

Jimena D. Gorfinkiel

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APPOINTMENTS

Professor	07/22-present
School of Physical Sciences, The Open University	
Senior Lecturer	10/11-07/22
School of Physical Sciences, The Open University	
Lecturer	12/05-09/11
Department of Physics and Astronomy, The Open University	
Postdoctoral Research Fellow	01/00-11/05
Department of Physics and Astronomy, University College London	
Associate lecturer	03/96-09/96
Department of Chemistry, Universidad Autónoma de Madrid	

EDUCATION

Ph. D. in Theoretical Chemistry (Cum Laude)	1999
Theoretical study of non-adiabatic processes in ion-diatomic molecule collisions. The $C^{4+}+H_2$ system.	
Universidad Autónoma de Madrid. Supervisor: Dr. Luis Mendez	
M. Sc. in Theoretical Chemistry (Special Award)	1996
Universidad Autónoma de Madrid.	
Degree in Chemistry (main field: Quantum Chemistry)	1994
Universidad Autónoma de Madrid	

FUNDING (last 6 years)

Molecular B-spline algebraic diagrammatic construction: High-performance ab initio software package for attoscience	
6 month project, Embedded CSE Support (eCSE), EPCC ££44365 (to OU)	03/19
Positrons in biosystems	
4 year project, ARC, £10000 (to OU)	01/19
UK Atomic, Molecular and Optical Physics Consortium (UK-AMOR)	
4 year High end Consortium, EPSRC EP/R029342/1, £20885 (to OU) plus equivalent of £1.2M in supercomputer time, Co-investigator	6/18
RMADAM - R-matrix suites for multielectron attosecond dynamics in atoms and molecules irradiated by arbitrarily polarised light	
2 year Software Infrastructure, EPSRC £203915, Co-investigator	09/17

PUBLICATIONS

One edited book, 3 book chapters, 1 invited review article and 78 refereed papers. Over 30 invited talks (including 2 plenary lectures) at national and international conferences.

List of five most relevant papers for merit review:

- Analysis of RABITT time delays using the stationary multiphoton molecular R-matrix approach
J.Benda, Z. Mašín and J. D. Gorfinkiel, *Phys. Rev. A*, 105, 053101 (2022)
- A complete cross section data set for electron scattering by pyridine: modelling electron transport in the energy range 0-100 eV
F. Costa, A. Traoré-Dubuis, L. Álvarez, A. I. Lozano, X. Ren, A. Dorn, P. Limão-Vieira, F. Blanco, J. C. Oller, A. Muñoz, A. García-Abenza, et al., *Int. J. Mol. Sci.*, 21, 6947 (2020)
- Interatomic Coulombic electron capture from first principles

N. Sisourat, T. Miteva, J. D. Gorfinkiel, K. Gokhberg and L. S. Cederbaum, Phys. Rev. A, 98, 020701(R) (2018)

- Resonances in low-energy electron scattering from para-Benzoquinone
A. Loupas and J. D. Gorfinkiel, PCCP, 19, 18252 (2017) Selected as PCCP HOT Article
- Absolute cross sections for electronic excitation of pyrimidine by electron impact
K. Regeta, M. Allan, Z. Mašín and J. D. Gorfinkiel, J. Chem. Phys., 144, 024302 (2016)

List of 5 software development publications:

- RMT: R-matrix with time-dependence. Solving the semi-relativistic, time-dependent Schrodinger equation for general, multi-electron atoms and molecules in intense, ultrashort, arbitrarily polarized laser pulses
A. Brown, G. Armstrong, J. Benda, D. D. A. Clarke, J. Wragg, K. R. Hamilton, Z. Mašín, J. D. Gorfinkiel, H. van der Hart, Comp. Phys. Comm., 250, 107062 (2020)
- UKRmol+: a suite for modelling of electronic processes in molecules interacting with electrons, positrons and photons using the R-matrix method
Z. Mašín, Jakub Benda, Jimena D. Gorfinkiel, Alex G. Harvey, Jonathan Tennyson, Comp. Phys. Comm., 249, 107092 (2020)
- Towards accurate representation of the continuum in calculations of electron and positron-molecule collisions and molecular processes in intense laser fields
Z. Mašín and J. D. Gorfinkiel, Journal of Physics: Conference Series, 490 01209, (2014)
- UKRmol: low-energy electron- and positron-molecule scattering suite
J. M. Carr, P. G. Galiatsatos, J. D. Gorfinkiel, A.G. Harvey, M. A. Lysaght, D. Madden, Z. Mašín, M. Plummer, J. Tennyson and H. N. Varambhia, Eur. Phys. J D, 66, 58 (2012)
- GTOBAS: fitting continuum functions with Gaussian-type orbitals
A. Faure, J. D. Gorfinkiel, L. A. Morgan and J. Tennyson, Comput. Phys. Commun. 144, 224 (2002)

JOURNAL REVIEWING AND EDITORSHIP

Member of the Editorial Board of the Journal of Physics B (since 02/22) and Specialist Editor for Computer Physics Communications (since 04/19).

Referee for Physical Chemistry Chemical Physics, Journal of Physics B (Outstanding Reviewer award 2020), Physical Review A, New Journal of Physics, European Journal of Physics D, Journal of Chemical Physics, Computer Physics Communications, Radiation Physics and Chemistry, International Journal of Quantum Chemistry, Chemical Physics Letters, Plasma Sources Science and Technology, etc.

PROPOSAL REVIEW

Panel member for EPSRC: ARCHER2 Embedded Computational Science and Engineering (eCSE) Programme, Distributed European Computing Initiative (DECI) and ARCHER Resource allocation panel. Reviewer for EPSRC and NSF

LEADERSHIP AND OTHER SERVICE (selected)

Vice-Chair of the Commission on Atomic, Molecular, and Optical Physics (C15) of the International Union of Pure and Applied Physics (IUPAP)	since 11/21
Chair of CCPQ, Quantum Dynamics in AMO Physics	since 10/21
Member of the ExCALIBUR (Exascale Computing Algorithms and Infrastructures Benefiting UK Research) Hardware and Enabling Software Delivery Board	since 09/20
Member of the ICPEAC Executive Committee	since 07/19
Co-Chair of UK-AMOR High-End Computing Consortium	since 6/18
Member of the POSMOL international advisory committee	since 06/18
Chair of the IOP Atomic and Molecular Interactions (AMIG) group	2011-2016
Member of the ICPEAC General Committee	2007-2011