



IVETTE FUENTES

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E-mail: ivette.fuentes@nottingham.ac.uk
date of birth: 07 October 1972
other names: Fuentes-Guridi, Fuentes-Schuller
nationality: Mexican

ACADEMIC HISTORY

- 2009- **School of Mathematical Sciences, University of Nottingham**
Lecturer and EPSRC Career Acceleration Fellow
- 2008–2009 **Technical University of Berlin, Institute for Theoretical Physics, Germany**
Humboldt Fellowship for Experienced Researchers
- 2006- **University of Waterloo, Institute for Quantum Computation, Canada**
Affiliate
- 2006–2007 **Universidad Nacional Autónoma de México, Instituto de Ciencias Nucleares**
Assistant Professor (Investigador Titular A)
- 2004–2005 **University of Oxford, Centre for Quantum Computation, UK**
Glasstone Research Fellowship, 3 year appointment (2004-2007)
- 2004–2005 **University of Oxford, Mansfield College, UK**
Junior Research Fellowship, 2 year appointment (2004-2006)
- 2002–2006 **Perimeter Institute for Theoretical Physics, Canada**
Postdoctoral Fellowship, Quantum Information Group, Mentor: R. Laflamme
- 1999–2003 **Imperial College, University of London, UK**
PhD in Theoretical Physics, 28 February 2003
Advisor: Prof. P. L. Knight (FRS) and Prof. V. Vedral
Thesis: Entanglement and geometric phases in light-matter interactions
- 1991–1999 **Universidad Nacional Autónoma de México (UNAM), México**
Masters course in Physics (overall grade: 9.75 out of 10)
BSc in Physics, 28 August 1997 (overall grade: 9.67 out of 10)
Thesis: Close environment of Seyfert Galaxies, Advisor: Prof. Deborah Dultzin

RESEARCH GRANTS

- 2009-2014 **Engineering and Physical Sciences Research Council (EPSRC), UK**
 Career Acceleration Fellowship *Exploiting Relativity in Quantum Information*
 Role: Sole Principal Investigator, Value: £527,372.0
- 2007–2008 **Universidad Nacional Autónoma de México**
 PAPIIT research grant for the project *Quantum Information and Quantum Computation*
 Role: Sole Principal Investigator
- 2007–2008 **Mexican National Council for Science and Technology (CONACyT)**
 National Research Grant, Level 1
- 2006 **Chilean National Council for Science and Technology (FONDECyT)**
 Research grant no. 706012 for visits to Chile
- 2006–2007 **Hewlett-Packard Labs, Bristol, UK**
 QUIPROCONE grant no. 040. Research grant for work in quantum information

COMMITTEE SERVICE

- 2009–2011 **American Physical Society**
 2-Year Member-at-Large, Executive Committee, Topical Group in Quantum Information
- 2010- **Relativistic Quantum Information International Society**
 Secretary, Executive Committee
- 2010- **School of Mathematical Sciences, University of Nottingham**
 Research Committee
- 2010- **School of Mathematical Sciences, University of Nottingham**
 member of the Athena Swan Committee
- 2003–2004 **Perimeter Institute**
 Member of the postdoctoral fellow selection committee

REFEREE FOR SCIENTIFIC JOURNALS

Canadian Journal of Physics
 Europhysics Letters
 JOSA B Optical Society of America
 Journal of Mathematical Physics
 Journal of Modern Optics
 Journal of Optics B
 Journal of Physics A
 Journal of Physics B
 Physics Letters A
 Physical Review A
 Physical Review Letters
 Referee for research grants: Dirección Nacional de Ciencia y Tecnología, Uruguay
 Referee for Discovery Research Grants: NSERC, Canada
 Referee for SSC Grants: EPSRC, UK

POSTDOCTORAL RESEARCHERS

2010-2012 Andrzej Dragan

SUPERVISION OF STUDENTS

- 2010 **PhD thesis supervisor**
of Nicolas Friis, University of Nottingham
Thesis: to be concluded in 2013
- 2009 **PhD thesis supervisor**
of Anthony Lee, University of Nottingham
Thesis: to be concluded in 2012
- 2009–2010 **Diploma [equiv. MSc] thesis supervisor**
of Thomas Isele, Technical University of Berlin
Thesis: *Generalized entanglement in relativistic settings*
- 2008–2009 **Diploma [equiv. MSc] thesis supervisor**
of Martin Kliesch, Technical University of Berlin
Thesis: *Holonomies and their applications in exactly solvable quantum models*
- 2006–2008 **Licenciatura [equiv. BSc] thesis supervisor**
of Cristopher Hernández Salinas, UNAM
Thesis: *Many-body collisions in the two-mode Bose-Einstein Condensate*
- 2006–2007 **PhD thesis Tutorial Committee Member**
of Osvaldo Jimenez Farias, UNAM
- 2004–2005 **Assisted Prof. K. Banaszek supervise PhD thesis**
for Jonathan Ball, University of Oxford, UK
- 2000–2002 **Assisted Prof. V. Vedral supervise PhD thesis**
of Angelo Carollo, Imperial College, London, UK
- 2001 **Assisted Prof. V. Vedral supervise undergraduate research project**
of Julian Hartley, Imperial College, London, UK

PROFESSIONAL SERVICES

2010 member of the EPSRC Peer Review College

OTHER SERVICES

- 2004 **Mansfield, College, University of Oxford, UK**
Founding member of the Mansfield College Science Society
- 1999–2001 **Imperial College, UK**
Subwarden at Southwell Halls of Residence

MEMBERSHIPS

- 2010– **Relativistic Quantum Information International Society**
2008– **American Physical Society, Topical Group for Quantum Information**

TEACHING EXPERIENCE

- 2011 **International School on Quantum Information
Bhubaneswar, India**
3hr lecture series on Quantum entanglement to be delivered on Dec. 18
- 2010 **Summer School on Diversities in Quantum Computation/Information,
Osaka, Japan**
7.5-hour course on Relativistic Quantum Information
- 2010 **Workshop in honour of Reinhold Bertlmann, Vienna, Austria**
3-hour course on Relativistic Quantum Information
- 2008 **International Iran Summer School
Technical University of Berlin**
4-hour course on Relativistic Quantum Information
Supervisor at seminar course
From qubits to quantum computers
- 2007 **Universidad Nacional Autónoma de México, México**
designed and taught 48-hour undergraduate course
Quantum Information and Computation II
- 2006 **Universidad Nacional Autónoma de México, México**
designed and taught 48-hour undergraduate course
Quantum Information and Computation I
- 2005 **Universidad de Concepción, Chile**
Invited Visiting Professor. Lecture Series on *Geometric Phases*
University of Tokyo, Japan
Invited Visiting Professor. Lecture Series on *Holonomic Quantum Computation*
- 2004 **University of Waterloo, Canada**
Invited Visiting Professor. Lecture Series on *Holonomic Quantum Computation*
- 2003 **Perimeter Institute for Theoretical Physics, Waterloo, Canada**
Tutor at the International Summer School for Young Physicists
- 2001–2002 **Imperial College, London, UK**
Demonstration classes for first-year seminars
Demonstration classes and marking for third-year *Quantum Mechanics rapid feedback*
- 1997–1999 **Universidad Nacional Autónoma de México, México**
Tutor at the Mathematics Workshop, Faculty of Sciences

ACADEMIC RESPONSIBILITIES

- 2011 **External PhD examiner, Universitat Autònoma de Barcelona, 28 October**
 Mariona Aspachs
External PhD examiner, Universidad Complutense de Madrid, 22 June
 Eduardo Martín-Martínez
Second year report viva examiner, University of Nottingham
 Merlijn van Horssen
- 2010 **First year report viva examiner, University of Nottingham**
 Merlijn van Horssen
- 2007 **Internal Examiner, Universidad Nacional Autónoma de México**
 Igor Peña Ibarra (PhD thesis)
 Carlos Pineda (PhD thesis)
 Mauricio Torres (PhD admission examination)
- 2007 **Initiator of the Quantum Information Group, UNAM**
 Weekly group meetings with about 10 researchers from three institutes within UNAM

AWARDS AND SCHOLARSHIPS

- 1999-2003 **Mexican National Council for Science and Technology (CONACyT)**
 Scholarship for doctoral studies abroad
- 1996 **FERMILAB and Mexican Physics Society**
 Scholarship for a three-month visit at Fermilab
- 1997-1999 **Universidad Nacional Autónoma de México**
 Scholarship program for graduate studies DEGEP
- 1995-1997 **Universidad Nacional Autónoma de México**
 Scholarship program for undergraduate studies DGAPA
- 1992 **Universidad Nacional Autónoma de México**
 Distinguished Undergraduate Student Award
 awarded for the best student in the academic year 1991-1992

ORGANIZATION OF CONFERENCES AND ACADEMIC EVENTS

2011	Relativistic Quantum Information Workshop member of the International Organizing Committee	Madrid, Spain
	Relativistic Quantum Information Mini-workshop main organizer	Nottingham, UK
2010	International Iran Conference on Quantum Information member of the Programme Committee	Kish, Iran
	Developments in Computational Models member of the Programme Committee	Edinburgh, UK
	Quantum Information meets gravity mini-workshop main organizer	Nottingham, UK
2009-2010	Quantum Stochastics and Information Seminar Series main organizer	Nottingham, UK
	Quantum Information and Cold Atoms Seminar Series Initiator and main organizer (with P. Krüger and L. Hackermuller)	Nottingham, UK
2009	Relativistic Quantum Information mini-workshop main organizer	Nottingham, UK
2008	Quantum information, Q optics, Q many-body theory monthly meetings in the Berlin-Brandenburg area Initiator and organizer (with J. Eisert)	Berlin, Germany
2007	Latin American School of Physics: Quantum Information and Quantum Cold Matter Member of the organizing committee	México City
2004	Quantum Information Processing Conference Member of the local organizing committee	Waterloo, Canada
2003	Relativistic Quantum Information Mini-workshop Main organizer (with D.Terno)	Perimeter Inst., Canada
2003	Quantum Information and Relativity Mini-workshop Main organizer (with D.Terno)	Perimeter Inst., Canada
2002-2004	Seminar Series PIQUDOS Initiator, chair and organizer	Perimeter Inst., Canada
1997-1999	Seminar Series for Postgraduate Students Initiator, chair and organizer	UNAM, México

CONFERENCES

Plenary and invited talks

2012	Physics of Quantum Electronics Workshop	Snowbird, Utah
2011	International Conference on Quantum Information	Bhubaneswar, India
	Lecture series at International School on Quantum Information	Bhubaneswar, India
	Annual Meeting of the German Female Physicists (Plenary)	Saarbruecken, Germany
	Relativistic Quantum Information Workshop	Durban, South Africa
	Signatures of Quantumness in Complex Systems Workshop	Nottingham, UK
2010	Relativistic Quantum Information Workshop	Brisbane, Australia
	Summer School on Diversities in Quantum Computation/Information	Osaka, Japan
	International Workshop on Relativistic Quantum Information	Hualien, Taiwan
	Workshop in honour of Reinhold Bertlmann	Vienna, Austria
2009	Relativistic Quantum Information Workshop delivered by T. Isele on my behalf	Brisbane, Australia
	International Program on Quantum Information not delivered due to visa problems	Bhubaneswar, India
	International Iran Summer School	Kish Island, Iran
2008	March Meeting of the American Physical Society	New Orleans, USA
	International Iran Summer School	Kish Island, Iran
	A2-Meeting	Potsdam University
2007	Int'l Conf. on Quantum Probability and Related Topics	Guanajuato, México
2006	Annual Meeting Mex. Phys. Soc. (Particles and Fields)	México City
	Subtle Technologies Conference	Toronto, Canada

Contributed talks

2010	March Meeting of the American Physical Society	Portland, USA
2008	Network Meeting of the Alexander von Humboldt Foundation	Münster, Germany
2006	Mini-workshop on QIP and Many Body Physics	University of Hertfordshire
2005	Oxford-Imperial Quantum Meeting QUOXIC	Imperial College, UK
2004	Quantum Gravity and Quantum Information	Newton Institute, UK
	Quantum Information Processing Conference	Waterloo, Canada
2003	Quantum Information and Relativity Mini-workshop	Perimeter Institute, Canada
2001	Les Houches Physics School	Les Houches, France
2000	Young Researchers Meeting	Durham, UK

Posters

2004	Quantum Gravity in the Americas	Perimeter Institute, Canada
2003	Forth European QIPC Workshop	Oxford, UK
2002	Quantum Communication, Computing and Computing	MIT, USA
	Southwest Quantum Information and Technology	NIST, USA

Participation

2004	Latin American School of Physics	México City
2003	Quantum Information and Communication	Benasque, Spain
2000	Instructional Course in Quantum Computing	Edinburgh, UK
1998	Escuela Mexicana de Partículas y Campos	Oaxaca, México
1998	Latin American School of Physics	México City
1997	Escuela Mexicana de Partículas y Campos	Morelia, México

TALKS AT UNIVERSITIES AND RESEARCH INSTITUTES

			invited by
2011	University of York	UK	E. Hawkins
	University of Manchester	UK	A. McKane
	University of Cambridge	UK	A. Montaro
	University of Nottingham	UK	I. Lesanovsky
2010	University of Nottingham	UK	P. Krüger
2009	University of Nottingham	UK	Y. Fyodorov
	University of Vienna	Austria	R. Bertlmann
	University of Bristol	UK	R. Jozsa
	University College London	UK	S. Bose
	Royal Holloway, University of London	UK	K. Audenaert
	University of Nottingham	UK	G. Adesso
	University of Oxford	UK	A. Briggs
2008	Technical UNiversity of Berlin	Germany	T. Brandes
	Free University of Berlin (QQQ meeting)	Germany	I. Peschel
	Technical University of Berlin	Germany	T. Brandes
	University of Potsdam	Germany	M. Wilkens
2007	Instituto Tecnológico Autónomo de México	México	F. Esponda
	University of Heidelberg	Germany	M. Oberthaler
	Technical University of Kaiserslautern	Germany	J. Korsch
	University of Waterloo	Canada	R. Mann
	Perimeter Institute	Canada	L. Hardy
	University of Waterloo	Canada	K. Lamb
	IIMAS, UNAM	México	R. Weder
	Universidad Autónoma Metropolitana	México	A. Salas
	Technical University of Kaiserslautern	Germany	J. Korsch
2006	Instituto de Ciencias Nucleares, UNAM	México	H. Quevedo
	DESY, University of Hamburg	Germany	K. Sengstock
	University of Salerno	Italy	F. Illuminati
	University of Oxford	UK	C. Foot
	Imperial College, London	UK	M. Plenio
	University of Cambridge	UK	A. Kent
	University of Cambridge	UK	M. Ericsson
	Instituto de Física, UNAM	México	M. Mondragon
	CCF Cuernavaca, UNAM	México	T. Seligmann
	Instituto de Ciencias Nucleares	México	H. Quevedo
2005	Institute for Quantum Computing, UW	Canada	R. Laflamme
	University of Salerno	Italy	F. Illuminati
	Fields Institute, Toronto	Canada	D. Lidar
	Universidad Católica	Chile	M. Orzag
	Universidad de Concepción	Chile	L. Roa
	University of Oxford	UK	I. Walmsley
2004	Perimeter Institute	Canada	D. Gottesman
	Perimeter Institute	Canada	M. Mosca
	University of York	UK	T. Sudbury
	University of Tokyo	Japan	M. Murao

2003	University of Cambridge	UK	A. Kent
	Perimeter Institute	Canada	L. Hardy
	University of Waterloo	Canada	R. Laflamme
2002	Imperial College, London	UK	V. Vedral
	Instituto de Ciencias Nucleares, UNAM	México	J. de Olivo
	University of New México	USA	C. Caves
	Los Alamos National Laboratory	USA	W. Zurek
	University of New Meéxico	USA	C. Caves
	University of Waterloo	Canada	M. Mosca
2001	Imperial College, London	UK	P. Knight

OUTREACH TALKS

2011	School of Mathematical Sciences, University of Nottingham Open Day
2010	School of Mathematical Sciences, University of Nottingham Open Day
2006	Instituto de Ciencias Nucleares, UNAM, México Open Day
	Instituto de Astronomía, UNAM, México Symposium on Arts and Science
	Instituto de Ciencias Nucleares, UNAM, México Symposium on Arts and Science
	Mexican Association of Media Communication Short talk addressing the Mexican Secretary of Foreign Relations, L. E. Derbez
2004	Subtle Technologies Conference, Toronto, Canada Invited talk
	Department of Fine Arts, University of Waterloo Symposium on Arts and Science
	Mexican Association of Media Communication talk addressing Media Communicator P. Ferriz
2002	Perimeter Institute Outreach Program talk at high school in Waterloo, Canada

OUTREACH ACTIVITIES

2011	Co-authored script for 10min film by Andrzej Dragan: Hierarchy Lost Creator and administrator of Facebook page: Relativistic Quantum Information Twitter account on Relativistic Quantum Information
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SCIENTIFIC COVERAGE OF MY WORK

2005	A. Cho, Science, 309, 1801 (2005) <i>To escape from quantum weirdness: put the pedal to the metal</i> Article explaining my work in Phys. Rev. Lett. 95 120404 (2005) to a wider audience
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MEDIA COVERAGE

- 2010 **Portrait and video about my work by J. Perivolaris**
Retratos de Independencia: Bicentennial Portraits of Latin American Women in England
<http://retratosdeindependencia.weebly.com/>
exhibition shown at Night of Festivals, Nottingham UK
- 2008 **Referat für Presse und InformationTUB-newsportal**
Reporting on my Alexander von Humboldt Fellowship
- 2004 **R. Simone, Quantum Love, The Record June 12** (reprinted in Innovation Canada)
Interview on aspects of my work with Frederic Schuller
- One-hour interview on Mexican National Radio** with Pedro Ferriz, 98.5FM
Interview on my points of view on quantum mechanics

EXTENDED ACADEMIC VISITS

- 2008–2009 **Technical University of Berlin, Institute for Theoretical Physics, Germany**
Humboldt Fellowship for Experienced Researchers
- 2008 **University of Potsdam, Germany** (M. Wilkens)
invited visit for six months at the Institute of Physics
- 2007 **Technical University of Kaiserslautern, Germany** (J. Korsch)
invited visit for two months at the Department of Physics
- University of Waterloo, Canada** (K. Lamb & R. Mann)
invited visit for two weeks at the Department of Applied Mathematics
- University of Salerno, Italy** (F. Illuminati)
invited visit for three weeks at the Department of Physics
- 2006 **University of Cambridge, UK** (M. Ericsson)
invited visit for four weeks at DAMTP
- DESY University of Hamburg, Germany** (K. Sengstock)
invited visit for two weeks at the Quantum Gases and Spectroscopy Group at DESY
- 2005 **University of Salerno, Italy** (F. Illuminati)
invited visit for three weeks at the Department of Physics
- University of Concepción, Chile** (L. Roa)
invited visit for three weeks at the Department of Physics
- 2004 **University of Tokyo, Japan** (M. Murao)
invited visit for two weeks at the Quantum Information Group
- Perimeter Institute for Theoretical Physics, Canada** (H. Burton)
invited visit for two months in the Quantum Information Group
- 2002 **University of New Mexico, USA** (C. Caves)
long-term visiting researcher for nine months at the Information Physics Group
- 2003 **Imperial College, London** (V. Vedral)
invited visit for four weeks at the Quantum Optics Group. Visit funded by Hewlett-Packard
- 1996 **FERMILAB** (D. Jovanovic and H. Castillo)
student visit for three months at DZero

CITATION REPORT

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Sum of times cited: 1076

5 Most-cited publications:

- [1] **citations: 171**
A. Carollo, I. Fuentes-Guridi, M. F. Santos, & V. Vedral
Geometric phase in open systems
Physical Review Letters, 90, 160402/1-160402/4 (2003)
- [2] **citations: 106**
I. Fuentes-Schuller & R.B. Mann
Alice falls into a black hole: Entanglement in noninertial frames
Physical Review Letters, 95, 120404 (2005)
- [3] **citations: 103**
S. Bose, I. Fuentes-Guridi, P. L. Knight, & V. Vedral,
Subsystem purity as an enforcer of entanglement
Physical Review Letters, 87, 050401/1-050401/4, (2001)
- [4] **citations: 81**
A. Carollo, I. Fuentes-Guridi, M. F. Santos, & V. Vedral
Spin-1/2 geometric phase driven by decohering quantum fields
Physical Review Letters, 92, 204021-204024 (2004)
- [5] **citations: 78**
D. Dultzin-Hacyan, Y. Krongold, I. Fuentes-Guridi, & P. Marziani
The close environment of Seyfert galaxies and its implication for unification models
Astrophysical Journal Letters, 513, L111-L114(1999)

Citation source: scopus, google scholar and quant-ph (updated Sep 2010).

LANGUAGES

- Spanish (Native), English (fluent)
- 2008 **Goethe Institute, Berlin**
Four month intensive German course awarded by the Alexander von Humboldt Foundation
Completed B1 level of European reference frame

REFEREES

Prof. Gerard J. Milburn
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The University of Queensland
St Lucia, QLD 4072, Australia
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Institute for Mathematical Sciences
53 Princes Gate
London SW7 2BW
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fax +44 (20) 7594 77141
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Quantum Information Science Group
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