Remembering Adelchi Fabrocini (1951-2006)



- Born on August 27, 1951 in Sepino (Campobasso)
- June 1977: *Laurea* in Physics at the University of Pisa with the degree *summa cum laude*. Thesis title: "<u>Variational calculations of bosonic systems with an infinite number of particles</u>"
- From 1977: associated to the INFN-Pisa branch
- From September 1978: "Assistente incaricato" in the Engineering Faculty of the University of Pisa
- From October 1981: "Ricercatore confermato" in the same faculty
- **1985**: "Angelo della Riccia Foundation" award for young research physics theoreticians

From June 1985 until July 1987: Post Doctoral Research Associate in the University of Urbana-Champaign (IL) In **July-August 1989**: Visiting Professor there







- November 1992: Associate Professor of Nuclear Physics in the Faculty of Science of the University of Pisa
- **1990-1993**: local coordinator for the MURST national project "Fisica Teorica del Nucleo e di Sistemi a più Corpi"
- **1994**: Italian coordinator for a MURST program of collaboration between Pisa and Barcelona Universities
- December 1995 February 1996: Visiting Scientist at CEBAF (VA)
- 2000: Full Professor of Nuclear Physics in the Physics Dep. of the University of Pisa



SIF Congress Lecce 1994





Teaching activity (main):

- *Fisica 1* for the Engineering students and in the latest years for the Physics students
- Fisica Nucleare e Istituzioni di Fisica Nucleare for the Physics students

As a Univ. teacher, he interacted with a **large number of students**, always establishing **excellent relations** with them. His teaching activities were **highly appreciated** by all of his students and recognized by his colleagues.

- **Supervisor** of several degree theses, in the research field of strongly interacting many-body systems
- *Controrelatore* for many other theses in the field of Theoretical and Condensed Matter Physics.

When you have to do this in Finland ...



Research activity

- Microscopic study of <u>many-body strongly interacting nuclear</u> <u>systems</u>
- Development of <u>microscopic techniques to study these systems</u> <u>within a realistic approach</u>

Correlated basis functions (CBF) with realistic NN + 3N interaction applied to

- <u>Nuclear and neutron matter</u>
- <u>Doubly magic nuclei</u> (ground state and reaction processes)

Main results:

- Derivation of a microscopic EoS for nuclear matter and its application to relativistic electron scattering off heavy nuclei and nuclear matter
- Study of the inclusive longitudinal and transverse response functions for nuclear and neutron matter
- Application of CBF with realistic NN+3N potentials to doubly magic nuclei
- Generalization of the above methods to **liquid helium**
- Application of CBF to a microscopic study of **Bose-Einstein** condensates of alkaline atoms in Harmonic traps

Publications: about 100 articles in international scientific journals and Conference proceedings.





View a graph with all years.



The latest 20 years are displayed. View a graph with all years.



Conferences and Workshops organizer:

- 10 editions of the "Cortona" meeting
- One of the promoter of the Elba International Physics Center in Marciana Marina (Elba Island) where he organized 9 editions of the "Electron-Nucleus Scattering" Workshop, one workshop on "Two-nucleon emission reactions" and one "Workshop on Monte Carlo methods in theoretical physics"

[He will be remember on July 1, 2016, at this edition of the "Elba meeting"]

- Summer school on "Microscopic Quantum Many-Body Theories and their Applications" (Abdus Salam Center for Theoretical Physics – Trieste) in September 2001
- Member of the **International Advisory Committee** for the Series of International Conferences on Recent Progress in Many-Body Theories

Referee of several international physics journals

Several profitable scientific collaborations:

- Italy (Univ. of Lecce, Sissa, INFN-Genova, INFN-Roma 1)
- Europe (Univ. of Basel, Barcelona, Granada, Athens)
- USA (Argonne Nat. Lab., Jefferson Lab.)

"We would like again to recall the **enormous capacity** of Adelchi in contributing to the diverse teaching, scientific and organizational activities generally required in the everyday life of the Physics Department in the University of Pisa combined with the **simplicity and cordiality** always demonstrated in his relations with other people."

"His death *will prove* to be a **serious loss** for the University of Pisa, and for the International Many-Body Physics community. He will certainly be remembered with **unbounded gratitude and affection** by all those who knew him and had the fortune to have his friendship and collaboration." [Proceedings of the 11th Conference on Problems in Theoretical Nuclear Physics - 2007]

One way to remember him: "Adelchi Fabrocini" Award – III edition



Thanks to G. Co' for the beautiful photos from http://www.dmf.unisalento.it/~gpco/adelchi/adelchi.html