

# Sandro Stringari

## Books and main review papers:

### **Theory of ultracold atomic Fermi gases**

Stefano Giorgini, Lev P. Pitaevskii, Sandro Stringari, cond-mat/0706.3360, to appear in Rev. Mod. Phys. (2008)

### **Bose-Einstein Condensation**

Lev Pitaevskii and Sandro Stringari, Int. Series of Monographs on Physics (Oxford University Press) 2003

### **Theory of Bose-Einstein condensation in trapped gases**

Franco Dalfovo, Stefano Giorgini, Lev Pitaevskii and Sandro Stringari, Reviews of Modern Physics **71**, 463 (1999)

### **Sum Rules and Giant Resonances in Nuclei**

E. Lipparini and S. Stringari, Physics Reports **175**, 103 (1989)

## Main edited books

### **Bose Einstein Condensation in atomic gases**

Proceedings of the 1998 E. Fermi Summer School held in Varenna, M. Inguscio, S. Stringari and C. Weiman eds. (IOS Press, Amsterdam, 1999)

### **Bose Einstein Condensation**

Proceedings of the 1993 international workshop held in Levico, A. Griffin, D. Snoke and S. Stringari eds. (Cambridge University Press, 1995)

## Publications

### 2008

### **Collisional properties of a polarized Fermi gas with resonant interactions**

G.M. Bruun, A. Recati, C.J. Pethcick, H. Smith and S. Stringari, arXiv:0804.1885, Phys. Rev. Lett.

### **The role of interactions in spin-polarized atomic Fermi gases at unitarity**

A. Recati, C. Lobo and S. Stringari, cond-mat/0803.4419, Phys. Rev. A

### **Theory of ultracold atomic Fermi gases**

Stefano Giorgini, Lev P. Pitaevskii, Sandro Stringari, cond-mat/0706.3360, to appear in Rev. Mod. Phys. (2008)

### **Destroying superfluidity by rotating a fermi gas at unitarity,**

I. Bausmerth, A. Recati and S. Stringari, Phys. Rev. Lett. **100** 070401 (2008)

**Tkachenko modes in a superfluid Fermi gas at unitarity**

Gentaro Watanabe, Marco Cozzini, and Sandro Stringari, Phys. Rev. A **77** 021602 (2008)

**Equilibrium and dynamics of a trapped superfluid Fermi gas with unequal masses**

G. Orso, L.P. Pitaevskii, and S. Stringari, to appear in Phys. Rev. A,

**Dynamics and superfluidity of an ultracold Fermi gas**

Sandro Stringari, [cond-mat/0702526](#), in Proc. Varenna School on Ultra-cold Fermi Gases, M. Inguscio, W.Ketterle and C. Salomon eds.(2008)

**Casimir-Lifshitz force out of thermal equilibrium**

M. Antezza, L. P. Pitaevskii, S. Stringari, V.B. Svetovoy, [cond-mat/0706.1850](#), Phys. Rev. A **77**, 022901 (2008)

## 2007

**Dark solitons in a superfluid Fermi gas**

M. Antezza, F. Dalfovo, L. Pitaevskii and S. Stringari, Phys. Rev. A **76**, 043610 (2007)

**Breathing modes of a fast rotating Fermi gas**

M. Antezza, M. Cozzini and S. Stringari, Phys. Rev. A **75**, 053609 (2007)

**Measurement of the Temperature Dependence of the Casimir-Polder Force**

J.M. Obrecht, R.J. Wild, M. Antezza, L.P. Pitaevskii, S. Stringari, E.A. Cornell, Phys. Rev. Lett. **98**, 063201 (2007)

## 2006

**Normal state of a polarized Fermi gas at unitarity** C. Lobo, A. Recati, S. Giorgini, S. Stringari, Phys. Rev. Lett. **97**, 200403 (2006)

**Collective mode of homogeneous superfluid Fermi gases in the BEC-BCS crossover**

R. Combescot, M.Yu. Kagan and S. Stringari, Phys. Rev. A **74**, 042717 (2006)

**Quantum fluctuations and collective oscillations of a Bose-Einstein condensate in a 2D optical lattice**

G. Orso, C. Menotti and S. Stringari, [Phys. Rev. Lett. \*\*97\*\*, 190408 \(2006\)](#)

**Casimir-Lifshitz force out of thermal equilibrium and asymptotic non-additivity**

M. Antezza, L. P. Pitaevskii, S. Stringari, V. B. Svetovoy, Phys. Rev. Lett. **97**, 223203 (2006)

**One-dimensional description of a Bose-Einstein condensate in a rotating closed-loop waveguide**

S. Schwartz, M. Cozzini, C. Menotti, I. Carusotto, P. Bouyer, S. Stringari, [cond-mat/0606262](#), [New J. Phys. \*\*8\*\*, 162 \(2006\)](#)

**Dipole polarizability of a trapped superfluid Fermi gas**

A. Recati, I. Carusotto, C. Lobo and S. Stringari, Phys. Rev. Lett. **97**, 190403 (2006)

**Pair correlations of an expanding superfluid Fermi gas**

C. Lobo, I. Carusotto, S. Giorgini, A. Recati, S. Stringari, Phys. Rev. Lett. **97**, 100405 (2006)

**Molecular signatures in the structure factor of an interacting Fermi gas**

R. Combescot, S. Giorgini, S. Stringari, cond-mat/0512048, Europhys. Lett. **75**, 695 (2006)

**Seeing zeros of random polynomials: quantized vortices in the ideal Bose gas**

Y. Castin, Z. Hadzibabic, S. Stock, J. Dalibard, and S. Stringari, Phys. Rev. Lett. **96**, 040405 (2006)

**Bose-Einstein condensates**

F. Dalfovo, L.P. Pitaevskii and S. Stringari, (text), Encyclopedia of Mathematical Physics (Elsevier, 2006), Vol.1, p.312

**Vortex signatures in annular Bose-Einstein condensates**

M. Cozzini, B. Jackson, and S. Stringari, Phys. Rev. A **73**, 013603 (2006)

**Vortex lattices in Bose-Einstein condensates: from the Thomas-Fermi to the lowest Landau level regime**

M. Cozzini, S. Stringari, C. Tozzo, Phys. Rev. A **73**, 023615 (2006)

## 2005

**New asymptotic behaviour of the surface-atom force out of thermal equilibrium**

Mauro Antezza, Lev P. Pitaevskii, Sandro Stringari, Phys. Rev. Lett. **95**, 113202 (2005)

**Bose-Einstein condensation in ultracold atomic gases,**

S. Stringari, Phys. Lett. A **347**, 150 (2005), Einstein Special Issue - Edited by P. Holland

**Equation of state and collective frequencies of a trapped Fermi gas along the BEC-unitarity crossover**

G.E. Astrakharchik, R. Combescot, X. Leyronas and S. Stringari, Phys. Rev. Lett. **95**, 030404 (2005)

**Sensitive measurement of forces at micron scale using Bloch oscillations**

I. Carusotto, L. Pitaevskii, S. Stringari, G. Modugno, and M. Inguscio, Phys. Rev. Lett. **95**, 093202 (2005)

**Formation of molecules near a Feshbach resonance in a 1D optical lattice**

G.Orso, L.P. Pitaevskii, S. Stringari and M. Wouters, Phys. Rev. Lett. **95**, 060402 (2005)

**Oscillations of a Bose-Einstein condensate rotating in a harmonic plus quartic trap**

M. Cozzini, A. L. Fetter, B. Jackson, and S. Stringari, Phys. Rev. Lett. **94**, 100402 (2005)

**Sound propagation and oscillations of a superfluid Fermi gas in the presence of a 1D optical lattice**

L.P. Pitaevskii, S. Stringari, G. Orso, Phys. Rev. A **71**, 053602 (2005)

### **Rapid rotation of a Bose-Einstein condensate in a harmonic plus quartic trap**

Alexander L. Fetter, B. Jackson, and S. Stringari, Phys. Rev. A **71**, 013605 (2005)

## **2004**

### **Sum rules and the collective oscillations of a quantum gas**

S. Stringari, J. Phys. IV **116**, 47 (2004)

### **Effect of the Casimir-Polder force on the collective oscillations of a trapped Bose-Einstein condensate**

Mauro Antezza, Lev P. Pitaevskii, Sandro Stringari, Phys. Rev. A **70**, 053619 (2004)

### **Propagation of sound in a Bose Einstein condensate in an optical lattice**

C. Menotti, M. Kraemer, A. Smerzi, L. Pitaevskii, and S. Stringari, Phys. Rev. A **70**, 023609 (2004)

### **Collisions and expansion of an ultracold dilute Fermi gas**

B. Jackson, P. Pedri, and S. Stringari, Europhys. Lett. **67**, 524 (2004)

### **Umklapp collisions and center of mass oscillation of a trapped Fermi gas**

G. Orso, L.P. Pitaevskii and S. Stringari, Phys. Rev. Lett. **93**, 020404 (2004)

### **Insulating Behavior of a Trapped Ideal Fermi Gas**

L. Pezzè, L. Pitaevskii, A. Smerzi, S. Stringari, G. Modugno, E. DeMirandes, F. Ferlaino, H. Ott, G. Roati, M. Inguscio, Phys. Rev. Lett. **93**, 120401 (2004)

### **Tkachenko oscillations and the compressibility of a rotating Bose gas**

M. Cozzini, L. P. Pitaevskii, S. Stringari, Phys. Rev. Lett. **92**, 220401 (2004)

### **Momentum distribution of a trapped Fermi gas with large scattering length**

L. Viverit, S. Giorgini, L. P. Pitaevskii and S. Stringari, Phys. Rev. A **69**, 013607 (2004)

### **Collective oscillations of a trapped Fermi gas near a Feshbach resonance**

S. Stringari, Europhys. Lett. **65**, 749 (2004)

## **2003**

### **Phase fluctuations and coherence of an almost ideal condensate**

L.P. Pitaevskii and S. Stringari, Annales Henri Poincaré **4**, S793 Suppl.2 (2003)

### **Dynamics of a classical gas including dissipative and mean field effects**

P. Pedri, D. Guéry-Odelin and S. Stringari, Phys. Rev. A **68**, 043608 (2003)

### **Kelvin Modes of a fast rotating Bose-Einstein Condensate**

F. Chevy and S. Stringari, Phys. Rev. A **68**, 053601 (2003)

### **Bose-Einstein condensates in 1D optical lattices: compressibility, bloch bands and elementary excitations**

M. Kraemer, C. Menotti, L. Pitaevskii and S. Stringari, Eur. Phys. J. D **27**, 247 (2003)

**Fermi Gases in Slowly Rotating Traps: Superfluid vs Collisional Hydrodynamics**

Marco Cozzini, Sandro Stringari, Phys. Rev. Lett. **91**, 070401 (2003)

**Violation of self-similarity in the expansion of a 1D Bose gas**

P. Pedri, L. Santos, P. Ohberg and S. Stringari, Phys. Rev. A **68**, 043601 (2003)

**Dynamic structure factor of a Bose Einstein condensate in a 1D optical lattice**

C. Menotti, M. Kraemer, L. Pitaevskii and S. Stringari, Phys. Rev. A **67**, 053609 (2003)

**Macroscopic dynamics of a Bose-Einstein condensate containing a vortex lattice**

Marco Cozzini and Sandro Stringari, Phys. Rev. A **67**, 041602(R) (2003)

**Scissors mode of a rotating Bose-Einstein condensate**

M. Cozzini, S. Stringari, V. Bretin, P. Rosenbusch, and J. Dalibard, Phys. Rev. A **67**, 021602(R) (2003)

**2002**

**The Quest for Superfluidity in Fermi Gases**

Lev Pitaevskii and Sandro Stringari, *Science* **298**, 2144 (2002) (comment)

**Expansion of an interacting Fermi gas**

C. Menotti, P. Pedri and S. Stringari, Phys. Rev. Lett. **89**, 250402 (2002)

**Macroscopic dynamics of a trapped Bose-Einstein condensate in the presence of 1D and 2D optical lattices**

M. Kraemer, L. Pitaevskii, and S. Stringari, Phys. Rev. Lett. **88**, 180404 (2002)

**Collective oscillations of a 1D trapped Bose gas**

Chiara Menotti and Sandro Stringari, Phys. Rev. A **66**, 043610 (2002)

**Finite size effects on the collective oscillations of a trapped Bose gas**

F. Zambelli and S. Stringari, *Laser Physics* **12**, 240 (2002)

**Vortex nucleation and quadrupole deformation of a rotating Bose-Einstein condensate**

M. Kraemer, L. Pitaevskii, S. Stringari, F. Zambelli, *Laser Physics* **12**, 113 (2002)

**Consequence of superfluidity on the expansion of a rotating Bose-Einstein condensate**

M. Edwards, C. W. Clark, P. Pedri, L. Pitaevskii, and S. Stringari, Phys. Rev. Lett. **88**, 070405 (2002)

**2001**

**Helium nanodroplets and trapped Bose-Einstein condensates as prototypes of finite quantum fluids**

F. Dalfovo and S. Stringari, *J. Chem. Phys.* **115**, 10078 (2001)

### **Expansion of a Coherent Array of Bose-Einstein Condensates**

P. Pedri, L. Pitaevskii, S. Stringari, C. Fort, S. Burger, F. S. Cataliotti, P. Maddaloni, F. Minardi, and M. Inguscio, Phys. Rev. Lett. **87**, 220401 (2001)

### **Thermal vs. quantum decoherence in double well trapped Bose-Einstein condensates**

L. Pitaevskii and S. Stringari, Phys. Rev. Lett. **87**, 180402 (2001)

### **Momentum transferred to a trapped Bose-Einstein condensate by stimulated light scattering**

A. Brunello, F. Dalfovo, L. Pitaevskii, S. Stringari, and F. Zambelli, Phys. Rev. A **64**, 063614 (2001)

### **A superfluid gyroscope with cold atomic gases**

S. Stringari, Phys. Rev. Lett. **86**, 4725 (2001)

### **Bose-Einstein condensation and superfluidity in trapped atomic gases**

S. Stringari, Lecture notes for the Cargèse summer School, C.R. Acad. Sci. Paris, t.2, Série IV, 381 (2001)

### **Collective excitations of a "gravitationally" self-bound Bose gas**

S. Giovanazzi, G. Kurizki, I.E. Mazets, and S. Stringari, Europhys. Lett. **56**, 1 (2001)

### **Shape deformations and angular momentum transfer in trapped Bose-Einstein condensates**

F. Dalfovo and S. Stringari, Phys. Rev. A **63**, 011601(R) (2001)

### **Overcritical Rotation of a Trapped Bose-Einstein Condensate**

A. Recati, F. Zambelli, and S. Stringari, Phys. Rev. Lett **86**, 377 (2001)

### **Adiabatic compression of a trapped Fermi gas**

L. Viverit, S. Giorgini, L.P. Pitaevskii and S. Stringari, Phys. Rev. A **63**, 033603 (2001)

### **Moment of Inertia and Quadrupole Response Function of a Trapped Superfluid**

F. Zambelli and S. Stringari, Phys. Rev. A **63**, 033602 (2001)

## **2000**

### **How to measure the Bogoliubov quasiparticle amplitudes in a trapped condensate**

A. Brunello, F. Dalfovo, L. Pitaevskii, and S. Stringari, Phys. Rev. Lett. **85**, 4422 (2000)

### **Dynamic structure factor and momentum distribution of a trapped Bose gas**

F. Zambelli, L.P. Pitaevskii, D.M. Stamper-Kurn, and S. Stringari, Phys. Rev. A **61**, 063608 (2000)

### **Kinetic energy of a trapped Fermi gas interacting with a Bose-Einstein condensate**

L. Vichi, M. Amoruso, A. Minguzzi, S. Stringari, M. P. Tosi, Eur. Phys. J. D **11**, 335 (2000)

### **Romagnosi and the discovery of electromagnetism**

S. Stringari and R.R. Wilson, Rend. Fis. Acc. Lincei **9**, 115 (2000)

## **1999**

**Scissors mode and superfluidity of a trapped Bose-Einstein condensed gas**

D. Guery-Odelin and S. Stringari, Phys. Rev. Lett. **83**, 4452 (1999)

**Interference of Bose-Einstein condensates in momentum space**

L. Pitaevskii and S. Stringari, Phys. Rev. Lett. **83**, 4237 (1999)

**Collective oscillations of an interacting trapped Fermi gas**

L. Vichi and S. Stringari, Phys. Rev. A **60**, 4734 (1999)

**Collective oscillations of a classical gas confined in harmonic traps**

D. Guery-Odelin, F. Zambelli, J. Dalibard, and S. Stringari, Phys. Rev. A **60**, 4851 (1999)

**Theory of Bose-Einstein condensation in trapped gases**

F. Dalfovo, S. Giorgini, L.P. Pitaevskii and S. Stringari, Reviews of Modern Physics **71**, 463 (1999)

**Phase diagram of quantized vortices in a trapped Bose-Einstein condensed gas**

S. Stringari, Phys. Rev. Lett. **82**, 4373 (1999)

**1998**

**Elementary excitations in trapped Bose gases beyond mean field approximation**

L. Pitaevskii and S. Stringari, Phys. Rev. Lett. **81**, 4541 (1998)

**Temperature-dependent density profiles of trapped boson-fermion mixtures**

M. Amoruso, A. Minguzzi, S. Stringari, M. P. Tosi, L. Vichi, European Journal of Physics D **4**, 261 (1998)

**Quantum degeneracy and interaction effects in spin-polarized Fermi-Bose mixtures**

L. Vichi, M. Inguscio, S. Stringari, G. M. Tino, J. Phys. B: At. Mol. Opt. Phys. **31**, L899 (1998)

**Quantized vortices and collective oscillations of a trapped Bose condensed gas**

F. Zambelli and S. Stringari  
Phys. Rev. Lett. **81**, 1754 (1998)

**Dynamical Response of a Bose-Einstein Condensate to a Discontinuous Change in Internal State**

M.R. Matthews, D.S. Hall, D.S. Jin, J.R. Ensher, C.E. Wieman, E.A. Cornell, F. Dalfovo, C. Minniti, and S. Stringari, Phys. Rev. Lett. **81**, 243 (1998)

**Dynamics of Bose condensed gases in highly deformed traps**

S. Stringari, Phys. Rev. A **58**, 2385 (1998)

**Anomalous fluctuations of the condensate in interacting Bose gases**

S. Giorgini, L.P. Pitaevskii and S. Stringari, Phys. Rev. Lett. **80**, 5040 (1998)

**1997**

**Landau damping in dilute Bose gases**

L.P. Pitaevskii and S. Stringari, Phys. Lett. A **235**, 398 (1997)

### **Collective and single-particle excitations of a trapped Bose gas**

F. Dalfovo, S. Giorgini, M. Guilleumas, L.Pitaevskii and S. Stringari, Phys. Rev. A **56**, 3840 (1997)

### **Thermodynamics of a trapped Bose-condensed gas**

S. Giorgini, L.P. Pitaevskii and S. Stringari, J. Low Temp. Phys. **109**, 309 (1997)

### **Bose Einstein Condensation**

C. Townsend, W. Ketterle and S. Stringari, Physics World, March 1997, p.29, (italian transl. in: Le Scienze, Luglio 1997)

### **Nonlinear Dynamics of a Bose Condensed Gas**

F. Dalfovo, C. Minniti, S. Stringari, and L. Pitaevskii, Phys. Lett. A **227**, 259 (1997)

### **Scaling and Thermodynamics of a Trapped Bose Condensed Gas**

S. Giorgini, L.P. Pitaevskii and S. Stringari, Phys. Rev. Lett. **78**, 3987 (1997)

### **Hydrodynamic modes in a trapped Bose gas above the Bose-Einstein transition**

A. Griffin, Wen-Chin Wu (University of Toronto), and S. Stringari, Phys. Rev. Lett. **78**, 1838 (1997)

## 1996

### **Condensate fraction and critical temperature of a trapped interacting Bose gas**

S. Giorgini, L. Pitaevskii, and S. Stringari, Phys. Rev. A **54**, 4633 (1996)

### **The condensate wave function of a trapped atomic gas**

F. Dalfovo, L. Pitaevskii and S. Stringari, J. Res. Natl. Inst. Stand. Technol. **101**, 537 (1996)

### **Order Parameter at the Boundary of a Trapped Bose Gas**

F. Dalfovo, L. Pitaevskii and S. Stringari, Phys. Rev. A **54**, 4213 (1996)

### **Bosons in a magnetic trap: the condensate wave function**

F. Dalfovo, L. Pitaevskii and S. Stringari, Contributed paper for the EPS Conference, Stresa 1996, Physica Scripta T66, 234 (1996)

### **Bosons in anisotropic traps: ground state and vortices**

F. Dalfovo and S. Stringari, Phys. Rev. A **53**, 2477 (1996)

### **Collective excitations of a trapped Bose-condensed gas**

S. Stringari, Phys. Rev. Lett. **77**, 2360 (1996)

### **Moment of Inertia and Superfluidity of a Trapped Bose Gas**

S. Stringari, Phys. Rev. Lett. **76**, 1405 (1996)

### **Surface Region of Superfluid Helium as an Inhomogeneous Bose-Condensed Gas**

A. Griffin and S. Stringari, Phys. Rev. Lett. **76**, 259 (1996)

## 1995

**Rotons and Quantum Evaporation from Superfluid He4**

F. Dalfovo, A. Fracchetti, A. Lastri, L. Pitaevskii and S. Stringari,  
Phys. Rev. Lett. **75**, 2510 (1995)

**Density Functional Calculations for He4 Droplets**

M. Casas, F. Dalfovo, A. Lastri, Ll. Serra and S. Stringari,  
Z. Phys. D, **35**, 67 (1995)

**Dispersion Law of Ripplons in Superfluid He4**

A. Lastri, F. Dalfovo, L. Pitaevskii and S. Stringari,  
J. of Low Temp. Phys. **98**, 227 (1995)

**Time Dependent Density Functional Theory in Quantum Liquids**

S. Stringari, Condensed Matter Theories vol.10 (Eds. M. Casas, M.De Llano, J. Navarro and A. Polls, Nova Science Publishers, NY 1995)

**Upper Bounds on Plasmon Dispersion in the Degenerate Boson Plasma**

M.L. Chiofalo, S. Conti, Stringari and M.Tosi  
J.Phys. Condens. Matter **7**, L85 (1995)

**Structural and Dynamical Properties of Superfluid Helium: a Density Functional Approach**

F. Dalfovo, A. Lastri, L. Pitaevskii, S.Stringari and J. Treiner,  
Phys. Rev. B **52**, 1193 (1995)

**Bounds for the Phonon-Roton Dispersion in Superfluid He4**

J. Boronat, J. Casulleras, F. Dalfovo, S. Moroni and S. Stringari,  
Phys. Rev. B **52**, 1236 (1995)

**Sum Rules and Bose-Einstein Condensation**

S.Stringari in „Bose-Einstein Condensation“, A. Griffin, D. Snoke and S. Stringari eds.  
(Cambridge University Press, 1995)

**1994****Spin Excitations and Sum Rules in the Heisenberg Antiferromagnet**

Stringari, Phys. Rev. B **49**, 6710 (1994)

**Density Dependence of the Plasmon Dispersion in Alkali Metals**

E. Lipparini, S. Stringari and K. Takayanagi, J. Phys. Condens. Matter **6**, 2025 (1994)

**Dispersion Law of Edge Waves in the Quantum Hall Effect**

S. Giovanazzi, L. Pitaevskii and S. Stringari, Phys. Rev. Lett. **72**, 3230 (1994)

**Effects of Disorder in a Dilute Bose Gas**

S. Giorgini, L. Pitaevskii and S. Stringari, Phys. Rev. B **49**, 12938 (1994)

**Variational Calculation for He3 Impurities on He4 Droplets**

A. Belic, F. Dalfovo, S. Fantoni and S. Stringari, Phys. Rev. B **49**, 15253 (1994)

## 1993

**Uncertainty Principle and Off-Diagonal Long Range Order in the Fractional Quantum Hall Effect** L. Pitaevskii and S. Stringari Phys. Rev. B **47**, 10915 (1993)

## 1992

**Sum Rules for Density and Particle Excitations in Bose Superfluids**  
S. Stringari, Phys. Rev. B **46**, 2974 (1992)

**Bose-Einstein Condensation, Phase Fluctuations and 2-Phonon Effects in Superfluid He4**  
S. Giorgini, L. Pitaevskii and S. Stringari, Phys. Rev. B **46**, 6374 (1992)

**Ripplon-Roton Hybridization in Superfluid He4**  
L. Pitaevskii and S. Stringari, Phys. Rev. B. **46**, 13133 (1992)

**Static Response Function of Superfluid He4**  
F. Dalfovo and S. Stringari, J. Low Temp. Phys. **89**, 325 (1992)

**Temperature Dependence of the Condensate Fraction of Superfluid He4**  
S. Giorgini, L. Pitaevskii and S. Stringari, J. Low Temp. Phys. **89**, 449 (1992)

**Static Response Function for Longitudinal and Transverse Excitations in Superfluid He4**  
F. Dalfovo and S. Stringari, Phys. Rev. B **46**, 13991 (1992)

## 1991

**Collective Excitations in Deformed Alkali Metal Clusters**  
E. Lipparini and S. Stringari, Z. Phys. D **18**, 193 (1991);

**Evaporation of Atoms from Metal Clusters**  
G.F. Bertsch, N. Oberhofer and S. Stringari, Z. Phys. D **20**, 123 (1991)

**Quantum Statistical Effects in Helium Clusters**  
S. Stringari, Z. Phys. D **20**, 219 (1991)

**Freezing of Liquid Helium at Zero Temperature: a Density Functional Approach**  
F. Dalfovo, J. Dupont-Roc, N. Pavloff, S. Stringari and J. Treiner, Europhys. Lett. **16**, 205 (1991)

**Long Range Order in the Half-Diagonal 2-Body Density Matrix of a Bose Superfluid**  
S. Stringari, J. of Low Temp. Phys. **84**, 279 (1991)

**Uncertainty Principle, Quantum Fluctuations and Broken Symmetries**  
L. Pitaevskii and S. Stringari, J. of Low Temp. Phys. **85**, 377 (1991)

## 1990

### **Clusters of Quantum Liquids**

S.Stringari,

Lecture notes CVII Course Int. School "E. Fermi", Varenna, 1988 (North-Holland, 1990) p.199

### **Elementary Excitations of He4 Clusters**

M. Casas and S. Stringari, J. Low. Temp. Phys. **79** (1990) 135

### **Density of States and Evaporation Rate of Helium Clusters**

D.M. Brink and S.Stringari, Z. Phys.D **15**, (1990) 257

### **Momentum Distribution in Heavy Nuclei**

S.Stringari, M. Traini and O. Bohigas, Nucl. Phys. A **516** (1990) 33

### **Superfluid Effects in Rotating Helium Clusters**

L. Pitaevskii and S.Stringari, Z. Phys. D **16** (1990) 299

### **Asymmetry in Inclusive Polarized Electron Scattering from Polarized Nuclei: a Sum Rule Approach**

W. Leidemann, E. Lipparini and S. Stringari, Phys. Rev. C **42** (1990) 416

### **Sum Rules and the Spectral Function of Superfluid He4**

S. Giorgini and S. Stringari, Physica B **165- 166**, (1990) 511;

## 1989

### **Sum Rules and Giant Resonances in Nuclei**

E. Lipparini and S.Stringari, Physics Reports **175**, (1989) 103;

### **Sum Rules and Spin Multipair Excitations in Liquid He3**

F. Dalfovo and S.Stringari, Phys. Rev. Lett. **63** (1989) 532;

### **Magnetic Susceptibility and Collisionless Spin Waves in Fermi Liquids**

S.Stringari and F. Dalfovo, J. Low Temp. Phys. **78**, (1989) 1;

### **Electron Scattering Sum Rules in Polarized Nuclei**

E. Lipparini and S.Stringari, Phys. Rev. C **40**, (1989) R19

### **Surface Tension of Liquid $^3\text{He}$ at Low Temperature**

F. Dalfovo and S.Stringari, J. Low Temp. Phys. **77**, (1989) 307

### **Rotational Magnetic State in Deformed Metal Clusters**

E. Lipparini and S.Stringari, Phys. Rev. Lett. **63**, (1989) 570;

## 1988

**Effects of Temperature and Magnetization on the Maximum Solubility of He3 in He4**

F. Dalfovo and S.Stringari, *J. Low Temp.* **71**, (1988) 311;

**Surface State of He3 on Liquid He4**

F. Dalfovo and S.S., *Physica Scripta* **38** (1988) 204;

**Surface and Temperature Effects in Isovector Giant Resonances**

E. Lipparini and S.Stringari, *Nucl. Phys. A* **482**, (1988) 205c;

**Isospin Effects and Dynamic Correlations in Inclusive Muon Capture**

E. Lipparini, S.stringari and R. Leonardi, *Phys. Lett.* **212** (1988) 6

**1987**

**Core Polarization Effects in the Hartree-Fock-Random-Phase Approximation Schemes**

E. Lipparini and S.Stringari, *Ann. Phys.* **173**, (1987) 411;

**Scaling and Deep Inelastic Neutron Scattering from Quantum Liquids and Solids**

S. Stringari, *Phys. Rev. B* **35** (1987) 2038;

**Ripplon Dispersion and Finite Range Effects in the Quantum Liquid Surface**

E. Krotscheck, S.Stringari and J. Treiner, *Phys. Rev. B* **35**, (1987) 4754;

**Peculiarity of Charge Exchange Quadrupole Excitation in Nuclei**

R. Leonardi, E. Lipparini and S.Stringari, *Phys. Rev. C* **35** (1987) 1439;

**Lifetimes of Monopole Resonances in Time-dependent Hartree Fock Theory**

Ph. Chomaz, , Nguyen Van Giai and S.Stringari, *Phys. Lett. B* **189**, (1987) 375;

**Analogies between He3 Clusters and Atomic Nuclei**

S. Stringari *Annales UMCS (Lublin, Poland) Sect. AAA*, vol. XLI/XLII (1987)

**Liquid Gas Phase Transition in He3**

M. Barranco, A. Polls and S.Stringari, *J. Physique* **48**, (1987) 911;

**Spin Polarized He: Liquid Gas Equilibrium**

S.Stringari, M. Barranco, A. Polls, P.J. Nacher and F. Laloe, *J. Physique* **48** (1987) 1337;

**Isovector Monopole Excitation Energies,**

J.D. Bowman, E. Lipparini and S.Stringari, *Phys. Lett. B* **197**, (1987) 497

**Systematics of Liquid Helium Clusters**

S.Stringari and J. Treiner, *J. Chem. Phys.* **87**, (1987) 5021

**Surface Properties of Liquid He3 and He4: a Density Functional Approach**

S.Stringari and J. Treiner, *Phys. Rev. B* **36** (1987) 8369;

**Charge Exchange Excitations in  $N=Z$  Nuclei: Vlasov and Hydrodynamic Equations**

E. Lipparini and S.Stringari, *J. Physique C* **2** (1987) 27;

### **Hydrodynamic Model in Isospin Channels**

E. Lipparini and S.Stringari, Phys. Rev. Lett. **59**, (1987) 982;

### **Macroscopic Models for Charge Exchange Reactions in $N \neq Z$ Nuclei**

S. Stringari and E. Lipparini, Nucl. Phys. A **473**, (1987) 61

### **Phase Transitions in Partially Spin Polarized He3**

M. Barranco, A. Polls, S.Stringari., P.J. Nacher and F. Laloe, J. Physique C **2** (1987) 101;

### **Analogies between Nuclear Systems and Liquid He3**

S. Stringari, J. de Physique C **2** (1987) 93

### **The Incompressibility of Hot, Neutron Rich Nuclear Matter**

X. Vinas, M. Barranco, J. Treiner and S.Stringari, Astron Astrophys. **182** (1987) L34

### **Coupling between the Isoscalar and Isovector Monopole Resonance in $N \neq Z$ Nuclei**

E. Lipparini and S.Stringari, Phys. Rev. C **36** (1987) 2697

## **1986**

### **Macroscopic Models for Sound Propagation in Normal Liquid He3**

F. Dalfovo and S.Stringari, Nuovo Cimento D **6**, (1986) 445;

### **Surface and Elastic Effects in Isovector Giant Resonances**

S.Stringari and E. Lipparini, Phys. Rev. C **34**, (1986) 370;

### **On the Equivalence between the Landau-Migdal and the Bohr-Mottelson interactions**

E. Lipparini and S.Stringari, Nucl. Phys. A **455** (1986) 294;

### **Density Functional Approach to the Magnetic Properties of liquid He3**

S. Stringari, Eurphys. Lett. **2** (1986) 639;

### **Phase Space Description of Collective Nuclear Vibrations with the Vlasov Equation Plus Quantum Corrections**

K. Hohl, P. Schuck and S.Stringari Nucl. Phys. A **459** (1986) 265

## **1985**

### **Fluid Dynamical Models from the Boltzmann Equations**

S. Stringari, Nuovo Cimento A **87** (1985) 231;

### **Liquid He3 Droplets: Energy Systematics and Magic Numbers**

S. Stringari Phys. Lett. A **107**, (1985) 40;

### **Variational Approach to Magnetic Dipole Core Polarization: Application to Moments and Transitions**

E. Lipparini, S.Stringari and A. Richter, Phys. Lett. B **160** (1985) 221;

### **Effect of Triaxial Deformations on the Splitting of the M1 Isovector Rotational State**

N. Lo Iudice, E. Lipparini, S.Stringari, F. Palumbo and A. Richter, Phys. Lett. B **161**, (1985) 18;

### **Hartree-Fock Calculations for He<sup>3</sup>-He<sup>4</sup> mixtures at zero Temperature**

F. Dalfovo and S.Stringari, Phys. Lett. A **112** (1985) 171;

## **1984**

### **Study of Collective Excitations using the Sum Rule Approach**

S.Stringari, Lecture Notes, Int. School of Intermediate Energy Nuclear Physics, S. Miniato 1983, R. Bergere, S. Costa and C. Schaerf eds. (World Scientific) 1984 p. 99;

### **Sum Rules for Normal Fermi Liquids**

S.Stringari, J. Low Temp. Phys. **57** (1984) 301;

### **Models and Approximations for the Momentum Distribution in Nuclear Matter**

M.F. Flynn, J.W. Clark, R.M. Panoff, O. Bohigas and S.Stringari, Nucl. Phys. A **427** (1984) 253;

### **Long Range Dipole Correlations and Electron Scattering Sum Rules**

S. Stringari, Phys. Rev. C **29** (1984) 1482;

### **Sum Rule Approach to Nuclear Collective Motion**

S.Stringari, Lecture Notes, 1984 Winter College in Nuclear Physics, Trieste, K. Dietrich, M. Di Toro and H.J. Mang eds., World Scientific, Singapore, 1985;

### **Macroscopic Models of Isovector M1 Rotational States,**

S. Stringari J. de Physique C **6,45** (1984) 265;

### **Effective Interactions and Hartree-Fock calculations in liquid He<sup>3</sup>**

S. Stringari, Phys. Lett. A **106** (1984) 267;

## **1983**

### **Temperature Dependence of Nuclear Surface Properties**

X. Campi and S.Stringari, Z. Phys. A **309** (1983) 239

### **Symmetry Energy and Isovector Collective Motions**

S. Stringari, Progr. Theor. Phys. Suppl. **74-75** (1983) 367;

### **Fluid-Dynamical Description of Nuclear Collective Excitations**

S. Stringari, Ann. Phys. **151** (1983) 35;

### **Isovector M1 Rotational States in Deformed Nuclei**

E. Lipparini and S. Stringari, Phys. Lett. B **130** (1983) 139;

## **1982**

### **Microscopic Model for the Isospin Fragmentation of the Dipole Mode**

R. Leonardi, E. Lipparini and S.Stringari, Phys. Rev. C **26** (1982) 2636;

### **Effects of Short Range Correlations on one-and two body Properties of Nuclei**

M. Dal Ri, S.Stringari and O. Bohigas, Nucl. Phys. A **376** (1982) 81;

### **Sum Rules for Compression Modes**

S. Stringari, Phys. Lett. B **108** (1982) 232;

### **Volume and Surface Symmetry Coefficients from Photo Absorption Cross Sections**

E. Lipparini and S. Stringari, Phys. Lett. B **112** (1982) 421;

### **Hydrodynamical Approach to the Difference between Neutron and Proton Radii**

S. Stringari and E. Lipparini, Phys. Lett. B **117** (1982) 141;

### **Isoscalar Transition Density for the low-lying Dipole States**

G. Orlandini, S. Stringari and M. Traini, Phys. Lett. B **119** (1982) 21;

## **1981**

### **Surface Symmetry Energy and the Dipole Giant Resonance**

E. Lipparini and S. Stringari, Phys. Lett. B **99** (1981) 183;

### **Symmetry Energy and the Dipole Excitation Strength**

S. Stringari and E. Lipparini, Varenna International School of Physics **79** (1981) 527;

### **Effects of Velocity Dependent Potentials in the low-lying Octupole Vibrations**

S. Stringari, Phys. Lett. B **103** (1981) 5;

### **A Schematic Model for Collective States Including non Locality Effects (I). Isoscalar Quadrupole and Rotational Modes**

E. Lipparini and S. Stringari, Nucl. Phys. A **371** (1981) 430;

### **A Schematic Model for Collective States Including non Locality Effects (II). Isovector Modes**

S. Stringari and E. Lipparini, Nucl. Phys. A **371** (1981) 445;

## **1980**

### **Variational Approach to the Moment of Inertia**

S. Stringari and E. Lipparini, Phys. Rev. C **22** (1980) 884;

### **Surface Properties of Semi-Infinite Fermi Systems**

X. Campi and S. Stringari, Nucl. Phys. A **337** (1980) 313;

### **Effects of Short Range Correlations on Nuclear Mass and Momentum Distributions**

O. Bohigas and S. Stringari, Phys. Lett. B **95** (1980) 9;

### **Inclusive Radiative Pion and Muon Capture in N=Z Nuclei**

P. Christillin, E. Lipparini, S. Stringari and M. Traini, Phys. Lett. B **95** (1980) 344;

## **1979**

### **Magnetic Susceptibility and M1 Transitions in Pb208**

M. Traini, E. Lipparini, G. Orlandini and S. Stringari, Nucl. Phys. A **318** (1979) 162;

### **Spin Oscillations and the M1 Magnetic Form Factor**

E. Lipparini and S. Stringari, Phys. Lett. B **84** (1979) 1;

### **Velocity Fields and Transition Densities in Nuclear Collective Modes**

S. Stringari, Nucl. Phys. A **325** (1979) 199;

### **Damping of Monopole Vibrations in Time Dependent Hartree Fock Theory**

S. Stringari and D. Vautherin, Phys. Lett. B **88** (1979) 1

## **1978**

### **Constraints on Effective Interactions imposed by Antisymmetry and Charge Independence**

S.Stringari and D.M. Brink, Nucl. Phys. A **304** (1978) 307;

### **Surface Thickness Effects and Splitting of Multipole Excitations in Deformed Nuclei**

P. Christillin, E. Lipparini and S.Stringari, Nucl. Phys. A **308** (1978) 51;

### **Time Dependent Hartree-Fock Polarizability and Random Phase Approximation Sum Rules.I. Theory**

S.Stringari, E. Lipparini, G. Orlandini, M. Traini and R. Leonardi, Nucl. Phys. A **309** (1978) 177;

### **Time Dependent Hartree-Fock Polarizability and Random Phase Approximation Sum Rules.II. Application to Isovector Monopole, Quadrupole and Dipole Excitations**

S. Stringari, E. Lipparini, G. Orlandini, M. Traini and R. Leonardi, Nucl. Phys. A **309** (1978) 189

## **1977**

### **Macroscopic Equations of Motion and Dynamic Polarizability in the Study of Nuclear Collective Excitations**

S. Stringari, Nucl. Phys. A **279** (1977) 454;

### **Skyrme's Interaction and Corrections to Gyromagnetic Factors**

E. Lipparini, S.Stringari and M. Traini, Lett. Nuovo Cimento **19** (1977) 171;

### **A Variational Approach to Magnetic Moments**

E. Lipparini, S.Stringari and M. Traini, Nucl. Phys. A **291** (1977) 157;

### **Magnetic Moments and Skyrme's Interaction**

E. Lipparini, S.Stringari and M. Traini, Nucl. Phys. A **293** (1977) 29;

### **A Microscopic Evaluation of the Nuclear Dipole Polarizability**

E. Lipparini, G. Orlandini, S.Stringari and M. Traini, Nuovo Cimento A **42** (1977) 296

## **1976**

### **M1 Strength Distribution in Nuclei**

E. Lipparini, S.Stringari, M. Traini and R. Leopardi, Nuovo Cimento A **31** (1976) 207;

### **Sum Rule Approach to Radiative Pion Capture in Nuclei**

E. Lipparini, S.Stringari and M. Traini, Nuovo Cimento A **34** (1976) 48;

**Spin Stability and Magnetic Polarizability with Skyrme's Interaction**  
S.Stringari, R. Leonardi and D.M. Brink, Nucl. Phys. A **269** (1976) 87