Curriculum vitae

Personal information:

Name: Barnabás APAGYI

Nationality: Hungarian

Date of birth: May 10, 1946

Place of birth: Mátyásföld, Hungary

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Education

1952 - 1960 General School, Rákosszentmihály, Budapest

1960 - 1964 Secondary School "Matthias Corvinus", Mátyásföld, Budapest

1964 - 1969 University "Roland Eötvös", Budapest

Degrees:

1964 Final Examination

1969 M. Sc. Diploma in Physics and Astronomy, Eötvös University

1975 Ph. D., Eötvös University

1981 C.Ph.Sc., Hungarian Academy of Sciences

2000 Dr. Habil.,Budapest University of Technology and Economy

2006 D. Sc., Hungarian Academy of Sciences

University positions:

1969 - 1972 Research assistant, Research Group for Theoretical Physics, Academy of Sciences

1972 - 1983 Research fellow, Technical University of Budapest

1983 - 1992 Senior research associate, Quantum Theory Group, Technical University of Budapest

1992 - Associate professor, Institute of Physics, Technical University of Budapest

1998 - 2001 Szechenyi professor, Institute of Physics, Technical University of Budapest

Administrative experience and university activities:

1982 - 1988 Member of department council

1983 - 1985 Member of faculty council

1985 - 1987 Deputy head of the research group

1989 - 1994 Member of faculty council

Teaching experiences:

Scientific workshops for students

Regular courses at the Technical University of Budapest on theoretical physics

Regular examination of students at the Technical University of Budapest

Teaching foreign students in English at the Technical University of Budapest

Regular courses on quantum mechanics for physicist students

Special courses on quantum mechanics for physicist students

Special courses on solitons and inverse problems for phys. and math. students

Dissertations and theses supervised:

1976 - 1977 Attila Grandpierre, Ph.D. Thesis

1985 - 1986 Péter Lévay, Dissertation

1987 - 1988 Gábor Endrédi, Dissertation

1989 - 1990 Péter Lévay, Ph. D. Thesis

1995 - 1997 Imre Barna, Dissertation

1998 - 1999 Barnabás Báthory, Dissertation

1999 - 2000 Zoltán Harman, Dissertation

1999 - 2000 Dániel Schumayer, Dissertation

2000 - 2004 Dániel Schumayer, Ph. D. Thesis

2005 - 2008 Péter Varga, Ph. D. Thesis

2008 - Tamás Pálmai, Dissertation

Scientific activities:

Title of diploma theses: Explosions of supernovae

Title of Ph. D. theses: Theory of $\alpha-$decay and applications

Title of C.Ph.Sc.theses: The role of nuclear structure in many-nucleon transfer-reactions

Title of D. Sc. theses: Quantum mechanical potentials

Invited papers at the regular Meetings of the Hungarian nuclear physicists (1970, 1973, 1974, 1976, 1978, 1982, 1984, 1986)

Lectures at the Balaton conferences on Nuclear Physics (1973, 1975, 1977, 1985)

Invitations to Dubna (2 weeks in 1976 and 1978), to Dresden (1 week in 1977 and 1978)

Lecture at the Conference of the German Physical Society (DFG), Munich, March 1980

DAAD – fellow 1979/80 (13 month), Justus-Liebig-University, Gießen

DAAD – research scientist 1990 (3 month), Universities of Mainz, Frankfurt, and Gießen

Invited papers: Xth ICAP Conference (Tokyo–Sendai, 1986), 12th Wener Brandt Conference (San Sebastian, 1989), Few Body Conference (Adelaide, 1992), Quantum Inverse Scattering Workshop (Melbourne, 1992), Conference on Inverse Scattering Theory (Bad Honnef, 1993), Nuclear and Particle Physics Summer School (Melbourne, 1995) Nuclear Structure Conferences (Stockholm, 1995), (Cape Town, 1999), (Bologna, 2000), (Taxco, 2001)

One-month invitations to Gießen (1982, 1983, 1984, 1985, 1987, 1988, 1990, 1991, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001)

Seminars at the Atominstitut Wien (1985, 1989, 1990)

Two-month invitation to Melbourne University, School of physics (1995, 1999)

Organisation of international conference on "Inverse and Algebraic Scattering Theory" (Lake Balaton, 1996)

Organisation of international conference on "Inverse Quantum Scattering Theory" (Siófok, 2007)

Research interest:

Quantum scattering theory; nonperturbative (expansion, variational) methods; developing computer programs for calculating α-decay of light nuclei and α-spectroscopic coefficients used in α-transfer nuclear reactions; Kohn-, Schwinger-, Newton-, and Ladányi-type calculations of electron-atom collision; developing general multipole-expansion theory; developing localisation procedure for non-local potentials; determining the non-local content of a general heavy-ion optical potential; inverse scattering theory; use of variational methods in three-body scattering; stopping power of an electron gas for ions and anti-particles; detection of unexpected anomalies in the Schwinger and Newton variational methods; developing variational techniques which avoid the anomalies; generalization of algebraic scattering theory to infer internal symmetry of colliding particles; applying inverse quantum scattering to derive complex effective scattering potentials; developing efficient quantum inverse scattering code at fixed energy; phase shift analysis of nuclear and atomic scattering data; Painleve analysis of coupled nonlinear Gross-Pitaevski equations, solution of Cox-Thompson inverse scattering problem using finite set of phase shifts.