

Dr. Piroska Dömötör

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Education

- 2016 **PhD Degree in Physics**, *Doctoral School of Physics*, University of Szeged.
- 2006–2009 **PhD-student**, *Doctoral School of Physics (Theoretical and mathematical physics)*, University of Szeged.
- 2001–2006 **Bsc+MSc in mathematics and physics**, *University of Szeged*.
- 1993–2001 **Specialization in mathematics and physics**, *Bethlen Gábor Calvinist Gymnasium, Hódmezővásárhely*.

Professional Experience

- 2015– **Teaching assistant**, *Department of Theoretical Physics*, University of Szeged.
- 2010–2015 **Junior research fellow**, *Department of Theoretical Physics*, University of Szeged.
- 2009–2010 **Young researcher**, *Institut für Quantenphysik*, Universität Ulm, Germany.
- 2006–2009 **PhD-student**, *Department of Theoretical Physics*, University of Szeged.
- 2005–2006 **Mathematics - physics teacher (part time)**, *László Németh Gymnasium and Elementary School*, Hódmezővásárhely.

Teaching Experience

- Lecture** Linear algebra for physicists; Symbolic languages (few lectures)
- Seminar** Informatics in physics; Mathematical methods for physicists 1; Quantum mechanics; Physics problem solving 2; Computer and Internet in physics teaching
- Homework correction** Atom and molecular physics; Introduction to quantum-physics; Quantum mechanics complementary

Further projects and tasks

- 2015 – Committee memberships : Credit transfer + Admission + Educational (Physics Institute)
- 2013 – Organizing and administrating the timetable for our Department's courses
- 2010 – Member of the organizing team for high school physics problem solving competitions: Budó-competition, Tornyai-competition, Wigner-competition
- 2010–2015 E-learning material development in EU financed projects: Text editing in \LaTeX , embedding of pictures and animations. Presentation of learning materials in the required format (pdf, Docbook XML, SCORM package) – 5 materials
- 2013 – Voluntary tour leader (Rax / Schneeberg) and organizer (Provence, Tuscany, Grosse Hafner)
- 2012 Sizing canopy walkways at the "Kalandpart" adventure park in Újszeged

Talks and Posters

- 2015.07.09 **Talk:** Central European Workshop on Quantum Optics; Warsaw, Poland

- 2015.06.08 **Talk:** Optics Summer School; Siófok, Hungary
- 2015.02.26 **Seminar talk:** Department of Theoretical Physics, University of Szeged; Szeged, Hungary
- 2014.11.28 **Poster:** Quantum electronics 2014 Symposium; *Budapest, Hungary*
- 2014.09.4–5 **Talk:** Entanglement Day (MTA Wigner RC); *Budapest, Hungary*
- 2012.09.24–28 **Talk:** ECT* workshop “Many-body Open Quantum Systems: From Atomic Nucleus to Quantum Optics”; *Trento, Italy*
- 2012.05.03–07 **Talk:** Workshop on the dynamics and asymptotics in the Dicke model and quantum networks; *Mátraháza, Hungary*
- 2010.09.23–25 **Poster:** EMALI Final Meeting; *Barcelona, Spain*
- 2010.03.08–12 **Poster:** DPG Frühjahrstagung der Sektion AMOP; *Hannover, Germany*
- 2008.10.17 **Poster:** Quantum electronics 2008 Symposium; *Budapest, Hungary*
- 2008.05.30–03 **Talk:** Central European Workshop on Quantum Optics, *Belgrade, Serbia*
- 2007.09.13–15 **Poster:** MPTL 12 - Multimedia in Physics Teaching and Learning; *Wroclaw, Poland*

Publication List

- 2015 **Scattering of a particle with internal structure from a single slit: Exact numerical solutions**, *P. Dömötör, P. Földi, M. G. Benedict, B. W. Shore, W. P. Schleich*, New Journal of Physics **17**, 023044, .
- 2015 **Scattering of a particle with internal structure from a single slit**, *B. W. Shore, P. Dömötör, G. Süssmann, E. Sadurní, W. P. Schleich*, New Journal of Physics **17**, 013046, .
- 2009 **Global entanglement and coherent states in an N-partite system**, *P. Dömötör, M. G. Benedict*, The European Physical Journal D **53**, 237–242, .
- 2009 **Entanglement and coherent states**, *P. Dömötör, M. G. Benedict*, Physica Scripta **T135** 014030, .
- 2008 **Coherent states and global entanglement in an N qubit system**, *P. Dömötör, M. G. Benedict*, Physics Letters. A **372**, 3792-3795, .

Languages

Hungarian	Native	
English	Proficient (C1)	<i>Intermediate language exam 2001. Szeged</i>
German	Fluent (B2)	<i>Intermediate language exam 2008. Szeged</i>

Computer skills

Basic	C, Octave, Maxima, HTML, Docbook XML, SCORM XML
Expert	Mathematica, \LaTeX , PGF/TikZ
Tools	Office (MS and Open versions), TeXstudio, ExeLearning, Geogebra, Prezi, Gnuplot
Miscellaneous	MS Windows, Ubuntu Linux

Further interests

Cycling, Hiking, Mountain climbing, Rock climbing, Table-tennis