Curriculum Vitae

Luca Argenti, PhD
Associate Professor

- CONTACT INFORMATION

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- EDUCATION
  - Sep 10^{th} 2008: Ph.D. in Chemistry (70/70 *cum laude*), Scuola Normale Superiore, Pisa, Italy. Title: *The B-Spline K-matrix Method in Atomic Physics*. Advisor: R Moccia.
  - Nov 22^{nd} 2001: Diploma in Chemistry (70/70 *cum laude*), Scuola Normale Superiore.
  - Nov 21^{st} 2001: Laurea in Chemistry (110/110 *cum laude*), University of Pisa.
  - Sep 2001: European Summer School in Quantum Chemistry, Lund Univ., Sweden.
  - Jul 1995: Gold Medal at the 27^{th} Int. Chem. Olympiad, Beijing, China.
  - Jun 1995: Highschool diploma (60/60) from ITIS "G. Natta", Padua, Italy.
  - Jul 1994: Silver Medal at the 26^{th} Int. Chem. Olympiad, Oslo, Norway.

- MEMBERSHIP IN PROFESSIONAL SOCIETIES:
  - member of the American Association of Physics Teachers (AAPT).
  - member of the American Physical Society (APS).
  - member of the Institute of Physics (IoP: the British equivalent of APS).
  - member of the Spanish Physics Royal Society.
  - member of the Sigma Xi Society.
  - member of CompAS, the International Collaboration on Computational Atomic Structure, https://ddwap.mah.se/tsjoek/compas/members.php.
  - chair of TAMOC, the Theoretical Atomic Molecular and Optical Physics (US) Community, https://sites.google.com/site/tamocphysics/home.

- SCHOLARSHIPS AND EMPLOYMENT

9. Aug 2020 – : associate professor of physics at the Department of Physics and CREOL at the University of Central Florida, in Orlando, Florida, US.
8. Mar 2016 – July 2020: assistant professor of physics (tenure track) at the Department of Physics and CREOL at the University of Central Florida, in Orlando, Florida, US.
7. Feb 2012 – Feb 2016: Post-doc fellowship at the Univ. Autonoma de Madrid (UAM).
6. Aug 2010 – Jan 2012: Research grant "Estancia de movilidad de investigadores extranjeros en España" (at UAM. Competitive grant, from Spanish Ministry of Education).
5. Jan 2009 – Jul 2010: Post doctoral fellowship at Stockholm University.
4. Apr 2007 – Nov 2008: Project grant *Mol. Quantum Mechanics: Methods and analysis of new phenomena* from the Appl. Chem. & Mat. Sci. Dep., Bologna University.

3. Nov 2005 – Oct 2006: Project grant *Mol. Quantum Mechanics: Methods and analysis of new phenomena* from the Appl. Chem. & Mat. Sci. Dep., Bologna University.
2. Jan 2002 – Dec 2004: 3 year PhD grant from Scuola Normale Superiore di Pisa.
1. Sep 1995 – Jul 2000: 5 year UG grant from Scuola Normale Superiore di Pisa.

- I. FINANCIAL SUPPORT OF RESEARCH

Grants as PI at UCF: 2 × 3y-NSF + 1× NSF REU supplement + 1 × 5y-DOE CAREER + 3 × 2y-P3 + 1 in-house + RFTS award + startup.

Total funds secured and managed as PI at UCF, since 2016 ∼$1.849M.

19. Dec 2022 – Nov 2023: Principal Investigator in two ORC UCF Preeminent-Postdoctoral Program grants (∼$ **132K** in co-funds from ORC for two 2y post-doctoral positions.
18. July 2021 – Dec 2021: co-Principal Investigator Course Redesign Initiative ($ **24.5K**, of which $ **7K** credited to me).
17. April 2020 – Apr 2023: Principal Investigator Reach For The Stars Award ($ **30K**).
16. 2020 – 2021: Principal Investigator NSF Research Experience for Undergraduate students (REU) supplement ($ **10K**).
15. Dec 2019 – Nov 2021: Principal Investigator in the ORC UCF Preeminent-Postdoctoral Program (∼$ **66K** in co-funds from ORC for a 2y post-doctoral position. Serch for the PD candidate is currently under way).
14. Sep 2019 – Aug 2024: Principal Investigator in the DOE EARLY CAREER award *New correlated numerical methods for attosecond molecular single and double ionization* (∼$ **750K**).
13. 2019 – 2024: secondary proposer in the European COST Action CA18222 *Attosecond Chemistry* (e-COST actions are networking grants within the Horizon 2020 European Research Council program. The average budget for e-COST actions is ∼ **€150K**. The actual budget for this action is still undisclosed. Dr. Argenti -UCF- and Dr. DiMauro -OSU- are the two only representatives from the US attosecond community).
12. Jul 2019 – Jun 2022: Principal Investigator in the NSF project 1912507 *Attosecond photoemission dynamics: novel* ab initio *methods for atomic and molecular ex-situ spectroscopies* (∼$ **327K**, Ranked in the *"Highest Quality"* category).
11. Jul 2017 – Jun 2019: Principal Investigator in the ORC UCF Preeminent-Postdoctoral Program (∼$ **38K** in co-funds from ORC for a 2y post-doctoral position. Recipient, Dr. Nicolas Douguet).
10. May 2017 – Apr 2018: Principal Investigator in the ORC UCF In-House Research Grant *New correlated numerical methods for attosecond molecular double ionization* (∼$ **7.5K**).
9. Sep 2016 – Aug 2019: Principal Investigator in the NSF project 1607588 *Theoretical Atomic Attosecond Spectroscopy: Monitor and Control of Electron Correlation in Real Time* (∼$ **288K**).
8. Sep 2016 – Aug 2019: Principal Investigator of the startup funds, jointly provided by the College of Sciences and the College of Optics, as part of my hiring package in the tenure-track position of Professor of Physics, Optics, and Photonics at the University of Central Florida (∼$ **200K**).
7. Jan 2014 – Dec 2016: Collaboration researcher in the MINECO project FIS2013-42002-R financed by the Spanish ministry of economy.

Computation in attosecond and material science: breaking the frontier between physics and chemitry.

6. Jan 2012 – Today: Collaboration researcher in the (FP7/2007-2013)/ERC-2011-AdG 290853-XCHEM
   XUV/X-ray lasers for ultrafast electronic control in molecules (XCHEM).
5. May 2013 – Today: Member of the COST Action CM1204
   XUV/X-ray light and fast ions for ultrafast chemistry (XLIC)
4. Jul 2011 – Dec 2011: Principal researcher of the QCM-2011-2-0034 RES Project (Red Española de Supercomputación). Granted resources: 100'000 CPUh.
   Interferometric structural characterization of polyatomic molecules in high-energy photoionization
3. Jan 2010 – Dec 2012: Collaboration researcher in the MICINN project FIS2010-15127 financed by the Spanish ministry of education and science.
   Computational modeling of unbound states in atomic and molecular physics
2. Aug 2010 – Jan 2012: Recipient of the grant SB2009-0029 "Estancias de Jóvenes Doctores Extranjeros en Centros Españoles", financed by the Spanish ministry of education
   Effect of nondipole terms and manybody correlation on the multiple fragmentation of atoms and small molecules upon the action of intense subfemtosecond xuv pulses.
1. Jan 2009 – Apr 2012: Member of the COST Action CM0702. *Chemistry with Ultra-Short Pulses and Free-Electron Lasers: Looking for Control Strategies Through Exact Computations*

II. RESEARCH

- RESEARCH INTERESTS: Quantum dynamics of unbound few-body systems; Theoretical photoelectron spectroscopy of atoms and molecules; Attosecond physics and quantum control in the continuum; Time-resolved non-linear optical response.

- PEER-REVIEWED, INDICIZED PUBLICATIONS:
  [In large collaborations, which are often the most impactful, the relative role of authors cannot be determined by the order in which they are listed. In the AMO community, the last authors are normally senior group leaders, in the first positions are the students who run the experiment or the numerical calculations. The vast majority of the publications I co-authored would arguably not have seen the light in their substantive form without my contribution. This is also the case for my ten publications with largest impact (4 PRL, 1 Optica, 3 Nat. Commun., 1 Nature, 1 Science).]

  52 – Harkema N, Cariker C, Lindroth E, Argenti L, Sandhu A, Phys. Rev. Lett. **127**, *in press* (2021) *Autoionizing Polaritons in Attosecond Atomic Ionization*

  51 – Mehmood S, Lindroth E, Argenti L, Phys. Rev. Research **3**, *in press* (2021) *Coherence Control of an Helium-Ion Ensemble*

  50 – Gharibnejad H, Douguet N, Schneider B I, Olsen J, Argenti L, Comp. Phys. Commun. **263**, 107889 (2021) *A multi-center quadrature scheme for the molecular continuum*

  49 – Fuchs J, Douguet N, Donsa S, Martín F, Burgdörfer J, Argenti L, Cattaneo L, Keller U, Phys. Rev. Research **3**, 013195 (2021) *Towards the complete phase profiling of attosecond wave packets*

48 – Turconi M, Barrou L, Busto D, Isinger M, Alexandridi C, Harth A, Squibb R J, Kroon D, Arnold C L, Feifel R, Gisselbrecht M, Argenti L, Martín F, Salières P, J. Phys. B: At. Mol. Opt. Phys. **53**, 184003 (2020) *Spin–orbit-resolved spectral phase measurements around a Fano resonance*

47 – Fuchs J, Douguet N, Donsa S, Martín F, Burgdörfer J, Argenti L, Cattaneo L, Keller U, Optica **7**, 154 (2020) *Time delays from one-photon transitions in the continuum*

46 – Donsa S, Douguet N, Burgdörfer J, Březinová I, and Argenti L, Phys. Rev. Lett. **123**, 133203 (2019) *Circular holographic ionization-phase meter*

45 – Barrou L, Petersson C L M, Klinker M, Camper A, Marante C, Gorman T, Kiesewetter D, Argenti L, Agostini P, González-Vázquez J, Salières P, DiMauro L, Martín F, Phys. Rev. Lett. **122**, 253203 (2019) *Disentangling Spectral Phases of Interfering Autoionizing States from Attosecond Interferometric Measurements*

44 – Ghomashi B, Douguet N, Argenti L, Phys. Rev. A **99**, 053407 (2019) *Resonant anisotropic emission in two-photon interferometric spectroscopy*

43 – Klinker M, Marante C, Argenti L, González-Vázquez J, Martín F, Phys. Rev. A **98**, 033413 (2018) *Partial cross sections and interfering resonances in photoionization of molecular nitrogen*

42 – Douguet N, Schneider B I, Argenti L, Phys. Rev. A **98**, 023403 (2018) *Application of the complex Kohn variational method to attosecond spectroscopy*

41 – Chew A, Douguet N, Cariker C, Li J, Lindroth E, Ren X, Yin Y, Argenti L, Hill W T III, and Chang Z, Phys. Rev. A **97**, 031407(R) (2018) *Attosecond transient absorption spectrum of argon at the $L_{2,3}$ edge*

40 – Cirelli C, Marante C, Heuser S, Petersson C L M, Jiménez-Galán Á, Argenti L, Zhong S, Busto D, Isinger M, Nandi S, Maclot S, Rading L, Johnsson P, Gisselbrecht M, Lucchini M, Gallmann L, Dahlström J M, Lindroth E, L'Huillier A, Martín F, and Keller U, Nature Communications **9**, 955 (2018) *Anisotropic photoemission time delays close to a Fano resonance*

39 – Klinker M, Marante C, Argenti L, Gonzalez-Vazquez J, and Martín F, J. Phys. Chem. Lett. **9**, 756 (2018) *Electron Correlation in the Ionization Continuum of Molecules: Photoionization of N_2 in the Vicinity of the Hopfield Series of Autoionizing States*

38 – Busto D, Barreau L, Isinger M, Turconi M, Alexandridi C, Harth A, Zhong S, Squibb R J, Kroon D, Plogmaker S, Miranda M, Jiménez-Galán Á, Argenti L, Arnold C L, Feifel R, Martín F, Gisselbrecht M, L'Huillier A, and Salières P, J. Phys. B: At. Mol. Opt. Phys. **51**, 044002 (2018) *Time-frequency representation of autoionization dynamics in helium*

37 – Waitz M, Bello R Y, Metz D, Lower J, Trinter F, Schober C, Keiling M, Lenz U, Pitzer M, Mertens K, Martins M, Viefhaus J, Klumpp S, Weber T, Schmidt L Ph H , Williams J B, Schöffler M S, Serov V V, Kheifets A S, Argenti L, Palacios A, Martín F, Jahnke T, and Dörner R, Nature Communications **8**, 2266 (2017) *Imaging the square of the correlated two-electron wave function of a hydrogen molecule*

36 – Marante C, Klinker M, Kjellsson T, Lindroth E, Gónzalez-Vázquez J, Argenti L, and Martín F, Phys. Rev. A **96**, 022507 (2017) *Photoionization using the xchem approach: Total and partial cross sections of Ne and resonance parameters above the $2s^2\,2p^5$ threshold*

35 – Petersson C L M, Argenti L, and Martín F, Phys. Rev. A **96**, 013403 (2017) *Attosecond transient absorption spectroscopy of helium above the N=2 ionization threshold*

34 – Argenti L, Jiménez-Galán Á, Caillat J, Taïeb R, Maquet A, and Martín F, Phys. Rev. A **95**, 043426 (2017) *Control of photoemission delay in resonant two-photon transitions*

33 – Marante C, Klinker M, Corral I, Gonzalez-Vazquez J, Argenti L, and Martín F, J. Chem. Th. Comp. **13**, 499 (2017) *A hybrid-basis close-coupling interface to quantum chemistry packages for the treatment of ionization problems*

32 – Heuser S, Jiménez Galán Á, Cirelli C, Sabbar M, Boge R, Lucchini M, Gallmann L, Ivanov I, Kheifets A, Dahlström J M, Lindroth E, Argenti L, Martín F, Keller U, Phys. Rev. A **94**, 063409 (2016) *Angular dependence of photoemission time delay in helium*

31 – Gruson V, Barreau L, Jiménez-Galan Á, Risoud F, Caillat J, Maquet A, Carré, Lepetit F, Hergott J-F, Ruchon T, Argenti L, Taïeb R, Martín F, Salières P, Science **354**, 734 (2016) *Attosecond dynamics through a Fano resonance: Monitoring the birth of a photoelectron*

30 – Cheng Y, Chini M, Wang X, González-Castrillo A, Palacios A, Argenti L, Martín F, Chang Z, Phys. Rev. A **94**, 023403 (2016) *Reconstruction of an excited-state molecular wave packet with attosecond transient absorption spectroscopy*

29 – Argenti L, Moccia R, Phys. Rev. A **93**, 042503 (2016) *Autoionizing states of atomic boron*

28 – Jiménez-Galán Á, Argenti L, Martín F, Phys. Rev. A **93**, 023429 (2016) *Two-photon finite-pulse model for resonant transitions in attosecond experiments*

27 – Kotur M, Guénot D, Jiménez-Galán Á, Kroon D, Larsen E W, Louisy M, Bengtsson S, Miranda M, Mauritsson J, Arnold C L, Canton S E, Gisselbrecht M, Carette T, Dahlström J M, Lindroth E, Maquet A, Argenti L, Martín F, and L'Huillier A, Nature Commun. **7**, 10566 (2016) *Phase measurement of a Fano window resonance using tunable attosecond pulses*

26 – Argenti L, Jiménez Galán Á, Marante C, Ott C, Pfeifer T, Martín F, Phys. Rev. A **91**, 061403(R) (2015) *Dressing effects in the attosecond transient absorption spectra of doubly excited states in helium*

25 – Ayuso D, Kimura M, Kooser K, Patanen M, Plésiat E, Argenti L, Mondal S, Travnikova O, Sakai K, Palacios A, Kukk E, Decleva P, Ueda K, Martín F, Miron C, J. Phys. Chem. A **119**, 5971 (2015) *Vibrationally resolved B 1s photoionisation cross section of BF_3*

24 – Jiménez Galán A, Argenti L, Martín F, Phys. Rev. Lett. **113**, 263001 (2014) *Modulation of attosecond beating in resonant two-photon ionization*

23 – Ott C, Kaldun A, Argenti L, Raith P, Meyer K, Laux M, Zhang Y, Blättermann A, Hagstotz S, Ding T, Heck R, Madroñero J, Martín F, Pfeifer T, Nature **516**, 374 (2014) *Reconstruction and control of a time-dependent two-electron wave packet*

22 – Patanen M, Kooser K, Argenti L, Ayuso D, Kimura M, Mondal S, Plésiat E, Palacios A, Sakai K, Travnikova O, Decleva P, Kukk E, Miron C, Ueda K, Martín F, J. Phys. B: At. Mol. Opt. Phys. **47**, 124032 (2014) *Vibrationally resolved C 1s photoionization cross section of CF_4*

21 – Marante C, Argenti L, Martín F, Phys. Rev. A **90**, 012506 (2014) *Hybrid Gaussian-B-spline basis for the electronic continuum: photoionization of atomic hydrogen*

20 – Argenti L, J. Phys.: Conf. Series **488**, 012010 (2014) *Ionization and transient absorption control with a resonant attosecond clock*

19 – Jiménez Galán Á, Argenti L, Martín F, New J. Phys. **15**, 113009 (2013) *The soft-photon approximation in infrared-laser-assisted atomic ionization by extreme-ultraviolet attosecond pulse trains*

18 – Ueda K, Mirón C, Plésiat E, Argenti L, Patanen M, Kooser K, Ayuso D, Mondal S, Kimura M, Sakai K, Travnikova O, Palacios A, Decleva P, Kukk E, Martín F, J. Chem. Phys. **139**, 124306 (2013) *Intramolecular photoelectron diffraction in the gas phase*

17 – Kukk E, Ayuso D, Thomas T D, Decleva P, Patanen M, Argenti L, Plésiat E, Palacios A, Kooser K, Travnikova O, Mondal S, Kimura M, Sakai K, Mirón C, Martín F, Ueda K., Phys. Rev. A **88**, 033412 (2013) *Effects of molecular potential and geometry on atomic core-level photoemission over an extended energy range: the case study of the CO molecule*

16 – Argenti L, Pazourek R, Feist J, Nagele S, Liertzer M, Persson E, Burgdörfer J, Lindroth E, Phys. Rev. A **87**, 053405 (2013) *Photoionization of helium by attosecond pulses: extraction of spectra from correlated wave functions*

15 – Carette T, Dahlström J M, Argenti L, Lindroth E, Phys. Rev. A **87**, 023420 (2013) *Multiconfiguration Hartree-Fock close-coupling ansatz: application to the Ar photoionization cross section and delays*

14 – Argenti L, Thomas T D, Plésiat E, Liu X J, Mirón C, Lischke T, Prümper G, Sakai K, Ouchi T, Püttner R, Sekushin V, Tanaka T, Hoshino M, Tanaka H, Decleva P, Ueda K, Martín F, New J. Phys. **14**, 033012 (2012) *Double-slit experiment with a polyatomic molecule: vibrationally resolved C 1s photoelectron spectra of acetylene*

13 – Plésiat E, Argenti L, Kukk E, Mirón C, Ueda K, Decleva P, Martín F, Phys. Rev. A **85**, 023409 (2012) *Intramolecular electron diffraction in vibrationally resolved K-shell photoionization of methane*

12 – Lindroth E, Argenti L, Adv. Quantum Chem. **63**, 247 (2012) *Atomic resonance states and their role in charge-changing processes*

11 – Argenti L and Moccia R, J. Phys. B: At. Mol. Opt. Phys. **43**, 235006 (2010) *Non-dipole effects in helium photoionization*

10 – Argenti L and Lindroth E, Phys. Rev. Lett. **105**, 053002 (2010) *Ionization branching ratio control with a resonant attosecond clock*

9 – Argenti L and Colle R, J. Phys. Chem. A **113**, 15078 (2009) *Two-particle Coulomb Green function method with projected potential: application to He double photoionization.*

8 – Argenti L, Bolognesi P, Colle R, Feyer V and Avaldi L, Phys. Rev. A **79**, 063408 (2009) *Photo-double-ionization of the ns shell of rare gases*

7 – Argenti L and Colle R, Comp. Phys. Commun. **180**, 1442 (2009) *On the B-splines effective completeness*

6 – Argenti L and Colle R, J. Phys. B: At. Mol. Opt. Phys. **41**, 245205 (2008) *A general algorithm for fitting efficiently triple differential cross sections of atomic double photoionizations.*

5 – Argenti L, At. Data Nucl. Data Tables **94**, 903 (2008) *Rydberg and autoionizing triplet states in helium up to N=5 threshold*

4 – Argenti L and Moccia R, J. Phys. B: At. Mol. Opt. Phys. **41**, 035002 (2008) *Helium 2 ^3S photoionization up to N=5 threshold*

3 – Argenti L and Moccia R, J. Phys. B: At. Mol. Opt. Phys. **40**, 3655 (2007) ^3S , $^3P^{o,e}$, $^3D^{e,o}$ *resonance series in Helium*

2 – Argenti L and Moccia R, Th. Chem. Acc. **118**, 485 (2007) *He photoionization: β_n and σ_n below N=5 and N=6 thresholds*

1 – Argenti L and Moccia R, J. Phys. B: At. Mol. Opt. Phys. **39**, 2773 (2006) *K-matrix method with B-splines: σ_{nl}, β_{nl} and resonances in He photoionization below N=4 threshold*

- PEER-REVIEWED, NON-INDICIZED PUBLICATIONS:
[The following "J. Phys.: Conference Series" are full peer-reviewed articles (as opposed to abstracts in conference proceedings), associated to invited or selected talks at conferences that have stipulated a publication agreement with the Institute of Physics (IOP).]

5 – Argenti L, Lindroth E, J. Phys.: Conf. Series **1412**, 072028 (2020) *NewStock, a time-dependent close-coupling program for atomic ionization*

4 – C L M Petersson, L Barreau, M Klinker, A Camper, C Marante, T Gorman, D Kiesewetter, L Argenti, P Agostini, J González-Vazques, L F DiMauro, P Salières, F Martín, J. Phys.: Conf. Series **1412**, 072010 (2020) *Disentangling spectral phases of interfering autoionizing states from attosecond interferometric measurements*

3 – Jiménez-Galán Á, Argenti L, Martín F, J. Phys: Conf. Series **635**, 012005 (2015) *Modulation of attosecond beating by resonant two-photon transition*

2 – Argenti L, J. Phys.: Conf. Series **488**, 012010 (2014) *Ionization and transient absorption control with a resonant attosecond clock*

1 – Lindroth E, Argenti L, Bengtsson J, Ferro F, Genkin M, Selstø S, J. Phys.: Conf. Series **194**, 012001 (2009) *The structure behind it all*

- arXiv PUBLICATIONS not yet published in peer-reviewed journals: *[arXiv is a restricted non-peer-reviewed online publication, where researchers make manuscripts available while they are still under revision]*

2 – Argenti L, Lindroth E, arXiv:2105.10847 , (May 2021) *Attosecond photoelectron spectroscopy of helium doubly excited states*

1 – Ghomashi B, Douguet N, Argenti L, arXiv:2105.10751 , (May 2021) *Attosecond Intramolecular-Scattering and Vibronic Delay*

- INVITED PUBLICATIONS: *[The followings three items are recent invitations by prominent journals to contribute with a topical review, or with an article for invitation-only special issues. Whereas I ultimately had to decline them, these invitations alone certify impact.]*

5. Aug. 7^{th} 2019: Invitation to contribute to a joint focus issue, by the two AMO journals *JPhys Photonics* and *JPhys B*, on "Attosecond Technology and Science".

4. Jan. 31^{st} 2019: Invitation to edit a multi-contributed monographic volume on theoretical attosecond spectroscopy for the Institute Of Physics Publishing.

3. Feb. 9^{th} 2017: Invited article on the special issue *Emerging attosecond technologies* on the *Journal of Optics* [guest editors: Dr. Caterina Vozzi (Politecnico di Milano), Dr. Giulio Vampa (Stanford University), Prof. Johan Mauritsson (Lund University)].

2. Jan. 20^{th} 2017: Invited article on the PCCP themed issue *XUV/X-ray light and fast ions for ultrafast chemistry.*

1. 2016: Invited Topical Review "Ionization and transient absorption control with a resonance attosecond clock" on the J. Phys. B: At. Mol. Opt. Phys.

- INVITED TALKS AT MAJOR INTERNATIONAL CONFERENCES:

  9 – *Autoionizing states in attosecond spectroscopy*, Frontiers in Optics 2021 + Laser Science (FiO/LS) Conference, Washington, DC - Oct 31^{st} - Nov 4^{th} 2021

  8 – *Circular Holographic Ionization-Phase Meter*, The 50^{th} Winter Colloquium on the Physics of Quantum Electronics (PQE 20), Snowbird, Utah - Jan 6^{th}-10^{th} 2020

  7 – *New time-dependent* ab initio *close-coupling programs for atomic and molecular ionization*, International Workshop *Attosecond Physics at the Nanoscale*, Center for Theoretical Physics of complex Systems (PCS) of the Institute for Basic Science (IBS), Daejeon, Korea - October 29^{th} - November 2^{nd} 2018.

  6 – *Attosecond studies of electronic concerted motion: an* ab initio *perspective*, DAMOP 2018, Graduate Student Symposium, Fort Lauderdale, FL, USA - May 28^{th} - June 1^{st} 2018

  5 – *Attosecond photoelectron spectroscopy of resonant transitions*, The 48^{th} Winter Colloquium on the Physics of Quantum Electronics (PQE 18), Snowbird, Utah - Jan 8^{th}-12^{th} 2018

  4 – *Birth of a resonant photoelectron wavepacket*, 25^{th} Intl. Conf. At. Phys. (ICAP 2016), Seoul, Korea - July 24^{th}-29^{th} 2016

  3 – *Time-resolved two-photon atomic transitions involving autoionizing states*, Int. Conf. on Many Particle Spectrosc. At., Mol., Clust. and Surf. (MPS2014), Metz, France - Jul 16^{th}-18^{th} 2014

  2 – *Ionization and transient absorption control with a resonant attosecond clock*, XXVIII Int. Conf. Phot., El. and At. Collisions (XXVIII ICPEAC), Lanzhou, China - Jul 24^{th}-30^{th} 2013

  1 – *Attosecond transient absorption spectroscopy of doubly excited states in helium*, XXXVIII Int. Conf. Vac. UV and X-ray Phys. (VUVX2013), Hefei, China - Jul 12^{th}-19^{th} 2013

- INVITED TALKS AT MAJOR INTERNATIONAL WORKSHOPS AND MEETINGS:

  15 – *A new time-dependent* ab initio *close-coupling program for atomic ionization*, Annual CompAS Meeting, Lund University, Sweden - June 14^{th}-18^{th} (2018)

14 – *A new time-dependent* ab initio *close-coupling program for atomic ionization*, ITAMP Workshop *Developing Flexible and Robust Software in Computational Atomics and Molecular Physics*, ITAMP, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA - May 14^{th}-16^{th} (2018)

13 – *Attosecond interferometric spectroscopy of resonant transitions*, Workshop on Trends in Ultrafast Laser Science, Univ. Colorado, Boulder, CO, USA - August 16^{th}-18^{th} 2017

12 – *A hybrid-basis close-coupling interface to quantum chemistry packages for the treatment of ionization problems*, 2016 joint Attosecond-MURI annual meeting, Univ. Arizona, Tucson, AZ, USA - November 14^{th}-15^{th} 2016

11 – *Attosecond Interferometric Spectroscopy of Resonant Transitions*, ITAMP Workshop *The electronic-structure problem in theoretical strong-field physis*, ITAMP, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA - October 10^{th}-14^{th} (2016)

10 – *Reconstruction of Electronic and Vibrational Wavepackets with Attosecond Spectroscopies*, 2015 Joint-Attosecond-MURI Annual Meeting University of Central Florida, Orlando, FL, USA - Nov 12^{th}-13^{th} 2015

9 – *Attosecond interferometric spectroscopy of resonant two-photon transitions*, 3^{rd} Gen. Meeting of XLIC COST Action CM1204, Debrecen, Hungary - Nov 2^{nd}-4^{th} 2015

8 – *Modulation of attosecond beating in resonant two-photon ionization*, Nordita workshop "Control of Ultrafast Quantum Phenomena", Stockholm, Sweden - May 21^{st} 2015

7 – *Modulation of attosecond beating in resonant two-photon ionization*, 2^{nd} Gen. Meeting of XLIC COST Action CM1204, Gdansk, Poland - Sep 10^{th}-14^{th} 2014

6 – *Interferometric imprint of molecular geometry in high-resolution photoelectron spectra*, Kick-off meeting of COST Action MP1203, Ministry of Research, Paris, France - Apr 4^{th} - 5^{th} 2013

5 – *Attosecond transient absorption spectroscopy of doubly excited states in helium*, Int. Workshop At. Phys. (IWAP2012), MPI Complex Sys., Dresden, Germany - Nov 26^{th}-30^{th} 2012

4 – *Interferometric imprint of molecular geometry in high-resolution photoelectron spectra*, Annual Workshop Finnish Synch. Rad. Users Org. (FSRUO2012), Turku, Finland - Oct 22^{nd}-23^{rd} 2012

3 – *Spectral analysis of correlated wave functions for attosecond photoionization processes*, Int. Workshop At. Phys. (IWAP2011), MPI Complex Sys., Dresden, Germany - Nov 20^{th}-25^{th} 2011

2 – *Simulating XUV-pump IR-probe experiments in helium: a theoretical real-time investigation of doubly excited states*, Symp. on Trends in Exp. Phys.: multi-particle coincidence spectrosc. of At. and Mol., University of Uppsala, Sweden - May 28^{th} 2010

1 – *The role of doubly excited states when atoms interact with short laser pulses*, Int. Workshop At. Phys. (IWAP2009), MPI Complex Sys., Dresden, Germany - Nov 23^{rd}-27^{th} 2009

- CONTRIBUTIONS SELECTED FOR ORAL PRESENTATION AT INTERNATIONAL CONFERENCES (HOT TOPICS):

  11 – *Time resolved intramolecular photoelectron scattering*, DAMOP 2021, online - May 31^{st} - June 4^{th} 2021

  10 – *Time delay from one-photon transitions in the continuum*, Ultrafast Phenomena, online - Nov 16^{th} - 19^{th} 2020

  9 – *Time delay from one-photon transitions in the continuum*, DAMOP 2020, online - June 1^{st} - 5^{th} 2020

  8 – *A RABBITT attoclock for the direct measurement of photoionization time delays*, DAMOP 2019, Fort Lauderdale, FL, USA - May 27^{th} - 31^{st} 2019

  7 – *A new time-dependent* ab initio *close-coupling program for atomic ionization*, DAMOP 2018, Fort Lauderdale, FL, USA - May 28^{th} - June 1^{st} 2018

  6 – *Control of photoemission delay in resonant two-photon transitions*, DAMOP 2017, Sacramento, CA, USA - Jun 5^{th}-9^{th} 2017

  5 – *Birth of a resonant attosecond wavepacket*, DAMOP 2016, Providence, RI, USA - May 23^{rd}-27^{th} 2016

  4 – *Modulation of attosecond beating in resonant two-photon ionization*, Intl. Symp. on: (e,2e), double photoionization and related topics; polarization and correlation in electronic and atomic collisions, San Sebastián, Spain - Jul 30^{th}- Aug 1^{st} 2015

  3 – *Modulation of attosecond beating in resonant two-photon ionization*, ATTO2015, St-Sauveur, Canada - Jul 6^{th}-10^{th} 2015

  2 – *Attosecond transient absorption spectroscopy of doubly excited states in helium (hot topic)*, XII Int. Conf. El. Spectrosc. and Struct. (ICESS2012), Saint-Malo, France - Sep 16^{th}-21^{st} 2012

  1 – *Ionization branching ratio control with a resonance attosecond clock (hot topic)*, X Eur. Conf. At., Mol. and Phot. (ECAMP10), Salamanca, Spain - Jul 5^{th}-9^{th} 2010

- ORAL CONTRIBUTIONS TO OTHER WORKSHOPS AND MEETINGS:
  [The following are restricted international workshop/meetings predominantly based on oral contributions.]

  8 – *Theoretical attosecond spectroscopies at UCF*, Mini Workshop on attosecond physics, UCF - April 2, 2019

  7 – *Attosecond studies of electronic concerted motion in atoms: an ab initio perspective*, Seminar at the Dept. Physics of the University of Nebraska, upon invitation by Prof. Anthony Starace., Lincoln (NE) - April 25, 2018

  6 – *Theoretical Atomic Attosecond Spectroscopies*, 2016 ISSNAF Awards for Young Investigators, Italian Embassy, Washington DC, USA - October 18^{th} 2016

  5 – *Vibrationally resolved photoelectron spectroscopy of CH_4: studying electron diffraction from within*, Studying Quantum Mechanics in the Time Domain, Nordita, Albanova Center, Stockholm, Sweden - Aug 22^{nd} - Sep 16^{th} 2011

  4 – *Towards an interferometric spectroscopy of metastable wave packet dynamics*, Studying Quantum Mechanics in the Time Domain, Nordita, Albanova Center, Stockholm, Sweden - Aug 22^{nd} - Sep 16^{th} 2011

3 – *Benefits and inconveniences of channel-specific absorption boundaries for the solution of the TDSE*, Time-dependent quantum mechanics - analysis and numerics, Center of Math. for Appl., Oslo, Norway - Apr 28^{th} 2010

2 – *XUV-pump IR-probe investigation of doubly excited states in helium*, COST CM0702 WG1 meeting, Domaine de Masure, Han-sur-Lesse, Belgium - Apr 12^{th}-15^{th} 2010

1 – *Three-active-electron systems with the B-spline K-matrix method: positions, widths and branching ratios of boron resonances*, Workshop on num. meth. for time-dep. quant. mech.: appl. for laser-at./mol. int., Vestlia Resort AS, Geilo, Norway - Feb 6^{th} 2009

- CONGRESSES WITH NON-ORAL CONTRIBUTIONS (POSTERS)

[It is understood that in many of the conferences to which I have been invited or offered to talk, I also presented posters. In those cases, the main justification for the participation to the conference is the oral communication, in which case the poster contributions presented there are not mentioned below. I have often presented several posters to the conferences where I do not talk - e.g., five at XXV ICPEAC (2007) alone. In the following, however, I do not list each individual poster contribution separately. Finally, I appear as co-author or leading authors in multiple posters presented by colleagues and by students under my supervision. Most of those are not listed either.]

23 – *DAMOP 2021*, online - May 31^{st}-4^{th} 2020

22 – *DAMOP 2020*, online - June 1^{st}-5^{th} 2020

21 – *ICPEAC 2019*, Deauvulle - Jul 23^{rd}-30^{th} 2019

20 – *ATTO 2019*, Szeged, Hungary - Jul 1^{st}-5^{th} 2019

19 – *DAMOP 2019*, Milwaukee, WI - May 27^{th}-31^{st} 2019

18 – *ICPEAC*, Cairns, QLD, Australia - Jul 26^{th}-Aug 1^{st} 2017

17 – *DAMOP*, Sacramento, CA, USA - June 5^{th}-9^{th} 2017

16 – *Gordon Research Conference, Multiphoton Processes*, Proctor Academy, Andover, NH, USA - June 19^{th}-24^{th} 2016

15 – *XXIX Int. Conf. on Phot., El. and At. Collisions (XXIX ICPEAC)*, Toledo, Spain - July 22^{nd}-28^{th} 2015

14 – *Joint meeting XLIC (XUV/X-ray light and fast ions for ultrafast chemistry) - CORINF (Correlated Multielectron Dynamics in Intense Laser Fields)*, University College London, London, United Kingdom - July 3^{rd}-4^{th} 2014

13 – *Joint meeting XLIC (XUV/X-ray light and fast ions for ultrafast chemistry) - CORINF (Correlated Multielectron Dynamics in Intense Laser Fields)*, Madrid, Spain - Nov 11^{th}-15^{th} 2013

12 – *XII Int. Symp. on Ultrafast Intense Laser Science (ISUILS12)*, Salamanca, Spain - Oct 6^{th}-11^{th} 2013. *[Recipient of "The Best Poster Presenter Award". Jury composed by Luis Roso, Ruxin Li, and Kaoru Yamanouchi]*

11 – *IV Annual Meeting of the COST Action CM0702*, Cluj-Napoca, Romania - Mar 21^{st}-23^{rd} 2012

10 – *XXVII Int. Conf. on Phot., El. and At. Collisions (XXVII ICPEAC)*, Belfast, UK - Jul 27^{th} - Aug 2^{nd} 2011

9 – *Conf. on Femtochemistry (FEMTO10)*, Madrid, Spain - July 10^{th}-15^{th} 2011

8 – *COST CM0702 WG-1 Workshop on Methods and Codes for At. and Mol. in Strong Laser Fields*, Dublin, Ireland - Apr 27^{th}-30^{th} 2011

7 – *Workshop on new light sources*, Sønderborg, Denmark - May 27^{th}-29^{th} 2009

6 – *Many particle spectrosc. of At., mol., clust. and surf. (MPS08)*, Paris, France - Jun 30^{th} - Jul 2^{nd} 2008

5 – *XIV Int. Symp. and Correlation in El. and At. Collisions and the Int. Symp. on* $(e, 2e)$*, Double Photoionization and Related Processes*, Koenigstein, Germany - Aug 1^{st}-4^{th} 2007

4 – *XXV Int. Conf. on Phot., El. and At. Collisions (XXV ICPEAC)*, Freiburg, Germany - Jul 25^{th}-31^{st} 2007

3 – *XXXVIII Conf. of the Eur. Group for At. Sys. (EGAS38)*, Ischia, Italy - Jun 7^{th}-10^{th} 2006

2 – *III Conf. on Elem. Proc. in At. Sys. (CEPAS2005)*, Miskolc, Hungary - Aug 31^{st}-Sep 2^{nd} 2005

1 – *XXXVII Conf. of the Eur. Group for At. Sys. (EGAS37)*, Dublin, Ireland - Aug 3^{rd}-6^{th} 2005

- AWARDS
  [compare with research projects, below]

  2. April 2020: Reach For The Stars Award ($ **30K**).
  1. Sep 2019: DOE Early Career Award (∼$ **750K**).

- RESEARCH MISSIONS

12 – *Scientific mission*, July 8^{th}-11^{th} 2019 - TUV, Vienna, Austria.
Purpose: Revise manuscript on circular holographic ionization-phase meter.;

11 – *Scientific mission*, June 1^{st}-8^{th} 2019 - NIST, Gaithersburg, MD.
Purpose: New correlated num. methods for as molecular double ionization #5;

10 – *Scientific mission*, May 16^{th}-19^{th} 2018 - NIST, Gaithersburg, MD.
Purpose: New correlated num. methods for as molecular double ionization #4;

9 – *Scientific mission*, July 2^{nd}-7^{th} 2017 - NIST, Gaithersburg, MD.
Purpose: New correlated num. methods for as molecular double ionization #3;

8 – *Scientific mission*, June 19^{th}-23^{rd} 2017 - UAM, Madrid, Spain.
Purpose: XCHEM advancements, in collaboration with F. Martín at UAM.;

7 – *Scientific mission*, May 15^{th}-19^{th} 2017 - NIST, Gaithersburg, MD.
Purpose: New correlated num. methods for as molecular double ionization #2;

6 – *Scientific mission*, March 13^{th}-17^{th} 2017 - NIST, Gaithersburg, MD.
Purpose: New correlated num. methods for as molecular double ionization #1;

5 – *Short-term scientific mission*, Jan 27^{th}-31^{st} 2014 - Stockholm Univ., Sweden.
Purpose: Integrate a TDSE solver and a Lippmann-Schwinger equation solver in the suite of Stockholm MCHF close-coupling program for atomic photoionization;

4 – *Modeler for analysis of experimental data*, Apr 19^{th}-23^{rd} 2012 - Dep. Phys., Univ. of Turku, Finland.
Purpose: Develop a robust model for the parametrization of the data collected at Soleil synchrotron during mission n° 3;

3 – *Embedded theoretician in experiment*, Feb 22^{nd}-27^{th} 2012 - Soleil synchrotron, Gif-sur-Yvette, France.
Purpose: Provide on-the-run theoretical guidelines for the measurement of vibrationally-resolved core photoionization cross sections of BF_3, CH_4 and CF_4 molecules from the $1s$ orbital of the central atom;

2 – *Short-term scientific mission*, Aug 22^{nd} - Sep 4^{th} 2011 - Stockholm Univ., Sweden.
Purpose: Design of the Stockholm MCHF close-coupling atomic photoionization code;

1 – *Short-term scientific mission*, Nov 14^{th}-27^{th} 2010 - TUV, Austria.
Purpose: Implement a projector on multi-channel B-spline close-coupling scattering states for wave packets computed with a FE-DVR TDSE code developed at TUV in Vienna;

- HOSTED VISITORS AT UCF

8. Vicent Borras de Llano (Madrid, Spain), Sep 18 - Dec 13, 2019.

8. Isaac Guerra (SENACYT, Panama), May 18 - Aug 18, 2019.

7. Dr. Eva Lindroth (Stockholm University, Sweden), Oct 6 - 12, 2018.

6. Dr. Barry Schneider, Dr. Heman Gharibnejad (NIST), and Prof. Jeppe Olsen (University of Aarhus, Nederlands, EU), Fri Sep 14 - Fri Sep 21, 2018,

5. Dr. Renate Pazourek (Vienna Institute of Technology, Austria, EU), Apr 1 2018.

5. Dr. Klaus Barschat (Drake University), Mar 20 - 23, 2018.

4. Stefan Donsa (Vienna Institute of Technology, Austria, EU), Mar - Aug 2018,

3. Dr. Barry Schneider, Dr. Heman Gharibnejad (NIST), and Prof. Jeppe Olsen (University of Aarhus, Nederlands, EU), Sat Dec 9 - Fri Dec 15, 2017,

2. few days in Jul 2016, Dr. Barry Schneider (NIST),

1. the month of Oct 2016, Tor Kjellsson (Stockholm University).

III. TEACHING

- CLASSES TAUGHT:

14. Spring 2021, Instructor of OSE3053 "Electromagnetic Waves for Photonics", UCF.

13. Fall 2020, Instructor of PHY2054C "College Physics II", UCF.

12. Spring 2020, Instructor of OSE3053 "Electromagnetic Waves for Photonics", UCF.
11. Fall 2019, Instructor of PHY2048C "General Physics Using Calculus I", UCF.
10. Spring 2019, Instructor of OSE6111 "Optical Wave Propagation", UCF.
9. Fall 2018, Instructor of PHY3220 "Classical Mechanics I", UCF.
8. Spring 2018, Instructor of OSE6111 "Optical Wave Propagation", UCF.
7. Fall 2017, Instructor of PHY3220 "Classical Mechanics I", UCF.
6. Spring 2017, Instructor of OSE6111 "Optical Wave Propagation", UCF.
5. Fall 2016, Instructor of PHY3220 "Classical Mechanics I", UCF.
4. 2012-2015 "Laser" course for the Master in Theo. Chem. & Comp. Modeling (MTCCM).
3. Int. Spring School on New Computational Methods for Attosecond Molecular Processes [wrote the proposal, which got funded by CECAM for 10'000 euros].
2. Undergraduate course "Informatics applications in Chemistry" (66 hours, 2013-15).
1. 2015 Gen. Chem. seminars for undergrad. Env. Chem. at UAM, Madrid, Spain (EU).

- STUDENTS SUPERVISED IN THESES:

9. Direction of Didarul Ahlam's research, UCF, *Role of shake-up channels in neon photoionization time delay*
8. Direction of Bejan Ghomashi's Honors-In-the-Major thesis, UCF, *Twisted RABBIT: photoelectron spectroscopies with circularly polarized attosecond-pulse trains* (PHY4903H, started Spring semester 2017. Thesis defended on July 25 2018. Student has graduated, presented his research at DAMOP Annual Intl. Conference as a poster [M01.46]. A manuscript based on the HIM thesis, with Bejan as first author, has been recently published on Phys. Rev. A: B. Ghomashi, N. Douguet, L. Argenti, *Resonant anisotropic emission in two-photon interferometric spectroscopy*, Phys. Rev. A **99**, 053407 (2019).
7. Direction of Jeremy Ponsot's Honors-In-the-Major thesis, UCF, *Time-resolved decay of intruder states* (PHY4903H, started Spring semester 2017. Thesis proposal submitted on Dec 1, 2017, and subsequently approved. Jeremy has presented his results at DAMOP as a poster [M01.45]).
6. Direction of Paul Kutch's Independent Research, UCF, *Theoretical atomic attosecond photoelectron spectroscopy* (PHY4912, Summer 2016).
5. Direction of Coleman Cariker's PhD thesis, UCF, *Attosecond Transient Absorption Spectroscopy of Autoionizing States in Complex Atoms* (direction started Summer semester 2016; dissertation proposal defended successfully in Jan 2017; Currently: PHY7980; PhD thesis defense should take place in 2020. Student is currently fully supported, and he will be through Fall 2019).
4. Direction of Saad Mehmood's PhD thesis, UCF, *Coherence Control in time-resolved Atomic Photoelectron Spectroscopies* (direction started Summer semester 2016; Currently: PHY6918; dissertation proposal defended successfully in Spring 2017; PhD thesis defense should take place in 2020. Student will be supported through Fall 2019).
3. Direction of Carlos Marante's PhD thesis, UAM, *Photoelectron spectroscopy of atoms and molecules with novel light sources*, defended on September 21, 2017.

2. Direction of Á. Jiménez Galán's PhD thesis, UAM, *Attosecond spectroscopy of autoionizing states*, defended on December 15^{th} 2015.

1. Direction of Á. Jiménez Galán's master thesis, UAM, *Attosecond interferometric spectroscopy of doubly excited states in helium*, defended on July 16^{th} 2013.

- TEACHING HABILITATION & TRAINING: - Habilitation as Prof. Ayudante Doctor (lecturer, fixed-term), Prof. Contratado Doctor (lecturer, permanent), Prof. Universidad Privada (professor, private university). July 15^{th} 2014, ANECA, Spain.
  - Participated to the New Faculty Workshop of the American Association of Physics Teachers (AAPT), on active-learning techniques, Nov. 2^{nd}-5^{th} 2017, College Park, MD.
  - Successfully completed the Fall 2018 edition of IDL 6543, UCF faculty development program for creating and teaching online courses.

IV. SERVICE TO THE PROFESSION AND TO THE UNIVERSITY

- MEMBER OF THE DAMOP ORGANIZING COMMITTEE: DAMOP (Annual conference of the Division of Atomic Molecular and Optical Physics of the American Physical Society) is the main American-based annual conference in AMO Physics. I have been co-opted in the Laser & Ultrafast subcommittee in June 2017, where I will serve until 2020. In particular:
  - I have contributed to define the list of sessions and of invited speakers of both the 2018 (Ft. Lauderdale, FL) and 2019 (Milwaukee, WI) edition of the conference.
  - I chaired session J5 (time resolved molecular spectroscopy) of the 2017 edition.
  - I participated to the Abstract Sorter Meeting in Washington, Feb 8-10 2018.
  - Chair the DAMOP'20 Laser & Ultrafast subcommittee, in which capacity I have solicited nomination from about 300 international researchers and directed the organization of thirteen sessions of the DAMOP2020 conference.
- MEMBER OF THE CLEO-US FS7 SUBCOMMITTEE: CLEO-US (Conference on Lasers and Electro-Optics) together with its European counterpart, CLEO-EU, is the go-to conference for laser science. I have been asked to serve in the High-Field Physics and Attoscience Subcommittee in 2017. I have contributed to the selection and ranking of the abstracts for both the 2018 edition as well as the upcoming 2019 edition. For the 2018 edition, I have participated to the abstract-sorter meeting, where contributions and oral presentations are finally decided.
- MEMBER OF THE ICPEAC ORGANIZING COMMITTEE: ICPEAC (International Conference of Photonic, Electronic, and Atomic Collisions) is one of the two major atomic physics international biannual conferences. In particular, as US representative, I attended the General Sorter Meeting at RIKEN, Tokio, in March 2017. I am currently contributing to the preparation of the 2019 edition of the conference (July 2019, Deauville, France).
- MEMBER OF THE ATTO2019 COMMITTEE: ATTO is the main professional international biannual conference in attosecond science. I have been asked in June 2018 to join the organizing committee, and I have contributed to the preparation of the 2019 edition of the conference (July 1-5 2019, Szeged, Hungary). On that occasion, I presented the candidacy of UCF for the next edition of ATTO conference, in 2021, which was approved.
- CO-CHAIR OF TAMOC: I am the co-chair, together with Dr. Anh-Thu Le, of the Theoretical Atomic Molecular and Optical (US) Community (TAMOC). In this capacity, I administer the TAMOC webpage https://sites.google.com/site/tamocphysics and I have organized the 2021 TAMOC annual meeting, http://meetings.aps.org/Meeting/DAMOP21/Session/G02, which featured presentations from the program managers of the atomic molecular and optical programs of the National Science Foundation (NSF), of the Department of Energy

(DOE), and of the Army Research Office (ARO), as well as the directors of the Harvard-Smithsonian Institute of Theoretical Atomic and Molecular Physics (ITAMP, Cambdridge, MT), of the Kavli Institute of Theoretical Physics (KITP, Santa Barbara, CA), and of the James R. Macdonald Laboratory (Manhattan, KS).

- CO-CHAIR OF THE ATTO2021 CONFERENCE: I will co-chair, together with Dr. Michael Chini and Dr. Li Fang, and with the collaboration of the other members of the local organizing committee (currently: Dr. Mihai Vaida -UCF- , Dr. Madhab Neupane -UCF-, and Dr. Nicolas Douguet -Kennesaw U, GA-), the next edition of the ATTO conference.
- REFEREE FOR: 1) Nature Physics; 2) Phys. Rev. Lett.; 3) Phys. Rev. A; 4) Sci. Rep.; 5) New J. Phys.; 6) Optics Express; 7) J. Phys. Chem. Lett.; 8) Physical Chemistry Chemical Physics (PCCP); 9) J. Chem. Th. Comp.; 10) Comp. Phys. Commun.; 11) J. Phys. B: At., Mol. Opt. Phy.; 12) Struct. Dyn. (AIP); 13) Eur. Phys. J. D; 14) J. Phys.: Conf. Series; 15) Physics Letters A; 16) Cent. Eur. J. Phys.; 17) Chin. Opt. Lett.; 18) RSC book "Chemistry and Molecular Physics on the attosecond timescale: theoretical approaches";

- Editor of the Journal Atoms:
  Assigned the review of two NSF proposals (Jan 2018).
  Assigned the review of three NSF proposals (Feb 2017).
- Reviewer for NSF:
  Participated in the review panel of the NSF AMO theory program (Spring 2021)
  Written eight ad-hoc reviews of NSF proposals (Spring 2021)
  Participated in the review panel of the Harvard-Smithsonian Institute of Theoretical Atomic and Molecular Physics (ITAMP) in 2019.
  Assigned the review of two NSF proposals (Jan 2018).
  Assigned the review of three NSF proposals (Feb 2017).
- Reviewer for DOE:
  Participated in the review panel of a joint research program at the Lawrence Berkeley National Laboratory (NBNL) (2020).
  Assigned the review of one DOE proposal (Jan 2020).
  Assigned the review of one DOE proposal (Jan 2018).
  Assigned the review of one DOE proposal (March 2017).

- OTHER RECOGNITIONS WITHIN U.S.

  2. On Feb. 7th 2017 I have been co-opted, upon invitation of Prof. Charlotte Fröse Fischer, in the CompAS group (*The international collaboration on Computational Atomic Structure*, http://ddwap.mah.se/tsjoek/compas).

  1. Since Fall 2016, I have been made Research Associate at NIST.

- Service in UCF Campus-wide Committees:
  - 2021. Member of the search committee for the new Dean of the UCF College of Sciences,
  - 2021. Member of the search committee for the new Vice-President for Diversity, Equity, and Inclusion,
  - 2020-2021. Senator at large for the College of Sciences at the University of Central Florida Senate,
  - 2020-2021. Member of the Steering Committee of the Senate of the University of Central Florida,
  - 2020-2021. Member of the Budget and Administration Committee of the Senate of the University of Central Florida,

- Member / chair in UCF Physics and CREOL PhD committees:

  2020: Eric Switzer (PHY, Member; Adv.: Dr. Rahman); Sunghyun Kim (PHY, Member; Adv.: Dr. Klemm); Joshua Forer (PHY, Member; Adv.: Dr. Kokoouline).
  2019: Chi Hong Yuen (PHY, Member; Adv.: Dr. Kokoouline).
  2018: Daniel Bonior (PHY, Member; Adv.: Dr. Mucciolo); Bejan Ghomashi (PHY, Chair; Adv.: Dr. Argenti); Sayandip Dhara (PHY, Member; Adv.: Dr. Mucciolo); Andrew Chew (CREOL, Member; Adv.: Dr. Chang).
  2017: Saad Mehmood (PHY, Chair; Adv.: Dr. Argenti); Coleman Cariker (PHY, Chair; Adv.: Dr. Argenti); Tianyi Guo (PHY, Member; Adv.: Dr. Chang); Justin Reyes (PHY, Member; Adv.: Dr. Mucciolo); Shima Gholam Mirzaei Moghadar (PHY, Member; Adv.: Dr. Chini); Zahoora Sanjabi (CREOL, Member; Adv.: Dr. Correa).
  2016: Marjan Khamesian (PHY, Member; Adv.: Dr. Kokoouline); Andrew Chew (CREOL, Member; Adv.: Dr. Chang).

- Service in UCF Physics and CREOL Departmental Committees:
  - Serving in the Search Committee for a new faculty position for experimental Strong Field Laser-based Plasma Physics (chair Dr. Chang)
  - Member of the Diversity, Equity, and Inclusion committee of the Department of Physics of the University of Central Florida,
  - Member of the Diversity, Equity, and Inclusion committee of the College of Optics of the University of Central Florida,
  - Member of the Bridge committee. As part of it, I met with Leslie Davis, Christopher Sims, Andrew Malfavon, and Anthony Asilador to ascertain their progress in actively participating to research within the department, and to facilitate meeting with potential future supervisors.
  - Member of the Graduate Candidacy Committee at Phys. Dep.: prepared and graded the classical mechanics part of the candidacy exam in Physics since Fall 2016 (five editions, including Fall 2018, held Jan 2019).
  - Member of the Outreach Committee at Phys. Dep. [actively contributed to the Career day in 2016, 2017, and 2018, with a talk to the latter; participated to career discussion panel at local high-school; contributed to the Family-fun day (Sat 11, 2017); to the Mini-career day (Fri Apr 14, 2017); participated as a judge to the Florida TSA conference; Physics Olympiads seminar at Seminole High School, Tue Oct 23, 2018].
  - Served as Judge in the 9th Annual Nanoscience Technology Symposium (Sep 25-26, 2016).
- Service in the Undergraduate Mentoring program:
  - 2020 Spring (6 students): Ryan Ells, Carlos Gonzalez, Gregory Hammock, Jesse Johnson, Kylee Magaw, Luis Santori.
  - 2018 Spring (6 students): Joseph Kabourek, Andrew Silverman, Andrew Sippel, Evelyn Smith, Jared Turnage, Jonathan Van Den Heiden.
  - 2017 Fall (5 students): Zainulabedin Khan, William Neff, Antonett Nunez-DelPrado, Kyle Ricketson, Christopher Stackhouse.
  - 2017 Spring (5 students): Angelo Farfan, Tyler Ferrell, Ali Khater, Sunny Patel, Jeremy Ponsot.
- Prepared reference letters for:
  - Rod Long (UG), for multiple graduate-program applications (Feb 2022),
  - Nicolas Douguet (post-doc), for multiple tenure-track positions (Dec 2018 - Jan 2019),
  - Jamal Khayat (UG), for multiple PhD programs (Jan 2019),
  - Jamal Khayat (UG), for the Funder's day award (Jan 2019),
  - Bejan Ghomashi (UG), for multiple PhD programs (Dec 2018-Jan 2019),

- Sarah Bartley (UG), for multiple PhD programs (Dec 2018),
- Jamal Khayat (UG), for the Goldwater scholarship (Dec 2018),
- Niranjan Shivaram (post-doc), for green-card application (July 2018),
- Nestor Aguirre (post-doc), for green-card application (May 2018),
- Jeremy Ponsot (UG), to apply to the HIM Scholarship (2018),
- Bejan Ghomashi (UG), for the Funder's day award (Nov 30, 2017),
- Jamal Khayat (UG), for multiple REU programs (Jan 2018),
- Swapneal Jain (UG), for multiple PhD programs (Dec 2017),
- Darian Smalley (UG), for the Goldwater Scholarship (Jan 2018),
- Ali Khater (UG), for multiple PhD programs (Oct 2017),
- Chi Hong Yuen (PhD), for the Chateaubriand fellowship (research in France).
- Coleman Cariker (PhD), to participate to the 67^{th} Lindau meeting,
- Saad Mehmood (PhD), for travel grant to DAMOP, from the Few-Body Group of APS,
- Antonett Nuñez-delPrado (UG), for multiple REU programs (Jan 2017),
- Cody Jordan (UG), for multiple REU programs (Jan 2017).

- Informal Tutoring:
  - Hunter Cannan (PHY, UG: since Spring 2018, for a couple of months).

- Organization of Seminars at UCF Phys. Dept.:
  - by Dr. Fernando Martín, Hans Jacob Wörner, Francoise Remacle (April 2^{nd} 2019),
  - by Dr. Eva Lindroth (Stockholm University, Oct 10 & 11, 2018),
  - by Dr. Renate Pazourek (Vienna University of Technology, Apr 1st 2018),
  - by Dr. Klaus Bartschat (Drake University, Mar 2018),
  - by Dr. Guillaume Laurent (University of Auburn, Mar 10^{th} 2017),
  - by Dr. Nicolas Douguet (Drake University, Feb 2nd 2017),
  - by Dr. Néstor Aguirre (Universidad Autónoma de Madrid, Aug 2016).

- Other service activities at UCF Phys. Dept.:
  - prepared and delivered, on Sat April 22 2017, and Sat March 24 2018, with Dr. M Chini, the mini-lecture "Fast and Furious: how new light sources enable new science", within the Scholars Day (UCF recruitment initiative).
  - prepared the content for the AMO webpage of the Physics Internet site.
  - meeting with several applicants to Assistant Professorship positions.
  - delivered freshmen seminar (PHY), Tue Oct 3, 2017.

- ORGANIZATION OF TRAINING EVENTS:

2. Spring School on New Computational Methods for Attosecond Molecular Processes, Mar $16^{th} - 20^{th}$ 2015, ZCAM, Zaragoza, Spain.

1. Chair of the "Young Scientists Session", Nov 2013, Meeting of the Int. Training Network *Correlated Multielectron dynamics in Intense Laser Fields* (CORINF) at IMDEA-Nanociencia, UAM, Spain.