

**Dipartimento di Fisica, Universita' di Pisa**

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Citizenship: Armenia

Date of birth: 2<sup>nd</sup> Aug. 1983**EDUCATION:**

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- Ph.D.** student in Applied Physics, Department of Physics, **University of Pisa** Jan 2006 – present  
*Research topic: "Excited State Dynamics of Individual Single – Walled Carbon Nanotubes"*  
*Thesis advisors: Prof. Achim Hartschuh, Prof. Maria Allegrini*
- M.S.** in Physics, Department of Physics, **Yerevan State University**. GPA 5.0 (out of 5.0). Jun 2005  
*Thesis: "Selective coordinational properties of the sublimed layers of mono-4pyridil-tri-phenil-phorphyrinatocobalt"*  
*Thesis advisor: Prof. Tigran S. Kurtikyan*
- B.S.** in Physics, Department of Physics, **Yerevan State University**. GPA 4.8 (out of 5.0). Jun 2003  
*Thesis: Comparative study of contribution of different types of interactions in helix – coil transition of DNA.*  
*Thesis advisor: Prof. Vladimir F. Morozov*
- Maturity** (school graduation) certificate, A. Shirakatsi Lyceum, Yerevan, Armenia Jun 1999

**EMPLOYMENT:**

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**Molecule Structure Research Center, National Academy of Sciences, Yerevan, Armenia.**

- Research Assistant, Optical Spectroscopy Lab. Aug 2004 – Jan 2006

**RESEARCH EXPERIENCE:**

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- Confocal microscopy of single molecules and nanostructures.
- Photoluminescence and Raman spectroscopy of single carbon nanotubes.
- Time-resolved photoluminescence measurements on single carbon nanotubes by time-correlated single photon counting.
- Infrared and absorption spectroscopy of porphyrins. Research on catalytic and heme-modeling properties of metalloporphyrins' sublimed layers.
- Extensive experience with low temperature, high vacuum systems. Thermal deposition of molecular films.

**VISITING STAYS, CONFERENCES, SCHOOLS:**

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- NT08, Montpellier, France. Jul. 2008  
*Ninth International Conference on the Science and Application of Nanotubes.*  
*"Exciton decay dynamics in individual carbon nanotubes at room temperature" (Contributed talk)*
- Ludwig-Maximilians-University of Munich (LMU), Munich, Germany. Nov. 2006 – May. 2008  
*Visiting Ph.D. student, Prof. A. Hartschuh group, Department of Physical Chemistry*
- CeNS Winter School, Mauterndorf, Austria. Feb. 2007  
*Nanosystems: From Quantum Devices to Biological Engines*
- ICPP – 4, Rome, Italy Jul. 2006  
*Fourth International Conference on Porphyrins and Phthalocyanines.*  
*"Spectral study of the nitrogen monoxide interaction with sublimed layers of meso-mono-4-pyridyl-tri-phenyl- and meso-mono-3-pyridyl-tri-phenyl-porphyrinatocobalt(II)" (Poster presentation)*
- Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia. Jan. – Apr. 2005  
*Visiting student, Nuclear Magnetic Resonance Laboratory.*
- Deutsches Elektronen Synchrotron (DESY), Hamburg, Germany. Summer 2003  
*Summer student.*

- Heavy – Ion Research Center (GSI), Darmstadt, Germany. Summer 2002  
*Summer student.*
- Heavy – Ion Research Center (GSI), Darmstadt, Germany. Summer 2001  
*IAESTE student.*

## SCHOLARSHIPS AND AWARDS:

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- G. Galilei School of Graduate Studies three year Ph.D grant, University of Pisa. Jan. 2006 – Dec. 2008
- B.S. Diploma with Honor, Yerevan State University. Jun. 2003
- 8 diplomas in Republican School Olympiads (Physics, Mathematics, Astronomy, Informatics). 1997 – 1999

## PROFESSIONAL MEMBERSHIP:

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- Associate member of the Center of Nanoscience (CeNS), Munich, Germany. Nov. 2006 – Apr. 2008

## LANGUAGES:

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- Fluent in Armenian (mother tongue)
- Fluent in English and Russian.
- Basic knowledge of Italian.

## PUBLICATIONS:

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- H. Harutyunyan, T. Gokus, A. A. Green, M. C. Hersam, M. Allegrini, A. Hartschuh, "Defect induced photoluminescence from dark excitonic states in individual single-walled carbon nanotubes", *Phys. Rev. Lett.*, submitted, (2008).
- T. Gokus, A. Hartschuh, H. Harutyunyan, M. Allegrini, F. Hennrich, M. Kappes, A. A. Green, M. C. Hersam, P. T. Araújo, A. Jorio, "Exciton decay dynamics in individual carbon nanotubes at room temperature", *Appl. Phys. Lett.* 92, 153116 (2008).
- S. Mackowski, S. Wörmke, A. J. Maier, T. H. P. Brotsudarmo, H. Harutyunyan, A. Hartschuh, A. O. Govorov, H. Scheer, C. Bräuchle, "Metal – enhanced fluorescence of chlorophylls in single light – harvesting complexes", *Nano Lett.*, 8, 558, 2008
- C. Casiraghi, A. Hartschuh, E. Lidorikis, H. Qian, H. Harutyunyan, T. Gokus, K. S. Novoselov, A. C. Ferrari, "Rayleigh Imaging of Graphene and Graphene Layers", *Nano Lett.* 7, 2711 (2007).
- T.S. Kurtikyan, H. A. Harutyunyan, R. K. Ghazaryan and J. A. Goodwin, "Spectral study of the nitrogen monoxide interaction with sublimed layers of meso-mono-4-pyridyl-tri-phenyl- and meso-mono-3-pyridyl-tri-phenyl-porphyrinatocobalt(II) " *J. Porphyrins Phthalocyanines*, 10, 971 (2006).