CURICULUM VITAE

Personal Details:

Name & surname:	Samuel Cohen
Date and Place of Birth:	July 5, 1961, Thesalloniki, Greece
Nationality:	Hellenic
Marital Status:	Married, three children
Tel.:	2651 0 08540
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Education – Career:

- Laboratoire de Spectrométrie Ionique et Moléculaire, CNRS & Université Lyon I (France) Feb. 2009
  Invited Professor
- Laboratoire de Spectrométrie Ionique et Moléculaire, CNRS & Université Lyon I (France) Sep. 2007 – Feb. 2008
  Sabbatical Leave (Velocity Map Imaging (VMI) Techiniques – Photoionization Microscopy)
- Physics Departement, Univerity of Ioannina, Greece Nov. 2002 – present.
  Associate Professor (from January 2013)
- High school teacher Sep. 98 – Oct. 2002.
- Insttitute of Accelerating Systems & Applications (IASA) Feb. 97 – August 98.
  PostDoctoral Fellow
- Institut de Physique Nucléaire IN2P3 (CNRS), Orsay, France September 93 – January 97.
  PostDoctoral Fellow (22 month European Union's Human Capital and Mobility fellowship)
- Laboratoire Aimé Cotton CNRS, Orsay, France May 92 – June 93.
  PostDoctoral Fellow
- Theoretical & Physical Chemistry Institute (TPCI), May 91 – April 92.
  Theoretical & Physical Chemistry Institute (NHRF), Athens, Greece
  PostDoctoral Fellow
- PhD in Atomic Physics Sept. 85 – August 89.
  Performed at TPCI, NHRF, Athens, Greece.
  Presented at the University of Ioannina, Greece
  Title: *"Multiphoton spectroscopy of Sr: 4dnl J=3^o autoionizing states and double ionization"*
- NHRF – CNRS (France – Laboratoire Aimé Cotton): June 87 & August. – October 86.
  Exchange visitor program fellowship.
- Military Service May-October 84.
- Bachelor in Physics, Phyics Departement, Univerity of Crete, Greece 1984.

Specialization:

- *Experiment*: Laser-atom interactions (Photoexcitation, photoionization, non-linear optics, optical pumping, Photoionization Microscopy).
- Development of chemionization polarized electron sources & charged particle optics.
- *Theory*: Semiempirical Phase-Shifted Multichannel Quantum Defect Theory, RKR method for the construction of atomic potential curves, Polarizability and hyperopolarizability calculations.

Funded Research Programs:

- "Atomic multiphoton ionization dynamics with photon – dressed core states". EU-TMR-ULF-IESL-FORTH (1996) (Coordinator).
- Postgragraduate Studies Committee (2009): 12000 Euro for completing an electron energy analysis apparatus.
- Program HRAKLEITOS II (2011): 45500 Euro for a PhD research fellowship.

Referee in Scientific Journals:

- Physics Letters A (2007)
- J. Phys. B: At. Mol. Opt. Phys. (2009)
- Entropy (2009)

Publications/Presentations to Conferences:

- Publications in refereed Journals: 38 (three monographs)
- Publications in refereed Conference Proccedings: 7
- Publications in non-refereed Conference Proccedings: 11
- Presentations to Conferences: >58 (two invited)
- Non-self scitations: >200

Publications in refereed Journals:

1. **"Multiphoton single and double ionization of Strontium in the range 532-541 nm"**
P. Camus, M. Kompitsas, S. Cohen, C.A. Nicolaides, M. Aymar, M. Crance and P. Pillet
J. Phys. B: At. Mol. Opt. Phys., **22**, 445-458 (1989).

2. **"Observation and theoretical analysis of the odd J=3 autoionizing spectrum of Sr up to the 4d threshold"**
M. Kompitsas, S. Cohen, C.A. Nicolaides, O. Robaux, M. Aymar and P. Camus
J. Phys. B: At. Mol. Opt. Phys., **23**, 2247-2267 (1990).

3. **"Phase conjugation by degenerate four wave mixing in Barium vapor"**
T. Mikropoulos, S. Cohen, M. Kompitsas, S. Goutis and K. Baharis
Optics Letters **15**, 1270-1272 (1990).

4. **"Multipole structure in asymmetrical double Rydberg states"**
P. Camus, S. Cohen, L. Pruvost and A. Bolovinos
Phys.Rev.A **48**, R9-11 (1993).

5. **"Resonant double multiphoton ionization via planetary states"**
S. Cohen, P. Camus and A. Bolovinos
J. Phys. B: At. Mol. Opt. Phys., **26**, 3783-3794 (1993).

6. **"Effective core polarizabilities in Ba high-ℓ N$s n\ell$ double Rydberg states"**
P. Camus and S. Cohen
Phys.Rev. A **51**, 1985-1993 (1995).

7. **"Polarization quantum defect energy dependence of high-ℓ double Rydberg states"**
S. Cohen and P. Camus
J. Phys. B: At. Mol. Opt. Phys., **29**, 4323-4331 (1996).

8. **"A flowing afterglow as a polarized electron source"**
J. Arianer, S. Cohen, S. Essabaa, R. Frascaria and O. Zerhouni
Nuclear Instruments and Methods A, **382**, 371-378 (1996).

9. **"Beam characterization of the Orsay He afterglow polarized electron source"**
S. Cohen, O. Zerhouni, J. Arianer, S. Essabaa, and R. Frascaria
J. Phys. D: Applied Physics, 30, 417-421 (1997).

10. **"Study of non-linear optical phase conjugation in Ca by resonant degenerate four-wave mixing via bound excited states"**
A. Bolovinos, S. Cohen, A. Lyras, C. Skordoulis, T. Mikropoulos and S. Assimopoulos
Applied Physics B, **64**, 451-458 (1997).

11. **"Neutral Ba 8s$n\ell$ (ℓ=6,7) + 5f$n'\ell'$ double Rydberg spectroscopy"**
P. Camus and S. Cohen
J. Opt. Soc. Am. B., 14, 2340-2442 (1997).

12. **"3dnd J=4,5 autoionizing Levels in Ca: Laser Optogalvanic Spectroscopy and Theoretical Analysis"**
S. Assimopoulos, A. Bolovinos, E. Luc-Koenig, S. Cohen, A. Lyras, P. Tsekeris and M. Aymar
European Physical Journal D, **1**, 243-254 (1998). (Former Z. Phys. D: Atoms, Molecules and Clusters).

13. **"Phase Conjugation by Degenerate Four Wave Mixing via Autoionizing States"**
S. Cohen and A. Lyras
J. Opt. Soc. Am. B., **15**, 1069-1077 (1998).

14. **"Resonant widths, line intensities and lineshapes for MQDT models with two or more open channels"**
S. Cohen
European Physical Journal D, **4**, 31-38 (1998).

15. **"Experimental and theoretical analysis of the 5pnp J=0^e, 1^e, 2^e autoionizing spectrum of Sr "**
S. Cohen, E. Luc-Koenig, A. Bolovinos, M. Kompitsas, M. Aymar, H. Mereu and P. Tsekeris
European Physical Journal D, **13**, 165-180 (2001).

16. **"Accurate radial atomic model potentials by means of a novel RKR–QDT combined approach"**
S. Cohen and M. Chrysos
J. Phys. B: At. Mol. Opt. Phys., **35**, 847–864 (2002).

17. **"Phase conjugation through autoionizing states: a density matrix approach"**
S. Cohen and A. Lyras
J. Phys. B: At. Mol. Opt. Phys. **37**, 1025-1043 (2004).

18. **"Single and double ionization of magnesium via four-photon excitation of the $3p^2\ ^1S_0$ autoionizing state: Experimental and theoretical analysis"**
I. Liontos, A. Bolovinos, S. Cohen and A. Lyras
Phys. Rev. A **70**, 033403 (2004).

19. **"Interacting asymmetric double Rydberg series: the Ba $8s n\ell\ (\ell=5)+5f_j n'\ell'$ case"**
S. Cohen, P. Camus and A. Bolovinos
J. Phys. B: At. Mol. Opt. Phys. **38**, S1-S16 (2005).

20. **"Construction of RKR–QDT atomic model potentials for the calculation of Lithium polarizabilities and hyper-polarizabilities"**
S. Cohen and S. I. Themelis
J. Phys. B: At. Mol. Opt. Phys. **38**, 3705-3719 (2005).

21. **"Numerical solution of Dalgarno-Lewis equations by a mapped Fourier grid method"**
S. Cohen and S. I. Themelis
J. Chem. Phys. **124**, 134106 (2006).

22. **"Two-photon ionization spectra of Calcium above the $4s_{1/2}$ threshold"**
S. Cohen, I. Liontos, A. Bolovinos, A. Lyras, S. Benec'h and H. Bachau
J. Phys. B: At. Mol. Opt. Phys. **39**, 2693-2708 (2006).

23. **"Odd-parity J=11/2 autoionizing Rydberg series of europium below the $5d\ ^9D_4$ threshold: Spectroscopy and multichannel quantum-defect-theory analysis"**
S. Bhattacharyya, M.A.N. Razvi, S. Cohen and S.G. Nakhate
Phys. Rev. A **76**, 012502 (2007)

24. **"Dynamic Dipole Polarizabilities of the Ground and Excited States of Confined Hydrogen Atom Computed by Means of a Mapped Fourier Grid Method"**
S. Cohen, S. I. Themelis and K. D. Sen
International Journal of Quantum Chemistry, Vol 108, 351–361 (2008).

25. **"Single and double ionization of strontium in the vicinity of four-photon excitation of the $5p^2\ ^1S_0$ doubly excited state"**
I. Liontos, S. Cohen and A. Bolovinos
J. Phys. B: At. Mol. Opt. Phys., **41**, 2693-2708 (2008).

26. **"One- and two-photon phase-sensitive coherent control of total ionization yields in the presence of static electric fields"**
A. Bolovinos, S. Cohen and I. Liontos
Phys. Rev. A **77**, 023413 (2008).

27. **"Systematics of perturbative semiclassical quantum defect expansions probed by RKR-QDT and a Fisher-information-based criterion"**
S. Cohen
European Physical Journal D,**55**, 67-74 (2009).

28. **"Multiphoton Ca^{2+} production occurring before the onset of Ca^+ saturation: is it a fingerprint of direct double ionization?"**
I. Liontos, S. Cohen and A. Lyras
J. Phys. B: At. Mol. Opt. Phys., **43**, 095602 (2010).

29. **"Transfer-matrix-based method for an analytical description of velocity-map-imaging spectrometers"**
M. M. Harb, S. Cohen, E. Papalazarou, F. Lépine and C. Bordas
Rev. Sci. Instrum. **81**, 125111 (2010).

30. **"Energy dependence of photoelectron angular distributions from two- and four-photon ionization of Mg in the vicinity of the $3p^2\ ^1S_0$ doubly excited state"**
A. Dimitriou, S. Cohen and A. Lyras
J. Phys. B: At. Mol. Opt. Phys., **44**, 135001 (2011).

31. **"Phase sensitive coherent control of atomic excitation in the presence of static electric fields: a frame transformation Stark theory approach"**
S. Cohen
J. Phys. B: At. Mol. Opt. Phys. **44**, 205402 (2011).

32. **"Coupled channel theory of photoionization microscopy"**
L. B. Zhao, I. I. Fabrikant, J. B. Delos, F. Lépine, S. Cohen and C. Bordas
Phys. Rev. A, **85**, 053421 (2012).

33. **"Strong laser-induced coupling between autoionizing states: the case of the four-photon-excited 3p2 1S0 state of magnesium"**
A. Dimitriou, S. Cohen, A. Lyras and I. Liontos
J. Phys. B: At. Mol. Opt. Phys. **45**, 205003 (2012).

34. **"Wave Function Microscopy of Quasibound Atomic States"**
S. Cohen, M. M. Harb, A. Ollagnier, F. Robicheaux, M. J. J. Vrakking, T. Barillot, F. Lépine, and C. Bordas
Phys. Rev. Lett. **110**, 183001 (2013).

35. **"Hydrogen Atoms under Magnification: Direct Observation of the Nodal Structure of Stark States"**
A. S. Stodolna, A. Rouzée. F. Lépine, S. Cohen, F. Robicheaux, A. Gijsbertsen, J. H. Jungmann, C. Bordas, and M. J. J. Vrakking
Phys. Rev. Lett. **110**, 213001 (2013).

36. **"Thermochromic phase-transitions of GafChromic films studied by z-scan and temperature-dependent absorbance measurements"**
A. D. Kouloukidis, S. Cohen and J. Kalef-Ezra
Medical Physics, **40**, 112701 (2013).

37. **"Ion and electron spectroscopy of strontium in the vicinity of the two-photon-excited $5p^2\ ^1S_0$ state"**
A. Dimitriou and S. Cohen
Phys. Rev. A, **90**, 012513 (2014).

38. **"Electron spectroscopy of strontium in the vicinity of the four-photon-excited 5p21S0 state"**
A. Dimitriou and S. Cohen
Eur. Phys. J. D A, **69**, 238 (2015).