

# Juan Mauricio Torres González

## Personal

Born on May 9, 1980.

Mexican citizenship.

## Education

02/2011 Ph.D. at Instituto de Ciencias Físicas, UNAM, Cuernavaca, Mexico.

04/2005 Licenciatura (BS) in physics at Facultad de Ciencias, UNAM, Mexico City.

03/2000–02/2004 Studies in physics at the Facultad de Ciencias, UNAM, Mexico City.

## Teaching experience

*Facultad de Ciencias, UNAM*

2011-1 Lecturer of Introduction to heat and waves.

2010-2 Lecturer of Introduction to heat and waves.

2005-1 Teaching Assistant of Introduction to quantum information and computation.

2004-1 Teaching Assistant of Classical and quantum chaos.

## Conference organization

Editor of Proceedings of Symmetries in Nature Symposium in Memoriam Marcos Moshinsky at Instituto de Ciencias Físicas, UNAM. AIP Conference Proceedings, **1323**.

09/08/2010–14/08/2010

Organizer of Symmetries in Nature Symposium in Memoriam Marcos Moshinsky at Instituto de Ciencias Físicas, UNAM. 09/08/2010–14/08/2010

Organizer of Penetrating Physics by Random Matrices Symposium in honour of Prof. Hans A. Weidenmüller, Instituto de Ciencias Físicas, UNAM.

02/03/2009–06/03/2009.

## Skills and abilities

### *Computer knowledge*

Programming languages: FORTRAN, C, HTML.

Algebraic computer software (Mathematica).

Experience as administrator of Linux operating systems and as webmaster (www.cicc.unam.mx).

### *Language Knowledge*

Spanish: native

English: fluently

German: intermediate

(Mittelstufe des Österreichischen Sprachdiploms Deutsch, Deutsches Sprachdiplom Erste Stufe)

## Publications

- [1] J. M. Torres, M. Bienert, S. Zippilli, G. Morigi. ‘Quantum jumps induced by the center-of-mass motion of a trapped atom’. *The European Physical Journal D - Atomic, Molecular, Optical and Plasma Physics*, **61**, 21 (2011).
- [2] J. M. Torres, E. Sadurní, T. H. Seligman. ‘The Dirac-Moshinsky oscillator coupled to an external field and its connection to quantum optics’. *AIP Conference Proceedings*, **1323**, 301 (2010).
- [3] E. Sadurní, J. M. Torres, T. H. Seligman. ‘Dynamics of a Dirac oscillator coupled to an external field: a new class of solvable problems’. *Journal of Physics A: Mathematical and Theoretical*, **43**, 285204 (2010).
- [4] J. M. Torres, E. Sadurní, T. H. Seligman. ‘Two interacting atoms in a cavity: exact solutions, entanglement and decoherence’. *Journal of Physics A: Mathematical and Theoretical*, **43**, 192002 (2010).
- [5] M. Bienert, J. M. Torres, S. Zippilli, G. Morigi. ‘Resonance fluorescence of a cold atom in a high-finesse resonator’. *Phys. Rev. A*, **76**, 013410 (2007).
- [6] C. Jung, T. H. Seligman, J. M. Torres. ‘Canonically transformed detectors applied to the classical inverse scattering problem’. *Journal of Nonlinear Mathematical Physics*, **12**, 404 (2005).

The following above-mentioned papers have evolved from my doctoral thesis: [2, 3, 4].

## Attendance in conferences and courses

### 2010

- 10/11–11/11 Encuentro Río - México de Óptica e información cuántica at Instituto de Física, UNAM México D.F.  
Talk: Two interacting atoms in a cavity: entanglement and decoherence
- 09/08–14/08 Symmetries in Nature Symposium in Memoriam Marcos Moshinsky at Instituto de Ciencias Físicas, UNAM Cuernavaca, México. Talk: *A Dirac oscillator coupled to and external field and its connection to Quantum Optics*
- 14/03–10/04 Developments in Quantum Chaos , Scientific Gathering at Centro Internacional de Ciencias, Cuernavaca, México. Talk: *Quantum jumps induced by mechanical effects of light*

10/11–11/11 Encuentro Río - México de Óptica e información cuántica at Instituto de Física, UNAM México D.F.  
Talk: Two interacting atoms in a cavity: entanglement and decoherence

09/08–14/08 Symmetries in Nature Symposium in Memoriam Marcos Moshinsky at Instituto de Ciencias Físicas, UNAM Cuernavaca, México. Talk: *A Dirac oscillator coupled to an external field and its connection to Quantum Optics*

14/03–10/04 Developments in Quantum Chaos , Scientific Gathering at Centro Internacional de Ciencias, Cuernavaca, México. Talk: *Quantum jumps induced by mechanical effects of light*

## 2009

02/03–06/03 Penetrating Physics by Random Matrices Symposium in honour of Prof. Hans A. Weidenmüller, Instituto de Ciencias Físicas, UNAM.

## 2007

09/09–22/09 Decoherence: Measures, models and semi-classics, scientific gathering at Centro Internacional de Ciencias, Cuernavaca, México.

27/08–07/09 XXXVIII Escuela Latino Americana de Física, Quantum Information and Cold Quantum Matter, El Colegio Nacional, México, D.F.

## 2006

06/08–15/09 Quantum Chaos (Including RMT), Scientific Gathering at the Centro Internacional de Ciencias, Cuernavaca, México. Talk: *Scattering echoes in classical and quantum mechanics*

27/02–07/04 Quantum Information, Computation and Complexity, Trimester School at The Centre Emile Borel, Paris, France.

## 2005

28/11–10/12 Chaos, Decoherence and Fidelity Decay, Scientific Gathering at the Centro Internacional de Ciencias, Cuernavaca, México.

03/10–21/10 Chaotic and Random Wave Scattering in Quantum Mechanics and Acoustics, Scientific Gathering at the Centro Internacional de Ciencias, Cuernavaca, México.

29/08–30/09 International Summer School on Quantum Information, MPIPKS Dresden, Germany. Talk and poster: *Measuring chaotic scattering with canonically deformed wave packets*

## 2004

06/12–09/12 Quantum Optics II, Scientific Gathering at Cozumel, Mexico. Poster: *Measuring chaotic scattering with canonically deformed wave packets*

25/10–29/10 Congreso Nacional de Física, SMF, Hermosillo, Sonora, México. Talk: *Dispersión caótica clásica y cuántica entre caos e integrabilidad*

06/09–10/09 Modern Optics Workshop, INAOE, Puebla, México

16/08-21/08 Quantum Chaos in the 21st Century, Scientific Gathering at the Centro Internacional de Ciencias, Cuernavaca, Mexico. Poster: *Measuring chaotic scattering with canonically deformed wave packets*