Enrico Allaria

List of Publications by Year
in descending order

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146 papers	4,929 citations	101543 36 h-index	95266 68 g-index
147 all docs	147 docs citations	147 times ranked	3232 citing authors

#	Article	IF	Citations
1	Single-shot transverse coherence in seeded and unseeded free-electron lasers: A comparison. Physical Review Accelerators and Beams, 2022, 25, .	1.6	2
2	Addendum: Experimental evidence of intrabeam scattering in a free-electron laser driver (2020 New J.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.9	0
3	Nonlinear harmonics of a seeded free-electron laser as a coherent and ultrafast probe to investigate matter at the water window and beyond. Physical Review A, 2022, 105, .	2.5	7
4	Interference of two-photon transitions induced by XUV light. Optica, 2022, 9, 692.	9.3	2
5	FLASH2020+: The New High Repetition Rate Coherent Soft X-Ray Facility. , 2021, , .		0
6	Analysis of two-color photoelectron spectroscopy for attosecond metrology at seeded free-electron lasers. New Journal of Physics, 2021, 23, 043046.	2.9	4
7	Addendum: Beyond the limits of 1D coherent synchrotron radiation (2018 New J. Phys. 20 073035). New Journal of Physics, 2021, 23, 049401.	2.9	1
8	Generation and measurement of intense few-femtosecond superradiant extreme-ultraviolet free-electron laser pulses. Nature Photonics, 2021, 15, 523-529.	31.4	20
9	Characterization of soft x-ray echo-enabled harmonic generation free-electron laser pulses in the presence of incoherent electron beam energy modulations. Physical Review Accelerators and Beams, 2021, 24, .	1.6	3
10	Complex Attosecond Waveform Synthesis at FEL FERMI. Applied Sciences (Switzerland), 2021, 11, 9791.	2.5	5
11	Flexible and Coherent Soft X-ray Pulses at High Repetition Rate: Current Research and Perspectives. Applied Sciences (Switzerland), 2021, 11, 9729.	2.5	6
12	High repetition rate seeded free electron laser with an optical klystron in high-gain harmonic generation. Physical Review Accelerators and Beams, 2021, 24, .	1.6	3
13	Photoelectric effect with a twist. Nature Photonics, 2020, 14, 554-558.	31.4	39
14	Characterisation of microbunching instability with 2D Fourier analysis. Scientific Reports, 2020, 10, 5059.	3.3	7
15	Tracking attosecond electronic coherences using phase-manipulated extreme ultraviolet pulses. Nature Communications, 2020, 11, 883.	12.8	50
16	Attosecond pulse shaping using a seeded free-electron laser. Nature, 2020, 578, 386-391.	27.8	116
17	Experimental evidence of intrabeam scattering in a free-electron laser driver. New Journal of Physics, 2020, 22, 083053.	2.9	13
18	Spectrotemporal control of soft x-ray laser pulses. Physical Review Accelerators and Beams, 2020, 23, .	1.6	4

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19	Microbunching instability characterization via temporally modulated laser pulses. Physical Review Accelerators and Beams, 2020, 23, .	1.6	2
20	Enhanced seeded free electron laser performance with a â€œcoldâ€•electron beam. Physical Review Accelerators and Beams, 2020, 23, .	1.6	14
21	New Method for Measuring Angle-Resolved Phases in Photoemission. Physical Review X, 2020, 10, .	8.9	23
22	Coherent pulses from seeded Free Electron Lasers: the experience at FERMI with high gain harmonic generation and echo enabled harmonic generation. , 2020, , .		0
23	A Novel Attosecond Timing Tool for Free-Electron Laser Experiment. , 2020, , .		0
24	High-gain harmonic generation with temporally overlapping seed pulses and application to ultrafast spectroscopy. Optics Express, 2020, 28, 29976.	3.4	5
25	A detailed investigation of single-photon laser enabled Auger decay in neon. New Journal of Physics, 2019, 21, 113036.	2.9	12
26	Coherent soft X-ray pulses from an echo-enabled harmonic generation free-electron laser. Nature Photonics, 2019, 13, 555-561.	31.4	92
27	Ultrafast Structural Dynamics along the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi><mml:mo>â^’</mml:mo><mml:mi>Î³</mml:mi></mml:math> Phase Transition Path in MnAs. Physical Review Letters, 2019, 122, 145702.	7.8	6
28	Complete Characterization of Phase and Amplitude of Bichromatic Extreme Ultraviolet Light. Physical Review Letters, 2019, 123, 213904.	7.8	21
29	Free electron laser polarization control with interfering crossed polarized fields. Physical Review Accelerators and Beams, 2019, 22, .	1.6	9
30	Soft X-Ray Second Harmonic Generation as an Interfacial Probe. Physical Review Letters, 2018, 120, 023901.	7.8	64
31	Beyond the limits of 1D coherent synchrotron radiation. New Journal of Physics, 2018, 20, 073035.	2.9	20
32	Symmetry breakdown of electron emission in extreme ultraviolet photoionization of argon. Nature Communications, 2018, 9, 4659.	12.8	36
33	Publisherâ€™s Note: Extreme-Ultraviolet Vortices from a Free-Electron Laser [Phys. Rev. X 7 , 031036 (2017)]. Physical Review X, 2018, 8, .	8.9	0
34	Coherent control schemes for the photoionization of neon and helium in the Extreme Ultraviolet spectral region. Scientific Reports, 2018, 8, 7774.	3.3	25
35	Two-bunch operation with ns temporal separation at the FERMI FEL facility. New Journal of Physics, 2018, 20, 053047.	2.9	6
36	Coherent THz Emission Enhanced by Coherent Synchrotron Radiation Wakefield. Scientific Reports, 2018, 8, 11661.	3.3	16

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37	Time-Resolved Measurement of Interatomic Coulombic Decay Induced by Two-Photon Double Excitation of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Ne</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2017, 118, 033202.	7.8	32
38	High quality electron beams for high quality FEL. , 2017, , .		1
39	Observation and Control of Laser-Enabled Auger Decay. Physical Review Letters, 2017, 119, 073203.	7.8	29
40	Passive Linearization of the Magnetic Bunch Compression Using Self-Induced Fields. Physical Review Letters, 2017, 119, 184802.	7.8	14
41	Dynamics of Laser-Induced Magnetostructural Phase Transitions in MnAs/GaAs (001) Epitaxial Layers. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	3
42	Pulse Duration of Seeded Free-Electron Lasers. Physical Review X, 2017, 7, .	8.9	47
43	Extreme-Ultraviolet Vortices from a Free-Electron Laser. Physical Review X, 2017, 7, .	8.9	36
44	Thermally induced magnetization switching in Fe/MnAs bilayers and ultrafast dynamics of magneto-structural phase transitions in MnAs. , 2017, , .		0
45	TeraFERMI: Status of the beamline and pilot experiments. , 2017, , .		0
46	Echo-Enabled Harmonic Generation Studies for the FERMI Free-Electron Laser. Photonics, 2017, 4, 19.	2.0	18
47	Element Selective Probe of the Ultra-Fast Magnetic Response to an Element Selective Excitation in Fe-Ni Compounds Using a Two-Color FEL Source. Photonics, 2017, 4, 6.	2.0	9
48	Optical Klystron Enhancement to Self Amplïï¬ed Spontaneous Emission at FERMI. Photonics, 2017, 4, 15.	2.0	11
49	Dynamics of the MnAs Î±/Î²-Striped Microstructure and of the Fe Magnetization Reversal in Fe/MnAs/GaAs(001): An Optical-Laser Pumpâ€“Free-Electron-Laser Probe Scattering Experiment. Photonics, 2017, 4, 21.	2.0	4
50	Polarization Characterization of Soft X-Ray Radiation at FERMI FEL-2. Photonics, 2017, 4, 29.	2.0	11
51	The FERMI seeded-FEL facility: Status and perspectives. AIP Conference Proceedings, 2016, , .	0.4	4
52	THz coherent transition radiation at TeraFERMI: First characterization of THz radiation and electron beam dynamics. , 2016, , .		0
53	Chirped pulse amplification in an extreme-ultraviolet free-electron laser. Nature Communications, 2016, 7, 13688.	12.8	43
54	Widely tunable two-colour seeded free-electron laser source for resonant-pump resonant-probe magnetic scattering. Nature Communications, 2016, 7, 10343.	12.8	77

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55	Slow Interatomic Coulombic Decay of Multiply Excited Neon Clusters. Physical Review Letters, 2016, 117, 276806.	7.8	24
56	How the optical timing system, the longitudinal diagnostics and the associated feedback systems provide femtosecond stable operation at the FERMI free electron laser. High Power Laser Science and Engineering, 2016, 4, .	4.6	3
57	Generation of Phase-Locked Pulses from a Seeded Free-Electron Laser. Physical Review Letters, 2016, 116, 024801.	7.8	50
58	Coherent control with a short-wavelength free-electron laser. Nature Photonics, 2016, 10, 176-179.	31.4	197
59	Spectrotemporal Shaping of Seeded Free-Electron Laser Pulses. Physical Review Letters, 2015, 115, 114801.	7.8	68
60	Multicolor High-Gain Free-Electron Laser Driven by Seeded Microbunching Instability. Physical Review Letters, 2015, 115, 214801.	7.8	48
61	Single Shot Polarization Characterization of XUV FEL Pulses from Crossed Polarized Undulators. Scientific Reports, 2015, 5, 13531.	3.3	44
62	Interatomic Coulombic Decay Processes after Multiple Valence Excitations in Ne Clusters. Journal of Physics: Conference Series, 2015, 635, 112067.	0.4	0
63	Single-shot spectro-temporal characterization of XUV pulses from a seeded free-electron laser. Nature Communications, 2015, 6, 8075.	12.8	55
64	Experimental Demonstration of Enhanced Self-Amplified Spontaneous Emission by an Optical Klystron. Physical Review Letters, 2015, 114, 013901.	7.8	32
65	The FERMI free-electron lasers. Journal of Synchrotron Radiation, 2015, 22, 485-491.	2.4	101
66	Optical klystron SASE at FERMI. Proceedings of SPIE, 2015, , .	0.8	0
67	Experimental characterization of the FERMI laser heater and its impact on the FEL operations. Proceedings of SPIE, 2015, , .	0.8	0
68	Optically induced Fe magnetization reversal in Fe/MnAs/GaAs(001). Proceedings of SPIE, 2015, , .	0.8	0
69	FERMI longitudinal diagnostics: results and future challenges. Proceedings of SPIE, 2015, , .	0.8	0
70	Control of the Polarization of a Vacuum-Ultraviolet, High-Gain, Free-Electron Laser. Physical Review X, 2014, 4, .	8.9	80
71	Magnetization and Microstructure Dynamics in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Fe</mml:mi><mml:mo>/</mml:mo><mml:mi>MnAs</mml:mi><mml:mo>/</mml:mo><mml:mi stretchy="false">(</mml:mo><mml:mn>001</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 92 Td (stretchy="false"> Laser Pulse. Physical Review Letters, 2014, 113, 247202.	7.8	26
72	Laser heater commissioning at an externally seeded free-electron laser. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	49

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73	Impact of Non-Gaussian Electron Energy Heating upon the Performance of a Seeded Free-Electron Laser. Physical Review Letters, 2014, 112, 114802.	7.8	20
74	Energy slicing analysis for time-resolved measurement of electron-beam properties. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	6
75	Experimental Demonstration of Electron Longitudinal-Phase-Space Linearization by Shaping the Photoinjector Laser Pulse. Physical Review Letters, 2014, 112, 044801.	7.8	39
76	Polarization measurement of free electron laser pulses in the VUV generated by the variable polarization source FERMI. , 2014, , .		4
77	Chirp control in a seeded Free-Electron Laser. , 2014, , .		0
78	Coherent Pulses from a Seeded Free-Electron Laser in the Extreme Ultraviolet. Springer Proceedings in Physics, 2014, , 1-6.	0.2	0
79	The TeraFERMI terahertz source at the seeded FERMI free-electron-laser facility. Review of Scientific Instruments, 2013, 84, 022702.	1.3	39
80	Two-stage seeded soft-X-ray free-electron laser. Nature Photonics, 2013, 7, 913-918.	31.4	424
81	The TeraFERMI beamline at the FERMI Free-Electron-Laser. , 2013, , .		0
82	Two-colour generation in a chirped seeded free-electron laser: a close look. Optics Express, 2013, 21, 22728.	3.4	42
83	Status and achievements at FERMI@Elettra: the first double cascade seeded EUV-SXR FEL facility open to users. , 2013, , .		3
84	Impact of radiator length in the emitted power for a high gain harmonic generation free-electron laser. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	7
85	Chirped Seeded Free-Electron Lasers: Self-Standing Light Sources for Two-Color Pump-Probe Experiments. Physical Review Letters, 2013, 110, 064801.	7.8	93
86	Two-colour pumpâ€“probe experiments with a twin-pulse-seed extreme ultraviolet free-electron laser. Nature Communications, 2013, 4, 2476.	12.8	156
87	Optimization of a high brightness photoinjector for a seeded FEL facility. Journal of Instrumentation, 2013, 8, P05015-P05015.	1.2	37
88	Tunability experiments at the FERMI@Elettra free-electron laser. New Journal of Physics, 2012, 14, 113009.	2.9	81
89	Publisherâ€™s Note: Transverse emittance preservation during bunch compression in the Fermi free electron laser [Phys. Rev. ST Accel. Beams15, 020701 (2012)]. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	1
90	Time resolved pump-probe scattering in MnAs/GaAs(001): A look into the dynamics of Î±-Î² stripe domains. Applied Physics Letters, 2012, 100, 211905.	3.3	6

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91	Transverse emittance preservation during bunch compression in the Fermi free electron laser. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	18
92	Highly coherent and stable pulses from the FERMI seeded free-electron laser in the extreme ultraviolet. Nature Photonics, 2012, 6, 699-704.	31.4	903
93	Experimental demonstration of frequency pulling in single-pass free-electron lasers. Optics Express, 2011, 19, 10619.	3.4	8
94	Angular distribution of nonlinear harmonic generation in helical undulators: A comparison between experiments and theory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 654, 575-579.	1.6	4
95	Coherent Light with Tunable Polarization from Single-Pass Free-Electron Lasers. Physical Review Letters, 2011, 107, 084801.	7.8	30
96	FERMI@Elettra, a seeded free electron laser source for a broad scientific user program. , 2011, , .		6
97	The FERMI@Elettra free-electron-laser source for coherent x-ray physics: photon properties, beam transport system and applications. New Journal of Physics, 2010, 12, 075002.	2.9	155
98	Tunability of a seeded free-electron laser through frequency pulling. Europhysics Letters, 2010, 89, 64005.	2.0	7
99	Design and simulation challenges for FERMI@elettra. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 608, 19-27.	1.6	28
100	Sub-picosecond coherent VUV source on the Elettra storage ring. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2008, 596, 451-458.	1.6	6
101	Experimental Characterization of Nonlinear Harmonic Generation in Planar and Helical Undulators. Physical Review Letters, 2008, 100, 174801.	7.8	17
102	Comparison of single neuron models in terms of synchronization propensity. Chaos, 2008, 18, 033108.	2.5	6
103	Self-Induced Harmonic Generation in a Storage-Ring Free-Electron Laser. Physical Review Letters, 2008, 100, 104801.	7.8	19
104	Publisherâ€™s Note: Experimental Characterization of Nonlinear Harmonic Generation in Planar and Helical Undulators [Phys. Rev. Lett.100, 174801 (2008)]. Physical Review Letters, 2008, 101, .	7.8	0
105	Generation of Ultrashort Coherent Vacuum Ultraviolet Pulses Using Electron Storage Rings: A New Bright Light Source for Experiments. Physical Review Letters, 2008, 101, 053902.	7.8	55
106	Soft-X-Ray Coherent Radiation Using a Single-Cascade Free-Electron Laser. Physical Review Letters, 2007, 99, 014801.	7.8	50
107	Synchronization in Coupled and Free Chaotic Systems. , 2007, , 181-198.		0
108	Numerical and experimental exploration of phase control of chaos. Chaos, 2006, 16, 013111.	2.5	28

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109	UNEXPECTED BEHAVIOR IN THE CROSSING OF MICROWAVE AND OPTICAL BEAMS. Modern Physics Letters B, 2005, 19, 1403-1410.	1.9	4
110	Attractor Selection in Chaotic Dynamics. Physical Review Letters, 2005, 95, 184101.	7.8	22
111	Predicting Phase Synchronization for Homoclinic Chaos in a CO2 Laser. AIP Conference Proceedings, 2004, , .	0.4	0
112	Stochastic bifurcation in a driven laser system: Experiment and theory. Physical Review E, 2004, 70, 026220.	2.1	17
113	Experimental control of coherence of a chaotic oscillator. Physical Review E, 2004, 69, 066211.	2.1	13
114	Coupling scheme for complete synchronization of periodically forced chaoticCO2lasers. Physical Review E, 2004, 70, 036208.	2.1	8
115	Predicting phase synchronization in a spiking chaoticCO2laser. Physical Review E, 2004, 70, 035204.	2.1	7
116	In phase and antiphase synchronization of coupled homoclinic chaotic oscillators. Chaos, 2004, 14, 118-122.	2.5	13
117	Control of oscillation coherence in a chaotic laser. AIP Conference Proceedings, 2004, , .	0.4	0
118	Global manifold control in a driven laser: sustaining chaos and regular dynamics. Physica D: Nonlinear Phenomena, 2004, 189, 70-80.	2.8	20
119	POLARIZATION INSTABILITIES IN A QUASI-ISOTROPIC CO₂ LASER. , 2004, , .		0
120	Digital holography at 10.6 Î¼m. Optics Communications, 2003, 215, 257-262.	2.1	82
121	Transient polarization dynamics in a CO2 laser. Optics Communications, 2003, 217, 335-342.	2.1	14
122	Homoclinic chaos in a laser: synchronization and its implications in biological systems. Optics and Lasers in Engineering, 2003, 39, 293-304.	3.8	13
123	Interferometric analysis of reorientational nonlinear phenomena at 106 Âµm in a nematic liquid crystal. Applied Optics, 2003, 42, 4827.	2.1	3
124	Controlling transient dynamics to communicate with homoclinic chaos. Chaos, 2003, 13, 921-925.	2.5	4
125	Information encoding in homoclinic chaotic systems. Chaos, 2003, 13, 286-290.	2.5	19
126	Propensity Criterion for Networking in an Array of Coupled Chaotic Systems. Physical Review Letters, 2003, 91, 234101.	7.8	12

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127	Competition of synchronization domains in arrays of chaotic homoclinic systems. Physical Review E, 2003, 68, 066209.	2.1	25
128	Polarization and spatial competition in a transverse multimodeCO2laser. Physical Review A, 2003, 68, .	2.5	7
129	Noise-enhanced synchronization of homoclinic chaos in aCO2laser. Physical Review E, 2003, 67, 015205.	2.1	50
130	Constructive effects of noise in homoclinic chaotic systems. Physical Review E, 2003, 67, 066220.	2.1	57
131	Evidence of Noise Induced Synchronization and Coherence Resonance in Homoclinic Chaos. AIP Conference Proceedings, 2003, , .	0.4	3
132	Information encoding in a chaotic laser. , 2003, 4829, 1106.		0
133	Self-delayed synchronization and analogies with long term memories. , 2003, 4829, 462.		0
134	Interferometric analysis of self-phase-modulation at 10.6Î¼m in a nematic liquid crystal. , 2003, , .		0
135	Infrared digital holography. , 2003, 5036, 489.		0
136	Experimental Characterization of the Transition to Phase Synchronization of ChaoticCO2Laser Systems. Physical Review Letters, 2002, 89, 194101.	7.8	86
137	Autonomous Bursting in a Homoclinic System. Physical Review Letters, 2002, 88, 144101.	7.8	34
138	Delayed self-synchronization in homoclinic chaos. Physical Review E, 2002, 65, 046237.	2.1	40
139	Influence of observational noise on the recurrence quantification analysis. Physica D: Nonlinear Phenomena, 2002, 171, 138-152.	2.8	210
140	PATTERN FORMATION AND DYNAMICS IN AN ANNULAR CO2 LASER. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 2759-2770.	1.7	0
141	Polarization competition in a quasi-isotropic CO_2 laser. Optics Letters, 2001, 26, 605.	3.3	7
142	Synchronization of Homoclinic Chaos. Physical Review Letters, 2001, 86, 791-794.	7.8	107
143	Negative hysteresis in a laser with modulated parameters. Optics Communications, 2001, 189, 313-319.	2.1	5
144	Pattern dynamics in an annular laser. European Physical Journal D, 2000, 12, 329-337.	1.3	0

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145	Synchronization domains in arrays of chaotic homoclinic systems. , 0, , .		0
146	Experimental characterization of the transition to phase synchronization of chaos. , 0, , .		0