

Colloquiums and Seminars
C. Salomon
2019-1989

1. Quantum simulation, Bonn Physics Colloquium, (DE), November 29, 2019
2. Les fascinantes propriétés de la matière ultra-froide, Séminaire du directeur de l'ENS, April 17, 2019
3. Dual Bose-Fermi superfluids, MIT-Harvard Center for Ultracold Atoms, February 2019,
4. Dual Bose-Fermi superfluids, Hamburg University (DE) January, 8, 2019
5. Dual Bose-Fermi superfluids, LPMMC, Grenoble, décembre 2018
6. Dynamics of dual Bose-Fermi superfluids, Taiyuan, China, August 19, 2018
7. La mesure du Temps aujourd'hui et demain, Comité Science et Métrologie, académie des sciences 6 juin 2018
8. The Measurement of Time in the 21st Century, Alba Nova Colloquium, Stockholm University, February 22, 2018
9. La mesure du Temps au 21^{ème} siècle, ESPCI, 23 mai 2018
10. Quantum simulation with ultracold atoms, University of Mainz, January 16th, 2018
11. Dual Bose-Fermi Superfluids, University of Bonn, October 17, 2017
12. Dual Bose-Fermi Superfluids, JILA, University of Colorado, Boulder, USA, April 17, 2017
13. Dual Bose-Fermi Superfluids, NIST, Boulder, USA, April 21, 2017
14. One, Two, Three, Many: the lifetime of an ultracold Bose-Fermi mixture, JILA, University of Colorado, Boulder, USA, April 20, 2017
15. Dual Bose-Fermi superfluids, Vrije University of Amsterdam, NL, March 15, 2017
16. Dual Bose-Fermi superfluids, SPEC, CEA, February 22, 2017
17. Quantum simulation with cold gases: (1) Thermodynamics, (2) Superfluid flow and dissipation in a Bose-Fermi mixture. Two lectures in Croucher Summer school on ultracold gases, Hong-Kong, China, May 9-14, 2016
18. From ultrafast to ultraslow: Simulation of Weyl particles with cold atoms, University of Trento (IT), July 14, 2016
19. Simulating neutron stars in the laboratory, Hamburg photon science Colloquium, April 15, 2016
20. Fundamental Tests with Ground and Space Clocks, INRIM Galileo Ferraris memorial Lecture, Torino, Italy, October 15th, 2014
21. A mixture of Bose and Fermi Superfluids, Center for quantum technologies, Singapore, August 19, 2014
22. Superfluid Fermi gases, Max Planck distinguished lecturer, MPL, Erlangen, DE, July 10, 2014
23. La mesure du temps et tests de la relativité, AEIS, Ecole Polytechnique, June 2, 2014

24. Cold atom Clocks and Fermi Superfluids, Toptica, Muenchen, DE, April 25, 2014
25. Des atomes froids pour mesurer le temps, Univers Science, Cité des Sciences et de l'industrie, La Villette, April 15, 2014
26. From ultracold Fermi gases to neutron stars, University of Utrecht, April 2, 2014
27. Cold atoms, Bose-Einstein condensation, and Space Clocks, 4 lectures at the EPFL Lausanne, Ecole doctorale, (CH), April 3, 2014
28. Kondo effect with ultracold atoms, Ecole Normale supérieure, April 11, 2014
29. Fundamental Tests with Space Clocks and ACES, PTB Colloquium, Braunschweig, DE, February 21, 2014
30. 2 lectures at Orleans University, la mesure du temps et tests fondamentaux, December 4, 2013
31. From ultracold Fermi gases to neutron stars, CEA SPEC, November 27, 2013
32. Les ERC Ferlodim et Thermodynamix sur les fermions ultrafroids, journées du laboratoire Kastler Brossel, La Rochelle, 24-25 juin 2013
33. Strongly interacting Bose gases, Ulm University, DE, June 13, 2013
34. From ultracold Fermi gases to neutron stars, Ulm University, DE, June 12, 2013
35. Strongly interacting Bose gases, Technical University Munchen, April 29, 2013
36. La mesure du temps au 21^{ème} siècle, Collège de France, 12 mars 2013
37. From ultracold Fermi gases to neutron stars, colloque de la SFP Toulouse, February, 1st, 2013
38. From ultracold Fermi gases to neutron stars, Strathclyde University, UK, January 21, 2013
39. Cold atoms in the Paris area, Séminaire pour étudiants de M2 Concepts Fondamentaux de la Physique, ENS, October 9, 2012
40. From ultracold Fermi gases to neutron stars, Solvay Colloquium, Brussels, April 25, 2012
41. From ultracold Fermi gases to tests of general relativity, University of Hannover, Germany, July 10th, 2012
42. From ultracold Femi gases to neutron stars, University of Trento, Italy, March 7th, 2012
43. Thermodynamics of quantum gases, University of Trento, Italy, March 7th, 2012
44. Status of the PHARAO/ACES mission, CNES, Groupe de Physique Fondamentale, Paris, February. 1st, 2012
45. Thermodynamics of quantum gases, Ludwig Maximilian University, Munich, Germany, January 24th, 2012
46. Atomic quantum sensors, ESA, ESTEC, NL, Review of the Elips program, Noordwijk, the Netherlands, January 11th, 2012
47. The research Council point of View, EMRP dissemination event, Brussels, Nov, 29th, 2011,

48. From ultracold Fermi gases to neutron stars, Joint Quantum Institute, University of Maryland and NIST, (USA), Nov. 14th, 2011,
49. From ultracold Fermi gases to neutron stars, ETH colloquium, Zurich, Switzerland, Nov 9th, 2011,
50. The measurement of time in the 21rst Century, University of Chicago, USA, October 14th, 2011
51. The measurement of time in the 21rst Century, Argonne national laboratory, Illinois, USA, October 6th, 2011
52. From ultracold Fermi gases to neutron stars, North-Western University, Chicago, USA, October 12th, 2011
53. From ultracold Fermi gases to neutron stars, University of Chicago, USA, October 10th, 2011
54. The measurement of time in the 21rst Century, ESA, ESTEC, Noordwijk, the Netherlands, July 8th, 2011,
55. La mesure du temps au 21ieme siècle, Comité Sciences et Métrologie de l'Académie des Sciences, Paris, June 6, 2011
56. Gaz Quantiques, journées de prospectives du Laboratoire Kastler Brossel, Université Paris 6, Paris, June 5-6, 2011
57. From ultracold Fermi gases to neutron stars, Colloquium, University of Darmstadt, Germany, May 27th, 2011
58. Time and Fundamental tests, Colloquium, University of Princeton, USA, March 10th, 2011
59. La mesure du temps et tests fondamentaux, Observatoire de Paris-Meudon, LUTH, February 24, 2011
60. Atomes ultrafroids et mesure du temps, Palais de la découverte, Paris, February 8, 2011
61. Thermodynamics of quantum gases, Workshop on Quantum Simulators, Palaiseau, February 3rd, 2011
62. From ultracold Fermi Gases to Neutron Stars, Colloquium, University of Heidelberg, Germany, February 2nd, 2011
63. From ultracold Fermi Gases to Neutron Stars, ENS Lyon, January 24th, 2011
64. La mesure du temps et tests fondamentaux, Université Henri Poincaré, Nancy, December 7th, 2010
65. From ultracold Fermi gases to neutron stars, Max Planck Institute for Quantum Optics, Garching, Germany, November 30th, 2010
66. Thermodynamics of ultracold Fermi gases, University of Hamburg, Germany, November 24th, 2010
67. Les gaz quantiques, étudiants du M2 de l'école doctorale ED 107, ENS, Paris, November 5, 2010
68. Thermodynamics of ultracold Fermi gases, Université de Strasbourg, IPCMS, September 27, 2010

69. Atomic Clocks and fundamental tests, National University of Singapore, Republic of Singapore, August 10th, 2010
70. Thermodynamics of a tunable Fermi gas, Swinburne University, Melbourne, Australia, August 6th, 2010
71. The equation of State of strongly interacting fermions, Australian national University, Canberra, Australia, August 4th, 2010
72. Thermodynamics of ultracold Fermi gases, University of Geneva, Switzerland, June 15th, 2010
73. The Equation of State of Strongly Interacting Fermi gases, The Abdus Salam Centre for Theoretical Physics, Trieste, Italy, May 27th, 2010.
74. La mesure du temps et tests fondamentaux, Université de Toulouse, May 20th, 2010
75. 4 lectures at Lausanne University, (1) Fundamental Physics in Space and The ACES Mission, (2) The Space Instruments, (3) Relativity and Time Transfer, (4) Search for variations of fundamental constants and perspectives, Switzerland, April 22th, 2010
76. Thermodynamics of a strongly interacting Fermi gas, MIT, Center for ultracold atoms, Boston, USA, February 9th, 2010
77. Swimming in a Fermi Sea of cold Atoms, University of Recife, Brazil, Nov 16th, 2009
78. Tests de Physique Fondamentale avec des Horloges dans l'espace, journées de prospective du Laboratoire Kastler Brossel, Dourdan, 9 Juin 2009
79. La mission ACES/PHARAO, journées de prospective du Laboratoire Kastler Brossel, Dourdan, 8 Juin 2009
80. Fermionic Quantum gases, University of Sao Carlos, Brazil, January 16th, 2009
81. Atomic Clocks, University of Sao Carlos, Brazil, January 14th, 2009
82. Ultracold Fermi gases : recent advances, Eindhoven University, the Netherlands, December 11th, 2008
83. La mesure du temps, Université de Mulhouse, November 20th, 2008
84. PHARAO/ACES: les technologies du projet, Groupe de physique fondamentale du CNES, Paris, May 5th, 2008
85. Ultracold Fermi gases: from Bose-Einstein condensation of molecules to Cooper pairs, Mainz University Colloquium, Germany, December 6th, 2007
86. Cold atom clocks and fundamental tests, Heidelberg University, Germany, November 23rd, 2007
87. Ultracold Fermi gases: from Bose-Einstein condensation of molecules to Cooper pairs, Bonn University Colloquium, Germany, May 15th, 2007
88. ACES Science Objectives: an update, ESA ESTEC, Fundamental Physics Advisory Group, April 19th, 2007
89. Fundamental physics with Space Clocks : ACES and perspectives, Duesseldorf University, Germany, March 8th, 2007

90. Superfluidity in Ultracold Fermi Gases, Colloquium "Optics and Condensed Matter", Université de Bonn, Germany, May14-16, 2007.
91. Ultra Stable Clocks in Space and Applications in Geodesy, Institut für Astronomische und Physikalische Geodäsie, Technische Universität München, Germany, March 26, 2007.
92. Les objectifs scientifiques de la mission PHARAO/ACES, Groupe de physique fondamentale du CNES, Paris, February 5, 2007.
93. Horloges à atomes froids et mesure du Temps, Ecole Centrale de Paris, January19, 2007.
94. La mesure du temps, Séminaire au Lycée Français de Singapour, République de Singapour, December 5, 2006.
95. Cold atom clocks and tests of fundamental theory, National University of Singapore (NUS), Republic of Singapore, December 7, 2006:
96. Superfluidity in ultracold Fermi gases, National University of Singapore (NUS), Republic of Singapore, December 6, 2006
97. Horloges à atomes froids et mesure du temps, Journées d'exposés scientifiques destinées aux professeurs de prépa, ENSTA, Paris, October26, 2006.
98. Experiments in the BEC-BCS crossover, Trento University, Italy, May 5-9, 2006:
99. Superfluidité dans les Gaz de Fermi ultra-froids: de la condensation de Bose-Einstein de molécules aux paires de Cooper, Institut des NanoSciences, Paris, December1st, 2005.
100. Ultra cold Fermi gases from Bose-Einstein condensation of molecules to Fermi superfluidity, séminaire au L.P.T.M.S. à Orsay, November 15, 2005.
101. Superfluidity in ultra-cold Fermi gases, Weizmann Institute, Rehovot, Israël, November 3, 2005.
102. Cold Atoms Clocks, Université de Bar-Ilan, Israël, October 27, 2005.
103. La Mission PHARAO/ACES, Séminaire au CNES, Toulouse, September 26, 2005.
104. L'avancement du projet PHARAO, Séminaire du Groupe de Physique Fondamentale du C.N.E.S., Paris, June 22, 2005.
105. Ultra-cold Fermi gases: from a condensate of molecules to Cooper pairs, Séminaire at Hamburg University, Germany, May18-19, 2005.
106. Gaz de Fermi ultra froids : condensats de Bose-Einstein de molécules et paires de Cooper, Séminaire supraconductivité du LPS, Orsay, April 4, 2005
107. L'Aventure des atomes froids, Séminaire Général du Département de Physique de l'ENS, Paris, March 24, 2005.
108. Advances in cold atom clocks, L.E.N.S., Sesto Fiorentino, Italy, February 4, 2005.
109. Gaz de Fermi ultrafroids : du condensat de Bose-Einstein de molécules aux paires de Cooper, Université Paul Sabatier, Toulouse, November 12, 2004.
110. Gaz de Fermi ultrafroids ; du condensat de molécules aux paires de Cooper, Séminaire du Pole-Supraconducteur, ESPCI, Paris, September 30, 2004.

111. Ultra cold Fermi gases: from Bose-Einstein condensation of molecules to Fermi superfluidity, Laboratoire de Photonique et de Nanostructure, Marcoussis, June 16, 2004.
112. Gaz de Fermi ultra-froids : Condensat de molécules ou paires de Cooper ? Collège de France (Cours de S. Haroche), Paris, June 9, 2004.
113. Quantum Manipulation of atoms and molecules: from space-time sensors to biological tolls, Séminaire "atomes froids", Bruxelles, Belgium, May 6, 2004.
114. Horloges, fontaines atomiques et applications, Séminaire de l'Orme des Merisiers, Saclay, April 29, 2004.
115. Ultra-cold Fermi gases : from Bose-Einstein condensation of molecules to Fermi superfluidity, Symposium on "Finite Many-Body Systems" on the occasion of the conferment of the laurea honoris causa to George F. Bertsch, Milano, Italy, March 3, 2004.
116. Gaz de Fermi ultra-froids, Séminaire de l'Institut de Physique de la Matière Condensée, Grenoble, January 15, 2004.
117. Cold Atoms Clocks, Max-Planck-Institut für Quantenoptik, Garching, Germany, December 16, 2003.
118. Gaz de Fermi ultra-froids, Laboratoire de Physique des Solides, Orsay, November 20, 2003.
119. Les horloges à atomes froids et leurs applications, SPP au CEA de Saclay, October 22, 2003.
120. Gaz de Fermi ultra froids, Séminaire de prospective du Laboratoire Kastler Brossel, Paris, May 26-27, 2003.
121. La condensation de Bose-Einstein, Colloque X-ENS/UPS de Physique, Ecole Polytechnique, Palaiseau, May 15, 2003.
122. Horloges à atomes froids, Bureau des Longitudes, Paris, April 2, 2003.
123. Expériences sur les Atomes ultra-froids, Séminaire Poincaré sur la Condensation de Bose-Einstein, Paris, March 29, 2003.
124. Horloges à atomes froids : principe et applications, Ecole Polytechnique, Palaiseau, February 26, 2003.
125. Horloges à atomes froids et tests de physique fondamentale, B.I.P.M. (Bureau International des Poids et Mesures) Sèvres, December 18, 2002.
126. Les atomes froids : du laboratoire à l'espace, Lycée Montaigne (classe de seconde), Paris, December 16, 2002.
127. Cold Atom Clocks and Fundamental tests, Physics Colloquium at CALTECH (California Institute of Technology), Pasadena, USA, November 14, 2002.
128. Ultracold mixture of Bose and Fermi gases, Physics Colloquium at JILA, Boulder, USA, November 13, 2002.
129. Horloges à atomes froids et tests fondamentaux, séminaire du Laboratoire de Physique Théorique, Orsay, October 30, 2002.
130. Gaz de Bose et de Fermi à très basse température, Séminaire général du Département de Physique de l'ENS, Paris, October 17, 2002.

131. Recherche d'une dérive de alpha avec des horloges à atomes froids, Thé de la Cosmologie, Service de physique théorique du CEA, l'Orme les Merisiers, Saclay, May 24, 2002.
132. Ultra Cold Bose and Fermi gases, Colloquium of the University of Hannover, Germany, May 7, 2002.
133. Horloges à atomes froids: fonctionnement et tests fondamentaux, Colloque de l'Institut d'Optique, Orsay, May 2, 2002.
134. Cold atom clocks and fundamental tests, University of Heidelberg, Germany, December 7, 2001.
135. Ultra-cold atoms and precision measurements, University of Stuttgart, Germany, November 27, 2001.
136. L'histoire des atomes froids: du laboratoire à l'espace. Fête de la Science, Université Paris Nord, Villetaneuse, October 18, 2001.
137. Cold atom clocks in space, University of Duesseldorf, Germany, July 5, 2001.
138. Fermi degenerate atomic gases, University of Kaiserslautern, Germany, June 25, 2001.
139. Cold atom clocks, University of Gothenburg, Sweden, May 11, 2001.
140. Cold atom clocks, Annual Angstroem lecture, university of Uppsala, Sweden, May 9, 2001.
141. Progress on cold atom clocks and fermionic gases, Center for ultracold atoms, MIT-Harvard, Boston, USA, April 10, 2001.
142. Cold atom clocks, Hanan Rosenthal annual lecture, Yale University, USA, April 6, 2001.
143. Horloges à atomes froids, séminaire de la section Rhône-Alpes de la Société Française de physique, Grenoble, December 20, 2000.
144. Cold atom clocks, Danish academy of technical sciences, Denmark, November 22, 2000.
145. Horloges à atomes froids, Ecole Normale Supérieure, séminaire général, Paris, November 16, 2000.
146. ACES, University of Firenze, Italy, September 21, 2000.
147. Cold atom clocks, University of Aarhus, Denmark, March 27, 2000
148. ACES, Workshop CNES-ESA, Paris, December 20, 1999
149. Manipulation of motional quantum states of neutral atoms, University of Stockholm, Sweden, November 2, 1999
150. Manipulation of motional quantum states of neutral atoms, University of Innsbruck, Germany, May 24, 1999
151. Cold atom clocks in Space, University of Innsbruck, Germany, May 18, 1999
152. Les expériences Césium, Lithium et Hélium du groupe atomes ultra-froids, Journées du laboratoire Kastler Brossel, Paris, Mai 1999
153. ACES, Fundamental Physics Advisory Committee of ESA, April 8, 1999

154. Les horloges à atomes froids, Université de Lyon 1, March 24, 1999
155. PHARAO: une horloge à atomes froids dans l'espace, Université de Bordeaux, January 19, 1999
156. Quantum manipulation of ultra-cold atoms, University of Melbourne, Australia, October 9, 1998
157. Quantum effects in ultra-cold atoms, University of Melbourne, Australia, October 8, 1998
158. Quantum effects in ultra-cold atoms, Australian National University, Canberra, Australia, October 7, 1998
159. Cold atom Clocks, CSIRO, Sydney, Australia, October 6, 1998
160. Quantum effects in ultra-cold atoms, Yale University, USA, May 1998
161. Cold atom clocks in space, Max Planck Institut für Quanten Optik, Garching, Germany, February 4, 1998
162. Recent progress on cold atom clocks, University of Hannover, Germany, January 13, 1998
163. Cold atom clocks in space, University of Konstanz, Germany, November 21, 1997
164. Les atomes ultra-froids, Université de Versailles, November 18, 1997
165. Bloch oscillations of atoms, University of Oxford, UK, October 20, 1997
166. PHARAO, Journée sur les applications spatiales des lasers, CNES, Toulouse, October 15, 1997
167. Atomes froids, horloges et lasers, Séminaire du CERLA, Université de Lille, May 23, 1997.
168. Ultra-cold atoms in a light field: a toy model for solid-state physics, University of Goettingen colloquium, January 20, 1997
169. Bloch oscillations of atoms, University of Texas at Austin, USA, November 1996
170. PHARAO: une horloge à atomes froids dans l'espace, Journées d'étude du Groupe de recherche sur la gravitation expérimentale, Gif-sur-Yvette, October 1996
171. Atomes froids et horloges ultra-stables, Association des Anciens de la radioélectricité, June 11, 1996
172. Atomes froids et condensation de Bose-Einstein, Société Française de physique, Marseille, May 15, 1996
173. Atomes froids et mesure du temps, Ecole Polytechnique, journées X-UPS, Palaiseau, May 9, 1996
174. Bloch oscillations of cold atoms in an optical potential, University of Aarhus, Denmark, March 1996
175. Bloch oscillations of cold atoms in an optical potential, Max Planck Institut für KernPhysik, Heidelberg, Germany, January 30, 1996
176. Peut-on atteindre la condensation de Bose-Einstein par refroidissement et piégeage par laser? Université Paris-Nord, Villetaneuse, December 8, 1995.
177. Ultra-cold Atoms, Institut Laue- Langevin, Grenoble, March 9, 1995

178. Laser Cooling and Trapping in the quantum regime, Tokyo University, Japan, January 27, 1994.
179. Ultra-cold atoms, Université libre d'Amsterdam, Amsterdam, The Netherlands, November 16, 1994
180. Quelques applications du refroidissement laser, Ecole Normale Supérieure, Paris, February 1994
181. Le refroidissement laser dans le régime quantique: quelques applications. LAM Meudon, February 11, 1994.
182. Atoms in optical lattices, Max Planck Institute for quantum Optics, Garching, Germany, July 1993.
183. Laser cooling and trapping of atoms: a few applications, Heidelberg University, Germany, July 1993.
184. Atomes refroidis par laser et horloges ultra-stables. Journée d'étude sur la gravitation expérimentale, Ecole Normale Supérieure, Paris, May 24, 1993
185. La manipulation d'atomes par laser. Laboratoire de Physique nucléaire et des hautes énergies, Université Paris 6, Paris 5 mai 1993
186. Laser cooling in the microKelvin range: a few applications, IMGCC, Torino, Italy, February 17, 1993.
187. Le refroidissement laser et quelques applications. LAAP, Annecy, Mars 1993.
188. Le refroidissement Laser. Ecole Centrale des Arts et Manufactures, Paris, February 1993.
189. Atomes Froids et horloges ultra-stables, Académie des Sciences, Paris, January 1993
190. Laser manipulation of atomic beams, Université de Kaiserslautern, Germany, December 1992.
191. Laser cooling and trapping of atoms: new tools for ultra-stable clocks, PTB, Braunschweig, Germany, December 1992.
192. Laser cooling and trapping of atoms, Université de Hannover, Germany, December 1992.
193. Applications of optically trapped atoms, NIST, Washington, USA, September 1992.
194. Applications of optically trapped atoms, JILA, Université du Colorado, USA, September 1992.
195. Laser cooling in the quantum regime, Université de Pise, Italy, May 1992.
196. Le refroidissement et piégeage par laser, Université de Bordeaux, December 1991.
197. Le refroidissement laser et quelques applications, Annecy, LAAP, December 1991.
198. Laser cooling and trapping at microkelvin temperatures, University of Pisa, Italy, July 1991.
199. Laser cooling and trapping at microkelvin temperatures, University of Constance, Germany, May 1991.
200. Laser manipulation of atomic beams, Bayreuth University, Germany, February 1991.
201. Mélasse optique et fontaine atomique, Laboratoire Aimé Cotton, Orsay, March 1991.

202. Optical molasses and atomic fountains, Bonn University, December 1990.
203. Le refroidissement laser: quelles limites, Séminaire général de l'école Normale Supérieure, Paris, December 1990.
204. Laser cooling of cesium atoms below 3 microkelvins, Rowland Institute Boston, USA, July 1990.
205. Laser cooling of atoms, Göttingen University, Germany, December 1989.
206. Laser cooling of neutral atoms: good surprises and new limits, Rio de Janeiro University, Brazil, August 1989.
207. Laser cooling of neutral atoms: 1) Good surprises and new limits. 2) What are the limits?, Sao Carlos University, Brazil, August 1989.
208. Le refroidissement laser, Bureau International des Poids et Mesures, Paris, February 1989
209. Quelques applications des lasers en physique atomique, Jussieu, formation permanente, Paris, January 1989.