoms**
Les Houchers (France), 11. July-16. July, 2010
*"Ultracold Bosonic and Fermionic Atoms in Optical Lattices"*

128. **Quantum Solids, Liquids and Gases**
NORDITA Stockholm (Sweden), 23. August (2010)
*"Non-equilibrium Dynamics and Single Site Addressing in Strongly Interacting Quantum Gases in Optical Lattices"*

129. **Controlled Quantum Dynamics and QUAMP Summer School**
London (UK) 31 August-3 September, 2010
*"Ultracold Bosonic and Fermionic Atoms in Optical Lattices"*

130. **Beyond Optical Lattice – KITP program**
KITP Santa Barbara (USA) 21. September, 2010
*"Single Site and Single Atom Imaging of Strongly Correlated Quantum Gases"*

131. **Physics Colloquium, University of Colorado in Boulder**
Boulder , CO (USA) 29. September, 2010
*"Exploring Strongly Correlated Quantum Matter in Artificial Crystals of Light"*

132. **JILA Seminar**
Boulder, CO (USA) 30. September, 2010

*"Non-equilirium dynamics and single-site imaging of ultracold atoms in optical lattices"*

133. **Entanglement in Atomic Systems**
Weizmann Institute of Science (Israel), 21. November-25. November, 2010
*"Detecting and Controlling Correlations and Entanglement in Ultracold Atomic Gases"*

134. **Physics Colloquium, Southampton University**
Southampton (UK), 10 December, 2010
*"Exploring Strongly Correlate Quantum Matter in Artificial Crystals of Light"*

135. **International Conference on Quantum Technologies**
Munich (Germany), 9 May, 2011
*"Ultracold Atoms in Optical Lattices"*

136. **Workshop on Quantum Science and Technologies**
Rovereto (Italy), 10-11 May, 2011
*"Probing Strongly Interacting Quantum Matter using Ultracold Quantum Gases"*

137. **Summer School on Disordered Quantum Systems**
Cargese (France), 30 May-5 June, 2011
*"Introduction to Many-Body Physics with Ultracold Atoms"*

138. **DAMOP APS Meeting**
Atlanta (USA), 15-17 June, 2011
*"Probing and Controlling Strongly Interacting Quantum Matter at the Single-Atom Level"*

139. **EGAS Conference**
Fribourg (Switzerland), 29 June-1 July
*"Probing and Controlling Strongly Interacting Quantum Matter at the Single-Atom Level"*

140. **Summer School on "Quantum Machines"**
Les Houches (France), 13-15 July 2011
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141. **Frontiers of Quantum and Mesoscopic Thermodynamics (FQMT)**
Prague (Czech Republic), 27-29 July 2011
"Probing and Controlling Strongly Interacting Quantum Matter at the Single-Atom Level"

142. **Scottish University Summer School in Physics**
Glasgow (UK), 2-4 August 2011
*"Introduction to Many-Body Physics with Ultracold Atoms"*

143. **Quantum Information Processing Conference**
Zurich (Switzerland), 5-7 September 2011
*"Probing and Controlling Strongly Interacting Quantum Matter"*

144. **LENS Colloquium**
Florence (Italy), 20 October 2011
*"Probing and Controlling Strongly Interacting Quantum Matter"*

145. **Ehrenfest Colloquium**
Leiden University (NL), 23 November 2011
*"Observing and Controlling Quantum Matter"*

146. **ITAMP/Harvard Quantum Optics Center Colloquium**
Harvard University (USA), 1 December 2011
*"Observing and Controlling Quantum Matter"*

147. **Center for Quantum Techhnologies, 4th Anniversary**
National University of Singapore (Singapore), 7 December 2011
*"Observing and Controlling Quantum Matter at the Single-Atom Level"*

# Further Invited Talks

1. **Spring Meeting of the German Physical Society 1999, Heidelberg, Invited Main Talk**
   Heidelberg, March 1999
   *"Atom lasers"*

2. **Physics Colloquium of the University of Göttingen**
   Göttingen, April 1999
   *"Atom lasers"*

3. **Max-Planck-Institute for Plasma Physics**
   Garching, 3 February 2000
   *"Atom lasers"*

4. **Advanced training for High School physics teachers organized by the Germany Physical Society "100 years quantum physics",**
   (August 2000), Bonn; Lecture on "Matter Waves"

5. **Seminar "Quantum Optics and Spectroscopy"**
   Institute for Experimental Physics, University of Innbsruck
   Innsbruck, 17 January, 2001
   *"Atom lasers"*

6. **Physics Colloquium of the University of Oldenburg**
   Oldenburg, 14 Mai 2001
   *"Bose-Einstein condensation and atom lasers/Experimenting with the coldest objects in the universe"*

7. **Quantum Optics Summer School, Universität Bonn**
   Bonn, 20-21 August 2001
   *"Bose-Einstein condensation"*

8. **SFB 407 Colloquium, University of Hannover**
   Hannover, 21 November 2001
   *"Quantum phase transition from a superfluid to a Mott insulator"*

9. **Quantum Optics and Atomic Physics Seminar, University of Heidelberg**
   Heidelberg, 12 Dezember 2001
   *"Quantum phase transition from a superfluid to a Mott insulator in an ultracold gas of atoms"*

10. **Theoretical Quantum Optics Seminar, Ludwig-Maximilians University of Munich**
    Munich, 11 February 2001
    *"Quantum phase transitions from a superfluid to a Mott insulator in an ultracold gas of atoms"*

11. **"Lattice days in Stuttgart", 5. Physikalisches Institut, University of Stuttgart**
    Stuttgart, 28 February, 2002
    *"Quantum phase transitions from a superfluid to a Mott insulator in an ultracold gas of atoms"*

12. **Spring Meeting of the German Physical Society 2002, Osnabrück**
    Invited Main Talk
    Osnabrück, 8 March, 2002
    *"Quantum phase transitions from a superfluid to a Mott insulator in an ultracold gas of atoms"*

13. **Quantum Optics Summer School, University of Bonn**
    Bonn, April, 2002
    *"Bose-Einstein condensation"*

14. **Meeting of the SPP1116 program of the DFG "Interactions in ultracold atomic and molecular gases"**
    Bonn, April, 2002
    *"Quantum phase transitions from a superfluid to a Mott insulator in an ultracold gas of atoms"*

15. **Physics Department, University of Mainz**
    Mainz, 14 May, 2002
    *"From a weakly interacting Bose gas to a strongly correlated Bose system"*

16. **Theory Colloquium, University of Augsburg**
    Augsburg, 25 April, 2002
    *"From a weakly interacting Bose gas to a strongly correlated Bose system"*

17. **Physics Colloquium, University of Cologne**
    Cologne, 11 June, 2002
    *"Quantum phase transitions from a superfluid to a Mott insulator in an ultracold gas of atoms"*

18. **Physics Colloquium, TU and LMU Munich**
    Munich, 15 July, 2002

*"Quantum phase transitions from a superfluid to a Mott insulator in an ultracold gas of atoms"*

19. **Interactions in Ultracold Gases: From Atoms to Molecules**
    Heidelberg, September 2002
    *"Beyond mean field physics with Bose-Einstein condensates in optical lattices"*

20. **Max-Planck-Institut für Quantenoptik, Laserseminar**
    Garching, 26 November, 2002
    *"Seeing the particles beneath the waves – New physics with Bose-Einstein condensates"*

21. **Physics Colloquium Gerhard-Mercator University of Duisburg**
    Duisburg, 20 January, 2003
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

22. **Physics Colloquium University of Heidelberg**
    Heidelberg, 24 January, 2003
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

23. **Physics Colloquium University of Kaiserslautern**
    Kaiserslautern, 27 January, 2003
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

24. **Physics Colloquium University of Frankfurt**
    Frankfurt, 29 January, 2003
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

25. **DPG-Spring Meeting Condensed Matter Physics – Eingeladener Hauptvortrag**
    Dresden, 26 March, 2003
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

26. **Forschergruppe Quantengase Meeting in Castle Reisensburg**
    Günzburg, 3 April, 2003
    *"Controlled Collisions with Neutral Atoms in Optical Lattices"*

27. **Graduiertenkolleg Universität Regensburg**
    Regensburg, 22 May, 2003
    *"Seeing the Particles beneath the Waves"*

28. **Physikalisches Kolloquium Universität Düsseldorf**
    Düsseldorf, 3 July, 2003
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

29. **Quantum Information Processing Workshop**
    Bonn, 13-15 October, 2003
    *"Controlled Collisions for Multiparticle Entanglement of Optically Trapped Atoms"*

30. **Physics Colloquium University of Karlsruhe**
    Karlsruhe, 12 December, 2003
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

31. **Physics Colloquium at GSI Darmstadt**
    Darmstadt, 13 Januar, 2004
    *"Seeing the particles beneath the waves – New physics with Bose-Einstein condensates"*

32. **DFG-SPP1116 Meeting**
    Potsdam, 16-17. March 2004
    *"Photoassociation of neutral atoms in optical lattices"*

33. **Physics Colloquium at the University of Bonn**
    Bonn, 18 May 2004
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

34. **Workshop on Disordered Ultracold Quantum Gases**
    Hannover, 28-28 June 2004
    *"From entanglement interferometry to molecule formation in optical lattices"*

35. **Workshop on "Quantum Phase Transitions"**
    Bad Honnef, 12 October 2004
    *"Exploring strongly correlated quantum matter with ultracold atoms"*

36. **Physics Colloquium, University of Dresden**
    Dresden, 18 October 2004
    *"Seeing Particles beneath the Waves"*

37. **Inaugural Lecture, at Mainz University**
    Mainz, 28 October 2004
    *"Von Einsteins Traum zur Realität – Experimentieren mit den kältesten Objekten des Universums"*

38. **Colloquium at Graduation Department of Physics, Mainz University**
    Mainz, 12 November 2004
    *"Von Einsteins Traum zur Realität – Experimentieren mit den kältesten Objekten des Universums"*

39. **Colloquium, Technische Universität Darmstadt**
    Darmstadt, 26 November 2004
    *"Materiewellen am Aufbruch – neue Physik mit Bose-Einstein-Kondensaten"*

40. **Fritz Haber Institut of the Max-Planck-Society – Physics Colloquium**
    Berlin, 25 February 2005
    *"Exploring Quantum Matter in Crystals of Light"*

41. **Meeting of the German Physics Society – Plenary Talk**
    Berlin, 4 March 2005
    *"From Einsteins Dream to Reality – Experimenting with the Coldest Objects in the Universe"*

42. **New Trends in Nuclear, Atomic and Molecular Science**
    Heidelberg, 12-13 March 2005
    *"Exploring Quantum Matter in Optical Lattices"*

43. **Physics on Saturday Morning**
    Mainz, 7 May 2005
    *"Experimentieren mit den kältesten Objekten des Universums"*

44. **RWTH Aachen, Physics Colloquium**
    Aachen, 9 May 2005
    *"Exploring Quantum Matter in Crystals of Light"*

45. **Einstein Year of Physics Lectures**
    Bonn, 20 May 2005
    *"Bose-Einstein-Kondensation"*

46. **University of Tübingen, Physics Colloquium**
    Tübingen, 25 May 2005
    *"Materiewellen am Aufbruch – Neue Physik mit Bose-Einstein-Kondensaten"*

47. **Wissenschaftssommer Berlin, Invited Lecture by the DFG for the General Public**
    Berlin, 20 June 2005
    *"Experimentieren mit den kältesten Objekten des Universums"*

48. **Ludwig-Maximilians-University, Physics Colloquim**
    Munich, 23 January 2006
    *"Exploring Quantum Matter in Crystals of Light"*

49. **DPG Tagung 2006, Plenary Lecture**
    Frankfurt, 15 March 2006
    *"100 Jahre Quantenoptik, von Planck und Einstein zur Quantenoptik heute"*

50. **Naturwissenschaftliches Kolleg der Studienstiftung des deutschen Volkes**
Bad Honnef, 2-7 April 2006
*Lecture series on ultracold quantum gases*

51. **Graduate School on Physics of the University of Heidelberg, Honorary Colloquim**
Heidelberg, 20 April, 2006
*"Experimentieren mit ultrakalten Quantengasen"*

52. **Colloquium at the Max-Planck-Institute for Quantum Optics**
Garching, 23 May, 2006
*"Ultracold Quantum Gases in Optical Lattices"*

53. **Quantum Information in Solid State Based Systems SFB Workshop**
Herrsching, 25 May, 2006
*"Entangling Neutral Atoms in Optical Lattices"*

54. **Colloquium at the University of Bochum**
Bochum, 29 May, 2006
*"Exploring Quantum Matter in Artificial Crystals of Light"*

55. **Publich evening lecture with Anton Zeilinger**
Mainz, 30 May, 2006
*"Experimentieren mit den kältesten Objekten des Universums"*

56. **Otto-Stern Colloquium at the University of Hamburg**
Hamburg, 6 July, 2006
*"Exploring Quantum Matter in Artificial Crystals of Light"*

57. **Kepler Lecture at the University of Tübingen**
Tübingen, 12 July, 2006
*"New Light on Modern Optics"*

58. **Quo Vadis BEC Workshop**
FU Berlin, 28 October, 2006
*"Experimenting with Strongly Interacting Ultracold Quantum Gases"*

59. **Colloquium – Max-Planck-Institute for Nuclear Physics**
Heidelberg, 9 November, 2006
*"Experimenting with Strongly Interacting Ultracold Quantum Gases"*

60. **Colloquium – University of Ulm**
Ulm, 27 November, 2006
*"Experimenting with Strongly Interacting Ultracold Quantum Gases"*

61. **Colloquium – University of Würzburg**
    Würzburg, 11 December, 2006
    *"New Light on Quantum Optics"*

62. **DFG Rundgespräche**
    Bad Honnef, 21-23 February, 2007
    *"Strongly Interacting Quantum Gases in Optical Lattices"*

63. **NMLN Workshop – MPIKS Dresden**
    Dresden, 28 March, 2007
    *"Strongly Interacting Atoms in Optical Lattices"*

64. **Colloquium – University of Erlangen**
    Erlangen, 21 Mai, 2007
    *„Experimentieren mit Ultrakalten Atomen in Künstlichen Kristallen aus Licht"*

65. **Colloquium – University of Marburg**
    Marburg, 2-4 Juli, 2007
    *"Experimentieren mit Ultrakalten Atomen in Künstlichen Kristallen aus Licht"*

66. **Colloquium – University of Applied Sciences Fulda**
    Fulda, 2 November, 2007
    *„Experimentieren mit den kältesten Objekten des Universums"*

67. **DPG Meeting Berlin – Symposium on Quantum Phase Transitions**
    Berlin, 25 February, 2008
    *„Quantum Phase Transitions with Ultracold Atoms"*

68. **DPG Meeting Berlin – 150 Years Max-Planck: Physics Today**
    Berlin, 27 February, 2008
    *„Atomphysik"*

69. **Colloquium – University of Saarbrücken**
    Saarbrücken, 17 April, 2008
    *„Experimentieren mit Ultrakalten Atomen in Künstlichen Kristallen aus Licht"*

70. **Frontiers of Quantum Theory**
    Berlin, 28-29 April, 2008
    *„Entanglement and Quantum Simulations with Ultracold Atoms"*

71. **Colloquium – University of Bremen**
    Bremen, 19 June, 2008
    *„Experimentieren mit Ultrakalten Atomen in Künstlichen Kristallen aus Licht"*

72. **SFB/TRR49 Annual Meeting**
Schloss Waldthausen, 25-26 September, 2008
*„Strongly Correlated Fermions and Bose-Fermi Mixtures in Optical Lattices“*

73. **DPG Lehrerfortbildung**
Physikzentrum der DPG, 20 October 2008
*„Experimentieren mit den kältesten Objekten des Universums“*

74. **Max-von-Laue Colloquium – Physikalische Gesellschaft zu Berlin**
TU Berlin, 30 October, 2008
*„Experimentieren mit Ultrakalten Atomen in Künstlichen Kristallen aus Licht“*

75. **Physics Colloquium - TU Chemnitz**
Chemnitz, 7 January, 2009
*“Experimentieren mit Ultrakalten Atomen in Künstlichen Kristallen aus Licht“*

76. **Joint Physics Colloquium TU Karlsruhe/University of Heidelberg**
Karlsruhe, 30 January, 2009
*“Exploring Quantum Matter with Ultracold Atoms in Artificial Crystals of Light”*

77. **Invited Symposium Speaker, DPG Spring Meeting 2009**
Dresden, 23 March, 2009
*“Strongly Correlated Quantum Matter in Optical Lattices”*

78. **FOR635 Workshop**
Bonn, 6-8 July, 2009
*“Controlling Light and Matter with Ultracold Atoms in Optical Lattices”*

79. **Physics Colloquium Stuttgart**
Stuttgart, 7 July, 2009
*“Exploring Quantum Matter with Ultracold Atoms in Optical Lattices”*

80. **Quantum Criticality and Novel Phases (QCNP) 2009**
Dresden, 2 August-5 August, 2009
*“Strongly Correlated Fermionic Quantum Gases in Optical Lattices”*

*81.* **Laserfest Berlin**
Berlin, 23 March, 2010
“*Exploring Quantum Matter with the Coldest Objects in the Universe”*

*82.* **Physics Colloquium – University of Augsburg**
Augsburg, 13 December, 2010
*“Exploring Strongly Correlated Quantum Matter in Artificial Crystals of Light”*

*83.* **Physics Colloquium – University of Mainz**
Mainz, 12 July 2011
*"Probing and Controlling Strongly Interacting Quantum Matter"*

*84.* **Ruperto Carola Symposium - Pushing Frontiers in Quantum Information with Atoms and Photons**
Heidelberg, 1-3 September 2011
*"Probing and Controlling Strongly Interacting Quantum Matter"*

*85.* **Coherence and Decoherence at Ultracold Temperatures**
Garching, 8-9 September 2011
*"Probing and Controlling Strongly Interacting Quantum Matter at the Single Atom Level*

*86.* **Physics Colloquium – Physikalisch Technische Bundesanstalt (PTB)**
Braunschweig, 6 October 2011
*"Probing and Controlling Strongly Interacting Quantum Matter at the Single Atom Level"*

87. **Workshop on Engineering and Control of Quantum Systems**
Dresden, 13-14 October 2011
*"Probing and Controlling Strongly Interacting Quantum Matter"*