

## PERSONAL INFORMATION



## Maurizio Battista Reduzzi

 Piazza Leonardo da Vinci 32, 20133 Milano, Italia

 +39 02 2399 6178

 [maurizio.reduzzi@polimi.it](mailto:maurizio.reduzzi@polimi.it)

 [ORCID 0000-0003-2353-1210](https://orcid.org/0000-0003-2353-1210)

Date of birth 4 November 1987 | Nationality Italian

## WORK EXPERIENCE

November 2021 – present

## RTDB – Senior Researcher

Physics Department, Politecnico di Milano

Main activity Investigation of ultrafast molecular dynamics with extreme ultraviolet femtosecond and attosecond pulses.

May 2021 – October 2021

## Marie Skłodowska-Curie Fellow

Physics Department, Politecnico di Milano

Main activity Investigation of ultrafast molecular dynamics with extreme ultraviolet femtosecond and attosecond pulses, within the Marie Skłodowska-Curie Individual Fellowship 2020 "HETRUSQ" (Grant Agreement No. 10102311).

May 2018 – April 2021

## Marie Skłodowska-Curie Fellow

Attoscience and Ultrafast Optics Group, ICFO - The Institute of Photonic Sciences, Spain

Main activity Investigation of ultrafast molecular dynamics with attosecond pulses in the soft X-ray spectral region, within the PROBIST Fellowship awarded for the project "Attosecond X-ray investigation of conical intersections in organic molecules"

September 2016 – April 2018

## Post-Doctoral Fellow

Chemistry Department, University of California at Berkeley, USA

Main activity Investigation of chemical dynamics with attosecond pulses in the extreme ultraviolet spectral region

January 2015 – September 2016

## Research Fellow

CNR-IFN, Milano, Italy

Main activity Ultrafast metrology and spectroscopy with attosecond pulses in the extreme ultraviolet spectral region

## EDUCATION AND TRAINING

2012–2015

## PhD in Physics

cum laude

Physics Department, Politecnico di Milano, Italy

Under the supervision of Prof. Sansone. Thesis Title: "Time-resolved investigation of electron dynamics in few-particle systems using a versatile attosecond beamline"

2009–2011

## Master Degree in Engineering Physics

110/110 cum laude

Politecnico di Milano, Italy

2006–2009

## Bachelor Degree in Engineering Physics

110/110 cum laude

Politecnico di Milano, Italy

## LANGUAGE SKILLS

Mother tongue Italian

### Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Spanish	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user  
[Common European Framework of Reference for Languages](#)

## TECHNICAL SKILLS

Ultra-high vacuum technology; Titanium:Sapphire laser technology; Optical Parametric Amplifiers (OPAs); Ultrashort optical pulse generation and characterization; Time-resolved ("pump-probe") spectroscopy; Charged-particles detectors; X-ray optics.

## COMPUTER SKILLS

Independent user of the operative systems: Windows, Linux, Mac OS X.  
 Advanced knowledge of Microsoft Office™, L<sup>A</sup>T<sub>E</sub>X.  
 Advanced knowledge of MATLAB®, LabVIEW™.  
 Basic knowledge of the programming languages C, Python.  
 Basic knowledge of the software for 3D and vector graphics blender™.

## FELLOWSHIPS

- 2021 Marie Skłodowska-Curie Individual Fellowship 2020 (24 months, project "HETRUSQ", Grant Agreement No. 101023114), Politecnico di Milano
- 2018 PROBIST Fellowship (36 months, MSCA Grant Agreement No. 754510), the Barcelona Institute of Science and Technology
- 2012 PhD Fellowship (36 months) at the Physics Department of Politecnico di Milano, Ministero Italiano per l'Università e la Ricerca

## RESEARCH ACTIVITIES

During my PhD (2012-2015) at the Physics Department of Politecnico di Milano, under the supervision of Prof. Sansone, I focused on the construction and development of an innovative and ambitious spectroscopic setup for gas phase ultrafast dynamics studies, interfacing a high-repetition-rate source of attosecond pulses with a photon-photoelectron coincidence spectrometer.

During my Research Fellowship (2015-2016) at CNR-IFN Milano, I exploited the apparatus developed during my PhD for ultrafast metrology applications. The work was published on the journal *Nature Photonics* (shared first author, publication [11]).

In parallel to my on campus activities at Politecnico di Milano, during the period 2012-2016 I took part to several investigations (focusing on atomic physics studied at extreme ultraviolet wavelengths) at the free-electron laser FERMI (Basovizza, Trieste). These large international collaborations gave rise to a number of Q1 publications (publications [6,9,13,15,20,21]).

During my Post-Doctoral Fellowship at University of California at Berkeley (Berkeley, USA), under the supervision of Prof. Leone, I lead a team (including two graduate students and myself) focused on the application of extreme ultraviolet attosecond pulses to ultrafast photochemistry studies. Both projects I co-supervised were published on Q1 journals (publications [16,22]).

In 2018 I was awarded a PROBIST Fellowship (co-funded Marie Skłodowska-Curie Fellowship) by the Barcelona Institute of Science and Technology, with a project focused on the attosecond X-ray investigation of conical intersections in organic molecules, thanks to which I joined the group of Prof. Biegert at ICFO - The Institute of Photonic Sciences (Castelldefels, Spain), where I co-supervised a PhD student.

In February 2021 I was awarded a Marie Skłodowska-Curie Individual Fellowship at Politecnico di Milano (under the supervision of Prof. Nisoli), with a project related to the investigation of ultrafast dynamics of heteroaromatic molecules in the liquid phase exploiting few-femtoseconds extreme ultraviolet light pulses.

Since November 2021, I work as a full-time Senior Researcher position at the Physics Department of Politecnico di Milano.

**Research results** To the present date, 26-07-2023, I co-authored (source: Scopus) 30 research articles in peer-reviewed journals. Among them: *1x Nature*, *1x Nature Physics*, *2x Nature Photonics*, *2x Nature Communications*, *2x Physical Review X*, *5x Physical Review Letters*, one book chapter and 24 conference contributions. These publications attracted a **total of 873 citations** and my **h-index** is **16**.

## RESEARCH PROJECTS

*The following list contains the funded research projects to which I contributed writing the entire project ("author") or part of it ("co-author").*

Date	01/05/2021 - 31/10/2021
Project	Marie Skłodowska-Curie Individual Fellowship "HETeRoaromatic biomolecules Ultrafast Spectroscopy in liQuids" (HETRUSQ)
Description	The project, lasting 24 months, funded by European Research Council, covers a 24 months salary at Politecnico di Milano, training, formation and mobility costs and part of equipment costs. Total funded: 171.5 k€
Role	Principal investigator; author
Date	01/12/2019 – present
Project	"The Integrated Initiative of European Laser Research Infrastructures" (Laserlab Europe V)
Description	Laserlab Europe is a consortium of research labs focused on laser science, joined by the majority of states within the EC. Total funded: 10 M€ (212.5 k€ to ICFO unit)
Role	Interim contact person at ICFO (JRA/PRISES Task 3.3); co-author
Date	01/03/2019 – 31/05/2021
Project	ERC Proof Of Concept "MINIaturized coherent soft X-ray source for research and industry" (miniX)
Description	Research project lasting 24 months, granted to ICFO by European Research Council. Total funded: 150 k€
Role	Lead researcher; co-author
Date	01/05/2018 – 30/04/2021
Project	PROBIST Fellowship "Attosecond X-ray investigation of conical intersections in organic molecules"
Description	Research project, lasting 36 months, co-funded by the European Research Council and the Barcelona Institute of Science and Technology, covering a 36 months salary at ICFO, training, formation and mobility costs and part of equipment costs. Total funded: 170 k€
Role	Principal investigator; author
Date	01/08/2017 – 31/07/2021
Project	National Science Foundation Continuing Grant "Attosecond Electron Dynamics"
Description	Research project, lasting 48 months, granted to University of California at Berkeley by the National Science Foundation. Total funded: 540 k\$
Role	Participant; co-author

PUBLICATIONS IN  
PEER-REVIEWED SCIENTIFIC  
JOURNALS

- [1] C. Liu, **M. Reduzzi**, A. Trabattoni, A. Sunilkumar, A. Dubrouil, F. Calegari, M. Nisoli, and G. Sansone. "Carrier-envelope phase effects of a single attosecond pulse in two-color photoionization". In: *Physical Review Letters* 111.12 (2013), pp. 1–5.
- [2] C. Feng, J.-F. Hergott, P.-M. Paul, X. Chen, O. Tcherbakoff, M. Comte, O. Gobert, **M. Reduzzi**, F. Calegari, C. Manzoni, M. Nisoli, and G. Sansone. "Complete analog control of the carrier-envelope-phase of a high-power laser amplifier". In: *Optics Express* 21.21 (2013), p. 25248.
- [3] **M. Reduzzi**, P. Carpeggiani, S. Kühn, F. Calegari, M. Nisoli, S. Stagira, C. Vozzi, P. Dombi, S. Kahaly, P. Tzallas, D. Charalambidis, K. Varju, K. Osvay, and G. Sansone. "Advances in high-order harmonic generation sources for time-resolved investigations". In: *Journal of Electron Spectroscopy and Related Phenomena* 204 (2015), pp. 257–268.
- [4] **M. Reduzzi**, J. Hummert, A. Dubrouil, F. Calegari, M. Nisoli, F. Frassetto, L. Poletto, S. Chen, M. Wu, M. B. Gaarde, K. Schafer, and G. Sansone. "Polarization control of absorption of virtual dressed states in helium". In: *Physical Review A - Atomic, Molecular, and Optical Physics* 92.3 (2015), pp. 1–8.
- [5] A. Dubrouil, **M. Reduzzi**, M. Devetta, C. Feng, J. Hummert, P. Finetti, O. Plekan, C. Grazioli, M. D. Fraia, V. Lyamayev, A. L. Forge, R. Katzy, F. Stienkemeier, Y. Ovcharenko, M. Coreno, N. Berrah, K. Motomura, S. Mondal, K. Ueda, K. C. Prince, C. Callegari, A. I. Kuleff, P. V. Demekhin, and G. Sansone. "Two-photon resonant excitation of interatomic coulombic decay in neon dimers". In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 48.20 (2015), p. 204005.
- [6] K. C. Prince, E. Allaria, C. Callegari, R. Cucini, G. De Ninno, S. Di Mitri, B. Diviacco, E. Ferrari, P. Finetti, D. Gauthier, L. Giannessi, N. Mahne, G. Penco, O. Plekan, L. Raimondi, P. Rebernik, E. Roussel, C. Svetina, M. Trovò, M. Zangrando, M. Negro, P. Carpeggiani, **M. Reduzzi**, G. Sansone, A. N. Grum-Grzhimailo, E. V. Gryzlova, S. I. Strakhova, K. Bartschat, N. Douguet, J. Venzke, D. Iablonskyi, Y. Kumagai, T. Takanashi, K. Ueda, A. Fischer, M. Coreno, F. Stienkemeier, Y. Ovcharenko, T. Mazza, and M. Meyer. "Coherent control with a short-wavelength free-electron laser". In: *Nature Photonics* 10.3 (2016), pp. 176–179.
- [7] **M. Reduzzi**, W. C. Chu, C. Feng, A. Dubrouil, J. Hummert, F. Calegari, F. Frassetto, L. Poletto, O. Kornilov, M. Nisoli, C. D. Lin, and G. Sansone. "Observation of autoionization dynamics and sub-cycle quantum beating in electronic molecular wave packets". In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 49.6 (2016), p. 065102.
- [8] R. Pazourek, **M. Reduzzi**, P. A. Carpeggiani, G. Sansone, M. Gaarde, and K. Schafer. "Ionization delays in few-cycle-pulse multiphoton quantum-beat spectroscopy in helium". In: *Physical Review A* 93.2 (2016), p. 023420.
- [9] D. Iablonskyi, K. Nagaya, H. Fukuzawa, K. Motomura, Y. Kumagai, S. Mondal, T. Tachibana, T. Takanashi, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, **M. Reduzzi**, P. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, F. Calegari, A. Trabattoni, M. C. Castrovilli, D. Faccialà, Y. Ovcharenko, T. Möller, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, A. I. Kuleff, G. Jabbari, C. Callegari, O. Plekan, P. Finetti, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. De Ninno, I. Nikolov, B. Diviacco, S. Di Mitri, L. Giannessi, K. C. Prince, and K. Ueda. "Slow Interatomic Coulombic Decay of Multiply Excited Neon Clusters". In: *Physical Review Letters* 117.27 (2016), p. 276806.
- [10] S. L. Cousin, N. Di Palo, B. Buades, S. M. Teichmann, **M. Reduzzi**, M. Devetta, A. Kheifets, G. Sansone, and J. Biegert. "Attosecond streaking in the water window: A new regime of attosecond pulse characterization". In: *Physical Review X* 7.4 (2017), pp. 1–14.

- [11] P. Carpeggiani\*, M. Reduzzi\*, A. Comby\*, H. Ahmadi, S. Kühn, F. Calegari, M. Nisoli, F. Frassetto, L. Poletto, D. Hoff, J. Ullrich, C. D. Schröter, R. Moshhammer, G. G. Paulus, and G. Sansone. “Vectorial optical field reconstruction by attosecond spatial interferometry”. In: *Nature Photonics* 11.6 (2017), pp. 383–389.
- [12] H. Timmers, Y. Kobayashi, K. F. Chang, **M. Reduzzi**, D. M. Neumark, and S. R. Leone. “Generating high-contrast, near single-cycle waveforms with third-order dispersion compensation”. In: *Optics Letters* 42.4 (2017), p. 811.
- [13] D. Iablonskyi, K. Ueda, K. L. Ishikawa, A. S. Kheifets, P. Carpeggiani, **M. Reduzzi**, H. Ahmadi, A. Comby, G. Sansone, T. Csizmadia, S. Kuehn, E. Ovcharenko, T. Mazza, M. Meyer, A. Fischer, C. Callegari, O. Plekan, P. Finetti, E. Allaria, E. Ferrari, E. Rousel, D. Gauthier, L. Giannessi, and K. C. Prince. “Observation and Control of Laser-Enabled Auger Decay”. In: *Physical Review Letters* 119.7 (2017), p. 073203.
- [14] C. Callegari, T. Takanashi, H. Fukuzawa, K. Motomura, D. Iablonskyi, Y. Kumagai, S. Mondal, T. Tachibana, K. Nagaya, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, **M. Reduzzi**, P. Carpeggiani, C. Vozzi, M. Devetta, D. Faccialà, F. Calegari, M. C. Castrovilli, M. Coreno, M. Alagia, B. Schütte, N. Berrah, O. Plekan, P. Finetti, E. Ferrari, K. C. Prince, and K. Ueda. “Application of matched-filter concepts to unbiased selection of data in pump-probe experiments with free electron lasers”. In: *Applied Sciences* 7.6 (2017), p. 621.
- [15] T. Takanashi, N. V. Golubev, C. Callegari, H. Fukuzawa, K. Motomura, D. Iablonskyi, Y. Kumagai, S. Mondal, T. Tachibana, K. Nagaya, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, **M. Reduzzi**, P. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, D. Faccialà, F. Calegari, A. Trabattoni, M. C. Castrovilli, Y. Ovcharenko, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, O. Plekan, P. Finetti, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. De Ninno, B. Diviacco, S. Di Mitri, L. Giannessi, G. Jabbari, K. C. Prince, L. S. Cederbaum, P. V. Demekhin, A. I. Kuleff, and K. Ueda. “Time-Resolved Measurement of Interatomic Coulombic Decay Induced by Two-Photon Double Excitation of Ne<sup>2+</sup>”. In: *Physical Review Letters* 118.3 (2017), p. 033202.
- [16] Y. Kobayashi, **M. Reduzzi**, K. F. Chang, H. Timmers, D. M. Neumark, and S. R. Leone. “Selectivity of Electronic Coherence and Attosecond Ionization Delays in Strong-Field Double Ionization”. In: *Physical Review Letters* 120.23 (2018), p. 233201.
- [17] A. Marciniak, K. Yamazaki, S. Maeda, **M. Reduzzi**, V. Despré, M. Hervé, M. Mezziane, T. A. Niehaus, V. Lorient, A. I. Kuleff, B. Schindler, I. Compagnon, G. Sansone, and F. Lépine. “Ultrafast Nonadiabatic Cascade and Subsequent Photofragmentation of Extreme Ultraviolet Excited Caffeine Molecule”. In: *Journal of Physical Chemistry Letters* 9.24 (2018), pp. 6927–6933.
- [18] P. A. Carpeggiani, **M. Reduzzi**, A. Comby, H. Ahmadi, S. Kühn, F. Frassetto, L. Poletto, D. Hoff, J. Ullrich, C. D. Schröter, R. Moshhammer, G. G. Paulus, and G. Sansone. “Attosecond electronic recollision as field detector”. In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 51.10 (2018), p. 104004.
- [19] H. Timmers, X. Zhu, Z. Li, Y. Kobayashi, M. Sabbar, M. Hollstein, **M. Reduzzi**, T. J. Martínez, D. M. Neumark, and S. R. Leone. “Disentangling conical intersection and coherent molecular dynamics in methyl bromide with attosecond transient absorption spectroscopy”. In: *Nature Communications* 10.1 (2019), pp. 1–8.
- [20] P. A. Carpeggiani, E. V. Gryzlova, **M. Reduzzi**, A. Dubrouil, D. Faccialà, M. Negro, K. Ueda, S. M. Burkov, F. Frassetto, F. Stienkemeier, Y. Ovcharenko, M. Meyer, O. Plekan, P. Finetti, K. C. Prince, C. Callegari, A. N. Grum-Grzhimailo, and G. Sansone. “Complete reconstruction of bound and unbound electronic wavefunctions in two-photon double ionization”. In: *Nature Physics* 15.2 (2019), pp. 170–177.



- [21] P. K. Maroju, C. Grazioli, M. Di Fraia, M. Moioli, D. Ertel, H. Ahmadi, O. Plekan, P. Finetti, E. Allaria, L. Giannessi, G. De Ninno, C. Spezzani, G. Penco, S. Spampinati, A. Demidovich, M. B. Danailov, R. Borghes, G. Kourousias, C. E. Sanches Dos Reis, F. Billé, A. A. Lutman, R. J. Squibb, R. Feifel, P. Carpeggiani, **M. Reduzzi**, T. Mazza, M. Meyer, S. Bengtsson, N. Ibrakovic, E. R. Simpson, J. Mauritsson, T. Csizmadia, M. Dumergue, S. Kühn, H. Nandiga Gopalakrishna, D. You, K. Ueda, M. Labeye, J. E. Bækhoj, K. J. Schafer, E. V. Gryzlova, A. N. Grum-Grzhimailo, K. C. Prince, C. Callegari, and G. Sansone. "Attosecond pulse shaping using a seeded free-electron laser". In: *Nature* 578.7795 (2020), pp. 386–391.
- [22] K. F. Chang, **M. Reduzzi**, H. Wang, S. M. Poullain, Y. Kobayashi, L. Barreau, D. Prendergast, D. M. Neumark, and S. R. Leone. "Revealing electronic state-switching at conical intersections in alkyl iodides by ultrafast XUV transient absorption spectroscopy". In: *Nature Communications* 11.1 (2020), pp. 1–7.
- [23] M. D. Kiselev, P. A. Carpeggiani, E. V. Gryzlova, S. M. Burkov, **M. Reduzzi**, A. Dubrouil, D. Faccialá, M. Negro, K. Ueda, F. Frassetto, F. Stienkemeier, Y. Ovcharenko, M. Meyer, M. Di Fraia, O. Plekan, K. C. Prince, C. Callegari, G. Sansone, and A. N. Grum-Grzhimailo. "Photoelectron spectra and angular distribution in sequential two-photon double ionization in the region of autoionizing resonances of ArII and KrII". In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 53.24 (2020), p. 244006.
- [24] H. Ahmadi, S. Kellerer, D. Ertel, M. Moioli, **M. Reduzzi**, P. K. Maroju, A. Jäger, R. N. Shah, J. Lutz, F. Frassetto, L. Poletto, F. Bragheri, R. Osellame, T. Pfeifer, C. D. Schröter, R. Moshhammer, and G. Sansone. "Collinear setup for delay control in two-color attosecond measurements". In: *JPhys Photonics* 2.2 (2020), p. 024006.
- [25] P. K. Maroju, C. Grazioli, M. D. Fraia, M. Moioli, D. Ertel, H. Ahmadi, O. Plekan, P. Finetti, E. Allaria, L. Giannessi, G. D. Ninno, S. Spampinati, A. A. Lutman, R. J. Squibb, R. Feifel, P. Carpeggiani, **M. Reduzzi**, T. Mazza, M. Meyer, S. Bengtsson, N. Ibrakovic, E. R. Simpson, J. Mauritsson, T. Csizmadia, M. Dumergue, S. Kühn, N. G. Harshitha, D. You, K. Ueda, M. Labeye, J. E. Bækhoj, K. J. Schafer, E. V. Gryzlova, A. N. Grum-Grzhimailo, K. C. Prince, C. Callegari, and G. Sansone. "Analysis of two-color photoelectron spectroscopy for attosecond metrology at seeded free-electron lasers". In: *New Journal of Physics* 23.4 (2021), p. 043046.
- [26] F. Rott, **M. Reduzzi**, T. Schnappinger, Y. Kobayashi, K. F. Chang, H. Timmers, D. M. Neumark, R. d. Vivie-Riedle, and S. R. Leone. "Ultrafast strong-field dissociation of vinyl bromide: An attosecond transient absorption spectroscopy and non-adiabatic molecular dynamics study". In: *Structural Dynamics* 8.3 (2021), p. 034104.
- [27] P. K. Maroju, C. Grazioli, M. Di Fraia, M. Moioli, D. Ertel, H. Ahmadi, O. Plekan, P. Finetti, E. Allaria, L. Giannessi, G. De Ninno, A. A. Lutman, R. J. Squibb, R. Feifel, P. Carpeggiani, **M. Reduzzi**, T. Mazza, M. Meyer, S. Bengtsson, N. Ibrakovic, E. R. Simpson, J. Mauritsson, T. Csizmadia, M. Dumergue, S. Kühn, H. N. Gopalakrishnan, D. You, K. Ueda, M. Labeye, J. E. Bækhoj, K. J. Schafer, E. V. Gryzlova, A. N. Grum-Grzhimailo, K. C. Prince, C. Callegari, and G. Sansone. "Complex Attosecond Waveform Synthesis at FEL FERMI". In: *Applied Sciences* 11.21 (2021).
- [28] T. P. H. Sidiropoulos, N. Di Palo, D. E. Rivas, S. Severino, **M. Reduzzi**, B. Nandy, B. Bauerhenne, S. Krylow, T. Vasileiadis, T. Danz, P. Elliott, S. Sharma, K. Dewhurst, C. Ropers, Y. Joly, M. E. Garcia, M. Wolf, R. Ernstorfer, and J. Biegert. "Probing the Energy Conversion Pathways between Light, Carriers, and Lattice in Real Time with Attosecond Core-Level Spectroscopy". In: *Phys. Rev. X* 11 (4 Dec. 2021), p. 041060.

- [29] E. V. Gryzlova, P. Carpeggiani, M. M. Popova, M. D. Kiselev, N. Douguet, **M. Reduzzi**, M. Negro, A. Comby, H. Ahmadi, V. Wanie, M. C. Castrovilli, A. Fischer, P. Eng-Johnsson, M. Meyer, K. Bartschat, S. M. Burkov, T. Csizmadia, M. Dumergue, S. Kühn, N. G. Harshitha, M. Fule, F. Aeenehvand, F. Stienkemeier, D. Iablonskyi, K. Ueda, P. Finetti, M. Zangrando, N. Mahne, K. L. Ishikawa, O. Plekan, K. C. Prince, E. Allaria, L. Giannessi, C. Callegari, A. N. Grum-Grzhimailo, and G. Sansone. "Influence of an atomic resonance on the coherent control of the photoionization process". In: *Phys. Rev. Res.* 4 (3 Sept. 2022), p. 033231.
- [30] A. M. Summers, S. Severino, **M. Reduzzi**, T. P. H. Sidiropoulos, D. E. Rivas, N. D. Palo, H.-W. Sun, Y.-H. Chien, I. León, B. Buades, S. L. Cousin, S. M. Teichmann, T. Mey, K. Mann, B. Keitel, E. Plönjes, D. K. Efetov, H. Schwoerer, and J. Biegert. "Realizing Attosecond Core-Level X-ray Spectroscopy for the Investigation of Condensed Matter Systems". In: *Ultrafast Science* 3 (2023), p. 0004.

## CHAPTERS IN BOOKS

- 1 F. Calegari, J. Greenwood, C. Liu, M. Lucchini, **M. Reduzzi**, G. Sansone, A. Trabattoni, M. Nisoli, "Attosecond Electron Spectroscopy in Molecules", 143-160, in "Ultrafast Dynamics Driven by Intense Light Pulses", Springer International Publishing (2016).

## PRESENTATIONS TO PEER-REVIEWED INTERNATIONAL CONFERENCES

- 1 C. Liu, **M. Reduzzi**, A. Trabattoni, A. Sunilkumar, A. Dubrouil, F. Calegari, M. Nisoli, and G. Sansone, "Photoelectron spectra dependence on the CEP of an isolated attosecond pulse", ATTO2013, Paris, 8-12 July 2013 (oral presentation).
- 2 **M. Reduzzi**, W.-C. Chu, C. Feng, A. Dubrouil, F. Calegari, F. Frassetto, L. Poletto, M. Nisoli, C.-D. Lin, G. Sansone, "Attosecond control of electronic wavepackets in molecular nitrogen", FisMat 2013, Milan, 9-13 September 2013 (oral presentation).
- 3 **M. Reduzzi**, W.-C. Chu, C. Feng, A. Dubrouil, J. Hummert, F. Calegari, F. Frassetto, L. Poletto, O. Kornilov, M. Nisoli, C.-D. Lin, G. Sansone, "Attosecond dynamics of autoionizing states in electronic molecular wavepackets", Ultrafast Phenomena 2014, Okinawa, 7-11 July 2014 (oral presentation).
- 4 **M. Reduzzi**, P. Carpeggiani, R. Pazourek, M. Gaarde, K. Schafer, A. Fischer, C.-D. Schröter, J. Ullrich, T. Pfeifer, R. Moshhammer, F. Calegari, M. Nisoli, G. Sansone, "Coincidence photoelectron/photoion spectroscopy using trains and isolated attosecond pulses", ICEPAC 2015, Toledo, 22-28 July 2015 (poster presentation).
- 5 Y. Kobayashi, **M. Reduzzi**, H. Timmers, K. Chang, D. M. Neumark, S.R. Leone, "Observation of electronic coherence after strong-field multiple ionization", FEMTO13, Cancun, 12-17 August 2017 (poster presentation).
- 6 **M. Reduzzi**, Y. Kobayashi, H. Timmers, K. Chang, D. M. Neumark, S.R. Leone, "Predissociation dynamics of vinyl bromide following strong-field ionization", FEMTO13, Cancun, 12-17 August 2017 (poster presentation).
- 7 P.A. Carpeggiani, **M. Reduzzi**, A. Comby, H. Ahmadi, S. Kuehn, F. Calegari, M. Nisoli, F. Frassetto, L. Poletto, D. Hoff, J. Ullrich, C.D. Schroeter, R. Moshhammer, G. Paulus, G. Sansone, "Vectorial reconstruction of NIR-VIS optical fields by XUV interferometry", UFO XI, Jackson Hole, 8-13 October 2017 (invited presentation).
- 8 **M. Reduzzi**, Y. Kobayashi, F. Rott, T. Schnappinger, H. Timmers, K.F. Chang, S. Oesterling, D.M. Neumark, R. de Vivie-Riedle, S. R. Leone, "Ultrafast dissociation of vinyl bromide after passage through a conical intersection: an attosecond transient absorption spectroscopy study", Ultrafast Phenomena 2018, Hamburg, 15-20 July 2018 (poster presentation).
- 9 **M. Reduzzi**, "Attosecond X-ray investigation of conical intersections in organics", 2019 BIST Conference, Barcelona, 7 November 2019 (invited presentation).
- 10 R. Borrego-Varillas, F. Vismarra, Y. Wu, D. Mocci, F. Holzmeier, **M. Reduzzi**, P. Recio, J. Cachón, J. González-Vázquez, A. Palacios, J. Santos, M. Lucchini, N. Martín, F. Martín, L. Bañares, M. Nisoli, "Ultrafast dynamics of push-pull nitroanilines tracked with few-femtosecond XUV-NIR spectroscopy", Ultrafast Phenomena 2022, Montreal, 18-22 July 2022 (oral presentation).

## CONFERENCE ORGANIZATION

- 9 – 13/09/2013 FisMat 2013, Milano (volunteer)
- 19 – 20/11/2018 Laserlab-Europe Foresight Workshop “Visions on Future Laser-based X-ray Science and Technology”, Castelldefels (volunteer)
- 8 – 10/07/2019 ICFO Schools on the Frontiers of Light “Attosecond science and extreme photonics”, Castelldefels (session chair)
- 9 – 12/09/2019 High Intensity COherent Nonlinear Optics (HICONO, MSCA ITN grant agreement No. 641272) meeting, Castelldefels (session chair)

## TEACHING ACTIVITIES

- 2013 – 2015 I collaborated with Politecnico di Milano as teaching assistant for the course “Electromagnetism (for Biomedical Engineering)”
- 2015 I collaborated with Politecnico di Milano as tutor for the course “Physics II (for Electrical Engineering)”, covering Electrostatics, Magnetostatics and Electrodynamics
- 2015 – 2016 I collaborated with Politecnico di Milano as laboratory assistant for the teaching laboratories “Electrostatics and Magnetostatics”
- 2021 – present Since the academic year 2021 – 2022, I teach “Fondamenti di Fisica Sperimentale” at Politecnico di Milano

## MENTORING ACTIVITIES

I co-mentored two PhD students at UC Berkeley and one PhD student at ICFO. I am currently supervising three PhD students at Politecnico di Milano.

## OUTREACH ACTIVITIES

- 1 Presentation of the research activities performed at the Physics Department of Politecnico di Milano to a broad audience during Politecnico “Open Day”.
- 2 Realization of virtual lab-tour videos within the Marie Skłodowska-Curie grant agreement No. 641789 “MEDEA”.
- 3 Training of high-school teachers in the use of the Photonics Explorer kit provided by Eyst, as part of an initiative promoted by CNR-IFN Milano within the Marie Skłodowska-Curie grant agreement No. 644606 “Photonics4All”.

## PEER-REVIEW DUTIES

I perform referral activities for the journals *Applied Sciences*, *Optics Express*, *Optics Letters*, *Optica*, *The Journal of Physical Chemistry Letters*, *Philosophical Transactions of the Royal Society A*, *Laser And Photonics Reviews*.