

Dr. Michael Chini

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EDUCATION

University of Central Florida, Orlando FL

Ph.D. in Physics **2010-2012**
Dissertation: “Characterization and Application of Isolated Attosecond Pulses”
Advisor: Zenghu Chang

Kansas State University, Manhattan KS

Ph.D. Candidate in Physics **2007-2010**
Advisor: Zenghu Chang

McGill University, Montreal QC (Canada)

B.Sc. in Physics (Great Distinction) **2003-2007**
Thesis: “Forces, Charges, and Light Emission During the Rupture of Adhesive Contacts”
Minor: Music Technology
Advisor: Roland Bennewitz

EMPLOYMENT

CREOL, the College of Optics and Photonics, University of Central Florida

Secondary Joint Appointment **2017-present**

Department of Physics, University of Central Florida

Assistant Professor **2015-present**

Laser Plasma Laboratory, Townes Laser Institute, University of Central Florida

Senior Research Scientist **2014-2015**
Supervisor: Martin Richardson

Institute for the Frontier of Attosecond Science and Technology, University of Central Florida

Postdoctoral Research Associate **2012-2014**
Supervisor: Zenghu Chang

HONORS AND AWARDS

Ralph E. Powe Junior Faculty Award **2016**
Oak Ridge Associated Universities

Finalist, Award for Outstanding Doctoral Dissertation **2014**
American Physical Society Division of Laser Science

Finalist, Order of the Pegasus **2013**
University of Central Florida

RESEARCH

Grants Awarded

1. “High-Order Harmonic and Attosecond Spectroscopy in Materials,” Michael Chini (PI, 100% credit), Air Force Office of Scientific Research (AFOSR) Young Investigator Program (YIP), \$480,005.00 (2016-2020).
2. “Attosecond Time-Resolved Carrier Dynamics in Semiconductor Nanocrystals,” Michael Chini (PI, 100% credit), Oak Ridge Associated Universities, \$10,000.00 (2016-2017).

Awards of Facility Time

1. “Electric Field-Controlled High-Order Harmonic Generation in Ferroelectric/Multiferroic Heterostructures” Center for Integrated Nanotechnologies (CINT), Los Alamos National Laboratory (2018-2019).

Publications and Citations

1581 total citations; h-index: 19 (Web of Science, 02/06/2018)

*UCF graduate student advisee

**UCF undergraduate student advisee

Peer-reviewed articles

44. Beetar, J.*, Gholam-Mirzaei, S.* & Michael Chini “Spectral Broadening and Pulse Compression of a High Peak and Average Power Laser in Multi-plate Medium.” Appl. Phys. Lett. 112, 051102 (2018).
43. Ren, X., Li, J. Yin, Y., Zhao, K., Chew, A., Wang, Y., Hu, S., Cheng, Y., Cunningham, E., Wu, Y., Michael Chini & Chang, Z. “Attosecond Light Sources in the Water Window.” J. Opt. 20, 023001 (2018).
42. You, Y. S., Yin, Y., Chew, A., Ren, X., Gholam-Mirzaei, S.*, Michael Chini, Chang, Z. & Ghimire, S. “High-harmonic generation in amorphous solids.” Nature Commun. 8, 724 (2017). **Highlighted by DOE Science News Source:** “A Potential New and Easy Way to Make Attosecond Laser Pulses: Focus a Laser on Ordinary Glass,” http://www.newswise.com/doescience/?article_id=681997.
41. Li, J., Ren, X., Yin, Y., Zhao, K., Chew, A., Cheng, Y., Cunningham, E., Wang, Y., Wu, Y., Michael Chini & Chang, Z. “53-attosecond x-ray pulses glancing through the ‘water window’.” Nature Commun. 8, 186 (2017). **Highlighted by Laser Focus World:** “Once again, CREOL researchers set record for shortest light pulse,” <http://www.laserfocusworld.com/articles/2017/08/once-again-creol-researchers-set-record-for-shortest-light-pulse.html>.
40. You, Y. S., Wu, M., Yin, Y., Chew, A., Ren, X., Gholam-Mirzaei, S.*, Browne, D. A., Michael Chini, Chang, Z., Schafer, K. J., Gaarde, M. B. & Ghimire, S. “Laser waveform control of petahertz electron dynamics in solids.” Opt. Lett. 42, 1816 (2017).
39. Gholam-Mirzaei, S.*, Beetar, J.* & Michael Chini “High Harmonic Generation in ZnO with a High-Power Mid-IR OPA.” Appl. Phys. Lett. 110, 061101 (2017).
38. Cheng, Y., Michael Chini, Wang, X., Gonzalez-Castrillo, A., Palacios, A., Argenti, L., Martin, F. & Chang, Z. “Reconstruction of an excited-state molecular wave packet with attosecond transient absorption spectroscopy.” Phys. Rev. A 94, 023403 (2016).

37. Webb, B., Azim, A., Michael Chini, Shah, L. & Richardson, M. “Divided-pulse amplification to the Joule-level.” *Opt. Lett.* 41, 3106 (2016).
36. Rostami, S., Michael Chini, Lim, K., Durand, M., Palastro, J. P., Baudelet, M., Arissian, L. Diels, J. C. & Richardson, M. “Dramatic enhancement of supercontinuum generation in elliptically-polarized laser filaments.” *Sci. Rep.* 6, 20363 (2016).
35. Jeon, C., Harper, D., Lim, K., Durand, M., Michael Chini, Baudelet, M. & Richardson, M. “Interaction of a single laser filament with a single water droplet.” *J. Opt.* 17, 055502 (2015).
34. Michael Chini, Wang, X., Cheng, Y. & Chang, Z. “Resonance effects and quantum beats in attosecond transient absorption of helium.” *J. Phys. B: At. Mol. Opt. Phys.* 47, 124009 (2014).
33. Zhang, Q., Zhao, K., Li, J., Michael Chini, Cheng, Y., Wu, Y., Cunningham, E. & Chang, Z. “Suppression of driving laser in high harmonic generation with a microchannel plate.” *Opt. Lett.* 39, 3670 (2014).
32. Michael Chini, Wang, X., Cheng, Y., Wang, H., Wu, Y., Cunningham, E., Li, P.-C., Heslar, J., Telnov, D. A., Chu, S.-I. & Chang, Z. “Coherent VUV Emission from Field-Controlled Bound States.” *Nature Photon.* 8, 437 (2014). **Highlighted by SPIE Newsroom:** “Resonance-enhanced harmonics for probing molecular electrons,” DOI: 10.1117/2.1201407.005575.
31. Michael Chini, Zhao, K. & Chang, Z. “The generation, characterization, and applications of broadband isolated attosecond pulses.” *Nature Photon.* 8, 178 (2014).
30. Wang, X., Michael Chini, Cheng, Y., Wu, Y., Tong, X.-M. & Chang, Z. “Sub-cycle laser control and quantum interferences in attosecond photoabsorption of neon.” *Phys. Rev. A* 87, 063413 (2013).
29. Wu, Y., Cunningham, E., Zang, H., Li, J., Michael Chini, Wang, X., Wang, Y., Zhao, K. & Chang, Z. “Generation of high-flux attosecond extreme ultraviolet continuum with a 10 TW laser.” *Appl. Phys. Lett.* 102, 201104 (2013).
28. Michael Chini, Wang, X., Cheng, Y., Wu, Y., Zhao, D., Telnov, D. A., Chu, S. I. & Chang, Z. “Sub-cycle oscillations in virtual states brought to light.” *Sci. Rep.* 3, 1105 (2013). **Highlighted in Nature Photonics commentary:** “What will it take to observe processes in ‘real time’?” *Nature Photon.* 8, 162 (2014).
27. Wang, X., Michael Chini, Cheng, Y., Wu, Y. & Chang, Z. “In Situ Calibration of an Extreme Ultraviolet Spectrometer for Attosecond Transient Absorption Experiments.” *Appl. Opt.* 52, 323 (2013).
26. Zhao, K., Zhang, Q., Michael Chini, Wu, Y., Wang, X. & Chang, Z. “Tailoring a 67 attosecond pulse through advantageous phase-mismatch.” *Opt. Lett.* 37, 3891-3893 (2012). **Highlighted in popular media:** *BBC News, Fox News, Wired Magazine, and others. Top-15 cited articles of 2017 in Optics Letters.*
25. Michael Chini, Zhao, B., Wang, H., Cheng, Y., Hu, S. X. & Chang, Z. “Subcycle ac Stark Shift of Helium Excited States Probed with Isolated Attosecond Pulses.” *Phys. Rev. Lett.* 109, 073601 (2012).
24. Wang, X., Michael Chini, Zhang, Q., Zhao, K., Wu, Y., Telnov, D. A., Chu, S. I. & Chang, Z. “Mechanism of quasi-phase-matching in a dual-gas multijet array.” *Phys. Rev. A* 86, 021802 (2012).

23. Möller, M., Cheng, Y., Khan, S. D., Zhao, B. Z., Zhao, K., Michael Chini, Paulus, G. G. & Chang, Z. “Dependence of high-order-harmonic-generation yield on driving-laser ellipticity.” *Phys. Rev. A* 86, 011401 (2012).
22. Khan, S. D., Cheng, Y., Möller, M., Zhao, K., Zhao, B. Z., Michael Chini, Paulus, G. G. & Chang, Z. “Ellipticity dependence of 400 nm-driven high harmonic generation.” *Appl. Phys. Lett.* 99, 161106 (2011).
21. Möller, M., Sayler, A. M., Rathje, T., Michael Chini, Chang, Z. & Paulus, G. G. “Precise, real-time, single-shot carrier-envelope phase measurements in the multi-cycle regime.” *Appl. Phys. Lett.* 99, 121108 (2011).
20. Gilbertson, S., Michael Chini, Feng, X., Khan, S., Wu, Y. & Chang, Z. “Monitoring and Controlling the Electron Dynamics in Helium with Isolated Attosecond Pulses.” *Phys. Rev. Lett.* 105, 263003 (2010).
19. Wang, H., Michael Chini, Chen, S., Zhang, C. H., He, F., Cheng, Y., Wu, Y., Thumm, U. & Chang, Z. “Attosecond Time-Resolved Autoionization of Argon.” *Phys. Rev. Lett.* 105, 143002 (2010).
18. Gilbertson, S., Khan, S. D., Wu, Y., Michael Chini & Chang, Z. “Isolated Attosecond Pulse Generation without the Need to Stabilize the Carrier-Envelope Phase of Driving Lasers.” *Phys. Rev. Lett.* 105, 093902 (2010).
17. Michael Chini, Gilbertson, S., Khan, S. D. & Chang, Z. “Characterizing ultrabroadband attosecond lasers.” *Opt. Express* 18, 13006 (2010).
16. Gilbertson, S., Wu, Y., Khan, S. D., Michael Chini, Zhao, K., Feng, X. & Chang, Z. “Isolated attosecond pulse generation using multicycle pulses directly from a laser amplifier.” *Phys. Rev. A* 81, 043810 (2010).
15. Feng, X., Gilbertson, S., Khan, S. D., Michael Chini, Wu, Y., Carnes, K. D. & Chang, Z. “Calibration of electron spectrometer resolution in attosecond streak camera.” *Opt. Express* 18, 1316 (2010).
14. Moon, E., Wang, H., Gilbertson, S., Mashiko, H., Michael Chini & Chang, Z. “Advances in carrier-envelope phase stabilization of grating-based chirped-pulse amplifiers.” *Laser & Photonics Reviews* 4, 160 (2010).
13. Wang, H., Michael Chini, Wu, Y., Moon, E., Mashiko, H. & Chang, Z. “Carrier-envelope phase stabilization of 5-fs, 0.5-mJ pulses from adaptive phase modulator.” *Appl. Phys. B* 98, 291 (2010).
12. Mashiko, H., Gilbertson, S., Michael Chini, Feng, X., Yun, C., Wang, H., Khan, S. D., Chen, S. & Chang, Z. “Extreme ultraviolet supercontinua supporting pulse durations of less than one atomic unit of time.” *Opt. Lett.* 34, 3337 (2009).
11. Yun, C., Chen, S., Wang, H., Michael Chini & Chang, Z. “Temperature feedback control for long-term carrier-envelope phase locking.” *Appl. Opt.* 48, 5127 (2009).
10. Gilbertson, S., Feng, X., Khan, S. D., Michael Chini, Wang, H., Mashiko, H. & Chang, Z. “Direct measurement of an electric field in femtosecond Bessel-Gaussian beams.” *Opt. Lett.* 34, 2390 (2009).
9. Wang, H., Michael Chini, Khan, S. D., Chen, S., Gilbertson, S., Feng, X., Mashiko, H. & Chang, Z. “Practical issues of retrieving isolated attosecond pulses.” *J. Phys. B* 42, 134007 (2009).

8. Michael Chini, Wang, H., Khan, S. D., Chen, S. & Chang, Z. “Retrieval of satellite pulses of single isolated attosecond pulses.” *Applied Physics Letters* 94, 161112 (2009).
7. Chen, S., Michael Chini, Wang, H., Yun, C., Mashiko, H., Wu, Y. & Chang, Z. “Carrier-envelope phase stabilization and control of 1 kHz, 6 mJ, 30 fs laser pulses from a Ti:sapphire regenerative amplifier.” *Applied Optics* 48, 5692 (2009).
6. Michael Chini, Wang, H., Khan, S. D., Chen, S. & Chang, Z. “Retrieval of satellite pulses of single isolated attosecond pulses.” *Applied Physics Letters* 94, 161112 (2009).
5. Chen, S., Michael Chini, Wang, H., Yun, C., Mashiko, H., Wu, Y. & Chang, Z. “Carrier-envelope phase stabilization and control of 1 kHz, 6 mJ, 30 fs laser pulses from a Ti:sapphire regenerative amplifier.” *Applied Optics* 48, 5692 (2009).
4. Michael Chini, Mashiko, H., Wang, H., Chen, S., Yun, C., Scott, S., Gilbertson, S. & Chang, Z. “Delay control in attosecond pump-probe experiments.” *Opt. Express* 17, 21459 (2009).
3. Feng, X., Gilbertson, S., Mashiko, H., Wang, H., Khan, S. D., Michael Chini, Wu, Yi. Zhao, K. & Chang Z. “Generation of Isolated Attosecond Pulses with 20 to 28 Femtosecond Lasers.” *Phys. Rev. Lett.* 103, 183901 (2009).
2. Wang, H., Michael Chini, Moon, E., Mashiko, H., Li, C. & Chang, Z. “Coupling between energy and phase in hollow-core fiber based f-to-2f interferometers.” *Opt. Express* 17, 12082 (2009).
1. Miura, T., Michael Chini & Bennewitz R. “Forces, charges, and light emission during the rupture of adhesive contacts.” *J. Appl. Phys.* 102, 103509 (2007).

Popular Articles

2. Michael Chini “Speedy electrons exposed in a flash.” *Nature* 538, 325-326 (2016).
1. Michael Chini & Chang, Z. “Resonance-enhanced harmonics for probing molecular electrons.” *SPIE Newsroom*, DOI: 10.117/2.1201407.005575 (2014).

Book Chapters

4. Michael Chini, Wang, H., Zhao, B., Cheng, Y., Chen, S., Wu, Y. & Chang, Z. “Attosecond Absorption Spectroscopy.” in *Progress in Ultrafast Intense Laser Science Vol. 9* (eds. K. Yamanouchi & K. Midorikawa), Chapter 8, pg. 135 (Springer, 2013).
3. Zhao, K., Zhang, Q., Michael Chini & Chang Z. “Route to One Atomic Unit of Time – Development of a Broadband Attosecond Streak Camera.” in *Multiphoton Processes and Attosecond Physics Vol. 125* (eds. K. Yamanouchi & K. Midorikawa), Ch. 19, pg. 109 (Springer, 2012).
2. Chen, S. Gilbertson, S., Wang, H., Michael Chini, Zhao, K., Khan, S. D., Wu, Y. & Chang, Z. “Attosecond Pulse Generation, Characterization, and Application.” in *Advances in Multi-Photon Processes and Spectroscopy Vol. 20* (eds. S. H. Lin, A. A. Villaeys & Y. Fujimura), Ch. 4, pg. 127 (World Scientific, 2011).
1. Feng, X., Gilbertson, S., Mashiko, H., Wang, H., Khan, S. D., Michael Chini, Wu, Y. & Chang, Z. “Single Isolated Attosecond Pulses Generation with Double Optical Gating.” in *Progress in Ultrafast Intense Laser Science Vol. 6* (eds. K. Yamanouchi, G. Gerber & A. D. Bandrauk), Ch. 5, pg. 89 (Springer, 2010).

Invited Presentations

23. “High-order Harmonic and Attosecond Spectroscopy in Materials” to be given at the AFOSR Ultrashort Pulse Laser-Matter Interactions Program Review, Arlington VA (June 2018).
22. “Controlling High-order Harmonic Generation in Solids” to be given at the 49th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Fort Lauderdale FL (June 2018).
21. “Solid-state high-order harmonics driven by long-wavelength lasers” to be given at the SPIE Ultrafast Bandgap Photonics III Conference (April 2018).
20. “High-order harmonic and attosecond spectroscopy in atoms, molecules, and solids” (Lecture) High Energy Density Physics Summer School, Changsha China (2017).
19. “Solid-State High-order Harmonic Sources & Spectroscopy” (Seminar) Center for Integrated Nanotechnologies, Los Alamos National Laboratory, Los Alamos NM (2017).
18. “High-order Harmonic and Attosecond Spectroscopy in Materials” AFOSR Ultrashort Pulse Laser-Matter Interactions Program Review, Arlington VA (2017).
17. “Solid-State High-order Harmonic Sources & Spectroscopy” (Seminar) Department of Physics, University of California, San Diego, San Diego CA (2017).
16. “Solid-State High-order Harmonic Sources & Spectroscopy” (Seminar) CREOL, The College of Optics and Photonics, University of Central Florida, Orlando FL (2017).
15. “High-order Harmonic Generation in Bulk Crystals with a 50 kHz Mid-IR OPA” ARO and AFOSR Joint Attosecond MURI Annual Meeting, University of Arizona (2016).
14. “High-order Harmonic and Attosecond Spectroscopy in Materials.” AFOSR Ultrashort Pulse Laser-Matter Interactions Program Review, Arlington, VA (2016).
13. “Reconstruction of molecular wave packet dynamics with attosecond transient absorption spectroscopy.” Annual review meeting of ARO MURI on Light Filamentation Science, University of Central Florida (2016).
12. “Probing and Controlling Ultrafast Electron Motion with Attosecond Transient Absorption Spectroscopy.” (Colloquium) University of Central Florida (2015).
11. “Probing and Controlling Ultrafast Electron Motion with Attosecond Transient Absorption Spectroscopy.” (Colloquium) University of Connecticut (2015).
10. “Probing and Controlling Ultrafast Electron Motion with Attosecond Transient Absorption Spectroscopy.” (Colloquium) California State University, Long Beach (2015).
9. “Probing and Controlling Ultrafast Electron Motion with Attosecond Transient Absorption Spectroscopy.” (Colloquium) Auburn University (2015).
8. “Probing and Controlling Ultrafast Electron Motion with Attosecond Transient Absorption Spectroscopy.” (Colloquium) Mississippi State University (2015).
7. “Supercontinuum Generation and Polarization as Probes of Laser Filamentation Dynamics.” 46th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Columbus OH (2015).

6. "Characterization and Application of Isolated Attosecond Pulses." *Frontiers in Optics/Laser Science*, Tucson AZ (2014).
5. "Spectrum and Polarization of the White Light Supercontinuum." 5th International Symposium on Filamentation (COFIL), Shanghai China (2014).
4. "Attosecond Time-Resolved Spectroscopy with Few-Cycle Lasers." National University of Defense Technology, Changsha China (2014).
3. "Absorption Spectroscopy with Ultrabroadband Attosecond Pulses." (Colloquium) Kansas State University (2014).
2. "Sub-cycle Electron Dynamics Probed by Isolated Attosecond Pulses." *Frontiers in Optics/Laser Science*, Orlando FL (2013).
1. "Probing Attosecond Electron Dynamics in Atoms." IEEE Photonics Conference, Burlingame CA (2012).

Popular Talks

1. "Fast and Furious: How New Light Sources Enable New Physics." UCF Knight for a Day (2017).

Contributed Talks and Posters

63. Beetar, J.*, Gholam Mirzaei, S.*, Buczek, S.*, Solis, S.** & Michael Chini "Spectral Broadening and Pulse Compression of a High Average Power Yb:KGW Laser." IEEE Photonics Conference, Orlando FL (2017).
62. Gholam-Mirzaei, S.*, Beetar, J.* & Michael Chini "High-order harmonic generation in ZnO using few-cycle mid-IR pulses generated via self-compression." IEEE Photonics Conference, Orlando FL (2017).
61. Crites, E.**, Gholam-Mirzaei, S.*, Beetar, J.* & Michael Chini "High Harmonic Generation in Barium Titanate Crystal." *Frontiers in Optics/Laser Science*, Washington DC (2017).
60. Beetar, J.*, Gholam Mirzaei, S.*, Buczek, S.*, Solis, S.** & Michael Chini "Spectral Broadening of a High Average Power Yb:KGW Laser." *Frontiers in Optics/Laser Science*, Washington DC (2017).
59. Jeong, Y.-G., Piccoli, R., Ferachou, D., Cardin, V., Michael Chini, Morandotti, R., Legare, F., Schmidt, B. E. & Razzari, L. "20-fold pulse compression down to 3-cycles in a 3 m long hollow-core fiber." *Ultrafast Optics*, Jackson Hole WY (2017).
58. Yin, Y., Li, J., Ren, X., Zhao, K., Chew, A., Cheng, Y., Cunningham, E., Wang, Y., Wu, Y., Michael Chini & Chang, Z. "Infrared driving lasers for generating 53-as x-rays." 6th International Conference on Attosecond Physics (ATTO 2017), Xi'an China (2017).
57. Gholam-Mirzaei, S.*, Beetar, J.* & Michael Chini "High-order harmonic generation in solids driven by few-cycle mid-IR pulses at 50 kHz repetition rate." 6th International Conference on Attosecond Physics (ATTO 2017), Xi'an China (2017).
56. Beetar, J.*, Gholam-Mirzaei, S.*, Buczek, S.*, Solis, S.** & Michael Chini "Spectral Broadening and Pulse Compression of a High Average Power Yb:KGW Laser." APS Division of Atomic, Molecular and Optical Physics, Sacramento CA (2017).

55. You, Y.-S., Wu, M., Yin, Y., Chew, A., Ren, X., Gholam-Mirzaei, S.*, Browne, D., Michael Chini, Chang, Z., Schafer, K., Gaarde, M. & Ghimire, S. “Laser waveform control of extreme ultraviolet high harmonic generation in solids.” APS Division of Atomic, Molecular and Optical Physics, Sacramento CA (2017).
54. Ren, X., Li, J., Yin, Y., Zhao, K. Chew, A., Cheng, Y. Cunningham, E., Wang, Y., Wu, Y., Michael Chini & Chang, Z. “53 Attosecond X-ray Pulses Glancing Through the Water Window.” Conference on Lasers and Electro-Optics, San Jose CA (2017).
53. You, Y., Wu, M., Yin, Y., Chew, A., Ren, X., Gholam-Mirzaei, S.*, Brown, D. A., Michael Chini, Chang, Z., Schafer, K., Gaarde, M. B. & Ghimire, S. “Waveform control of high-harmonic generation in solids.” Conference on Lasers and Electro-Optics, San Jose CA (2017).
52. Azim, A.**., Webb, B., Michael Chini, Shah, L. & Richardson, M. “Hybrid spatiotemporal coherent pulse addition of a picosecond flashlamp-pumped Nd:YAG laser.” Advances in Solid State Lasers, San Francisco CA (2016).
51. Gholam-Mirzaei, S.*, Beetar, J.* & Michael Chini “High Harmonic Generation in ZnO from a 50 kHz OPA.” Frontiers in Optics/Laser Science, Rochester NY (2016).
50. Nesper, J.**., Solis, S.**., Beetar, J.*., Gholam-Mirzaei, S.* & Michael Chini “Terahertz Pulse Generation from a 200 kHz Femtosecond Laser.” APS Division of Laser Science Undergraduate Symposium, Frontiers in Optics/Laser Science, Rochester NY (2016).
49. Solis, S.**., Nesper, J.**., Beetar, J.*., Gholam-Mirzaei, S.* & Michael Chini “Terahertz Pulse Generation from a 200 kHz Femtosecond Laser.” APS National Mentoring Community Conference, Houston TX (2016).
48. Cousin, S. L., Li, J., Ren, X., Yin, Y., Teichmann, S. M., Zhao, K., Silva, F., Chew, A., Cheng, Y., Devetta, M., Cunningham, E., Sansone, G., Wu, Y., Leon, I., Michael Chini, Biegert, J. & Chang, Z. “Isolated Attosecond Water-Window Pulses Driven by 1.8 μm Lasers.” International Conference on Ultrafast Phenomena, Santa Fe NM (2016).
47. Michael Chini “Attosecond Time-Resolved Spectroscopy of Electron Dynamics in Atoms, Molecules, and Solids.” Southeastern Sectional Meeting of the American Physical Society, Birmingham AL (2015).
46. Jeon, C., Harper, D., Lim, K., Durand, M., Michael Chini, Baudelet, M. & Richardson, M. “Interaction Between a Single Water Droplet and a Laser Filament.” Conference on Lasers and Electro-Optics/Pacific Rim, Busan Korea (2015).
45. Jeon, C., Harper, D., Lim, K., Durand, M., Michael Chini, Baudelet, M. & Richardson, M. “Spatial Dependence of the Interaction between a Single Aerosol and a Laser Filament on its Reformation.” Conference on Lasers and Electro-Optics, San Jose CA (2015).
44. Cheng, Y., Michael Chini, Tong, X. M., Chew, A., Biedermann, J., Wu, Y., Cunningham, E. & Chang, Z. “Quantum Beats in Attosecond Transient Absorption of Krypton Autoionizing States.” Conference on Lasers and Electro-Optics, San Jose CA (2015).
43. Rostami, S., Michael Chini, Lim, K., Durand, M., Baudelet, M., Richardson, M., Diels, J.-C. & Arissian, L. “Enhanced supercontinuum generation by polarization control of filamentation in molecular gases.” Conference on Lasers and Electro-Optics, San Jose CA (2015).

42. Bodnar, N., Webb, B., Michael Chini, Shah, L. & Richardson, M. “145 W, 3 kHz Picosecond Amplifier for OPCPA Pumping.” Conference on Lasers and Electro-Optics, San Jose CA (2015).
41. Cheng, Y., Michael Chini, Tong, X. M., Chew, A., Biedermann, J., Wu, Y., Cunningham, E. & Chang, Z. “Quantum Beats in Attosecond Time-Resolved Autoionization of Krypton.” 46th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Columbus OH (2015).
40. Martin, F., Cheng, Y., Michael Chini, Wang, X., Gonzalez-Castrillo, A., Palacios, A., Argenti, L. & Chang, Z. “Attosecond transient absorption spectroscopy of molecular hydrogen.” XXIX International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC2015), Toledo Spain (2015).
39. Rostami, S., Michael Chini, Lim, K., Durand, M., Baudelet, M., Diels, J.-C., Richardson, M. & Arissian, L. “Measurements of the impact of polarization on filaments and the associated supercontinuum.” Frontiers in Optics/Laser Science, Tucson AZ (2014).
38. Richardson, M., Durand, M., Baudelet, M., Barbieri, N., Michael Chini, Lim, K., Jeon, C., Litchinitser, N., Kudyshev, Z., Will, S., Roth, Z., Johnson, E. “Nonlinear radiation effects with filaments – inside and outside.” Frontiers in Optics/Laser Science, Tucson AZ (2014).
37. Michael Chini, Wang, X., Cheng, Y., Wang, H., Wu, Y., Cunningham, E., Li, P.-C., Heslar, J., Telnov, D. A., Chu, S.-I. & Chang, Z. “Coherent VUV Emission from Field-Controlled Bound States.” Conference on Lasers and Electro-Optics, San Jose CA (2014).
36. Wu, Y., Cunningham, E., Li, J., Michael Chini & Chang, Z. “Carrier-envelope phase stabilization of a 10 Hz, 20 TW laser for high-flux attosecond pulse generation.” Conference on Lasers and Electro-Optics, San Jose CA (2014).
35. Cheng, Y., Michael Chini, Wang, X., Wu, Y. & Chang, Z. “Attosecond transient absorption in molecular hydrogen.” Conference on Lasers and Electro-Optics, San Jose CA (2014).
34. Wu, Y., Cunningham, E., Li, J., Zang, H., Michael Chini, Wang, X., Wang, Y., Zhao, K. & Chang, Z. “Generation of High-Flux Attosecond Extreme Ultraviolet Continuum with a 20 Terawatt Laser.” Frontiers in Optics/Laser Science, Orlando FL (2013).
33. Cheng, Y., Michael Chini, Wang, X., Wu, Y. & Chang, Z. “Probing Hydrogen and Deuterium Molecular Dynamics Using Attosecond Transient Absorption.” Frontiers in Optics/Laser Science, Orlando FL (2013).
32. Wu, Y., Cunningham, E., Li, J., Zang, H., Michael Chini, Wang, X., Wang, Y., Zhao, K. & Chang, Z. “Generation of high-flux attosecond XUV continuum with a 10 TW driving laser.” Conference on Lasers and Electro-Optics, San Jose CA (2013).
31. Michael Chini, Wang, X., Cheng, Y., Wu, Y., Zhao, D., Telnov, D. A., Shu, S.-I. & Chang, Z. “Probing sub-cycle dynamics of virtual states with attosecond transient absorption.” Conference on Lasers and Electro-Optics, San Jose CA (2013).
30. Michael Chini, Wang, X., Cheng, Y., Wu, Y., Zhao, D., Telnov, D. A., Chu, S.-I. & Chang, Z. “Probing Attosecond Electron Dynamics in Helium with Attosecond Transient Absorption.” 44th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Quebec QC (2013).

29. Cheng, Y., Michael Chini, Wang, X., Wang, Y., Wu, Y. & Chang, Z. “Probing molecular dynamics using attosecond transient absorption.” 44th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Quebec QC (2013).
28. Zhang, Q., Zhao, K., Michael Chini, Wu, Y., Wang, X. & Chang, Z. “Generation and characterization of broadband isolated attosecond pulse.” 43rd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Orange County CA (2012).
27. Michael Chini, Wang, X., Zhang, Q., Zhao, K., Wu, Y. & Chang, Z. “High-order Harmonic Generation from Molecular Hydrogen.” 43rd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Orange County CA (2012).
26. Cheng, Y., Khan, S. D., Zhao, B., Zhao, K., Michael Chini & Chang, Z. “Broadband high harmonic generation from 400 nm sub-10 fs driving pulses.” Conference on Lasers and Electro-Optics, San Jose CA (2012).
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