Curriculum Vitae

Personal information

First name / Surname	**Zdenek Masin**
Address	16 Warren Bank Simpson Milton Keynes MK6 3AQ United Kingdom
Mobile phone:	+44 0785 802 8016
E-mail	z.masin@open.ac.uk
Nationality	Czech
Date of birth	24.7. 1984
Gender	Male

Education

Dates	2009 - present
Program and Institution	PhD programme, Department of Physics and Astronomy, The Open University, UK
Thesis title	Resonance Formation in Electron Collisions with Pyrimidine-like Targets
Program and Institution	Master degree, Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic
Thesis title	Time evolution of resonant collisions of electrons with molecules (abstract below)
Level in national or international classification	Mgr. (equivalent of MSc.)
Dates	2004 - 2007
Program and Institution	Bachelor degree, Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic
Thesis title	Time evolution of resonant states of molecular anions (abstract below)
Level in national or international classification	Bc. (equivalent of BSc.)

Work/Research

Dates	2004 -
Occupation or position held	Research assistant. Department of Nuclear magnetic resonance – Prague Municipal Hospital (Vseobecna fakultni nemocnice v Praze)
Main activities and responsibilities	Statistics of experimental data, operation of special-purpose computer program for MR image analysis
Name and address of employer	MUDr. Vera Peterova, CSc. U Nemocnice 2 128 08 Prague 2 Czech Republic
Publications, Conferences	Listed below
Dates	2007 - 2008
Occupation or position held	Information analyst
Main activities and responsibilities	Selection of relevant articles for customers. Writing annotations of articles.
Name and address of employer	Newton Media, a.s. Na Pankraci 1683/127 140 00 Prague 4 Czech Republic

Dates	Summer 2005, Summer 2006
Occupation or position held	Research assistant. Solar department of Astronomical Observatory in Ondrejov.
Main activities and responsibilities	Participation on completion and testing of solar interferometer.
Name and address of employer	Astronomicky ustav AV CR Fricova 298 251 65 Ondrejov Czech Republic

Annexes

Abstract of Bachelor thesis:
In this work we study a new and very efficient method of solving time-dependent Schröodinger equation and its application to the dynamics of resonant states of molecular nitrogen aninon in the local complex potential approximation. We test the method on the time evolution of gaussian wavepacket in a potential of a linear harmonic oscillator. Finally, the cross sections for vibrational excitation of the molecular nitrogen are computed. We compare the results with the standard Crank-Nicholson approach to the problem and with the time-independent solutions. Obtained results are with excellent agreement with verified time-independent solutions.

Abstract of Diploma thesis:
In the present work we study an alternative formulation of the so-called nonlocal resonant model, which describes collisions of electrons with molecules. In our approach we solve a system of differential equations describing time-dependent nuclear dynamics of the collision process instead of solving a standard equation with nonlocal potential. The goal of this work was to find a suitable numerical method for solution of those equations, test it on a model problem and on the problem of resonant collision of electron with the molecule H_2. Obtained results are in a very good agreement with reference results from the standard calculations.