Curriculum

Nome Name:	Enrico Massimiliano
Cognome Surname:	ALLARIA

ORCID:	0000-0001-9570-6361
Scopus Author ID:	6603817098
WOS Author ID:	n.d.
Sito WEB WEB site:	n.d.

POSIZIONE PROFESSIONALE ATTUALE / CURRENT PROFESSIONAL POSITION:

Posizione attuale Current position:	In Servizio
Qualifica Qualification:	Primo ricercatore
Ateneo/Ente/Azienda University/Institution/Company:	Elettra-Sincrotrone Trieste S.C.p.A.
Nazione Ateneo/Ente/Azienda University/Institution/Company Country:	ITA
Anno inizio Start Year:	2021
Anno fine End Year:	n.d.

PRECEDENTI ESPERIENZE LAVORATIVE (ULTIMI 10 ANNI) / PREVIOUS WORK EXPERIENCE (LAST 10 YEARS):

Qualifica Qualification:	Primo ricercatore

Ateneo/Ente/Azienda University/Institution/Company	DESY - Deutsches Elektronen-Synchrotron
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	Hamburg, Germania
Anno inizio Start Year:	2020
Anno fine End Year:	2021
Descrizione Description:	Project leader for the FLASH2020+ project. With FLASH2020+, supported by DESY and by the German Federal Ministry of Education and Research, an upgrade of the FLASH free electron laser facility has started in 2020. The 4 year project aiming at an extension of current capabilities of the FLASH facility includes an ambitious seeded Free Electron Laser (FEL) covering the spectral range from 60 nm to 4 nm and operated at the full repetition rate of the superconducting accelerator of FLASH. As a project leader of the starting project, I have coordinated the work of the team and initiated all the processes required for the success of the project. A project structure has been created together with a new documentation system and a quality assurance process.

Qualifica Qualification:	Primo ricercatore
Ateneo/Ente/Azienda University/Institution/Company	Elettra-Sincrotrone Trieste S.C.p.A.
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	Trieste, TS, Italia
Anno inizio Start Year:	2016
Anno fine End Year:	2020
Descrizione Description:	Member of the FERMI team at Elettra. Starting from September 2016 responsible for the EEHG experiment at FERMI. In charge of managing the experimental project that include modification to the FERMI layout. From January 2019 head of machine physics of FERMI. In charge of coordinating the machine R&D and experiments oriented at the optimization of the FEL and development of new configurations for users.

LINGUE / LANGUAGES:

Lingua Language:	Inglese
Scrittura Writing:	C1
Comunicazione Comunication:	C1

Lingua Language:	Francese
Scrittura Writing:	B2
Comunicazione Comunication:	B2

Lingua Language:	Tedesco
Scrittura Writing:	B1
Comunicazione Comunication:	B2

Lingua Language:	Spagnolo
Scrittura Writing:	B2
Comunicazione Comunication:	C1

AREA/SETTORE SCIENTIFICO-DISCIPLINARE / AREA/SECTOR SCIENTIFIC-DISCIPLINARY

Area scientifico-disciplinare Area scientific-disciplinary:	Scienze fisiche
Area scientifico-disciplinare codice Area scientific-disciplinary code:	02
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-Fisica teorica delle interazioni fondamentali, modelli, metodi matematici e applicazioni -Fisica sperimentale della materia e applicazioni
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-PHYS-02/A -PHYS-03/A

DESCRIZIONE DEI PRINCIPALI RISULTATI SCIENTIFICI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 PUBBLICAZIONI) / DESCRIPTION OF THE MAIN SCIENTIFIC RESULTS ACHIEVED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 PUBLICATIONS):

Descrizione Description:	*As a member of the FERMI commissioning team, he has been responsible for FEL studies and experiments in addition to contribute to the coordination of the operations of the facility. In*

	2016, I proposed an experiment to demonstrate Echo Enabled Harmonic Generation in the soft X-ray spectral region. The experiment, done in collaboration with international experts, has been successfully carried out in 2018 at FERMI. Results have been published on Nature photonics and have been important for the further development of coherent x-ray sources at FERMI and also at other laboratories. From June 2020 to October 2021 I joined DESY to contribute to the FLASH2020+ project aiming at extending the FLASH capabilities with new options including external seeding. As a project leader I contributed to the project organization and the definition of important components. In 2021 I returned to FERMI as a member of the team in charge of FEL operations. Since 2022 I'm also coordinating the efforts toward the upgrade of the facility with the aim to extend the tuning range down to 2 nm. As an expert of the FERMI FEL I have been eavily involved in many of the most sophisticated user's experiments that exploits the unique characteristics of the FERMI facility. Over the years, I have co-authored more than 130 journal articles, many as corresponding or lead author, and have presented at numerous international conferences and workshops. In recognition of my contributions to seeded FELs, I received the International FEL Prize in 2019. Since many years I serve as a reviewer for several scientific journals and institutions.

PUBBLICAZIONI / PUBLICATIONS:

Anno della pubblicazione Year of publication:	2024
Citazione Citation:	Richter F, Saalmann U, Allaria E, Wollenhaupt M, Ardini B, Brynes A, Callegari C, Cerullo G, Danailov M, Demidovich A, Dulitz K, Feifel R, Fraia MD, Ganeshamandiram SD, Giannessi L, Gölz N, Hartweg S, von Issendorff B, Laarmann T, Landmesser F, Li Y, Manfredda M, Manzoni C, Michelbach M, Morlok A, Mudrich M, Ngai A, Nikolov I, Pal N, Pannek F, Penco G, Plekan O, Prince KC, Sansone G, Simoncig A, Stienkemeier F, Squibb RJ, Susnjar P, Trovo M, Uhl D, Wouterlood B, Zangrando M, Bruder L (2024). Strong-field quantum control in the extreme ultraviolet domain using pulse shaping. NATURE, vol. 636, p. 337-341, ISSN: 0028-0836, doi: 10.1038/s41586-024-08209-y

Anno della pubblicazione Year of publication:	2016
Citazione Citation:	Prince KC, Allaria E, Callegari C, Cucini R, De Ninno G, Di Mitri S, Diviacco B, Ferrari E, Finetti P, Gauthier D, Giannessi L, Mahne N, Penco G, Plekan O, Raimondi L, Rebernik P, Roussel E, Svetina C, Trovò M, Zangrando M, Negro M, Carpeggiani P, Reduzzi M, Sansone G, Grum-Grzhimailo AN, Gryzlova EV, Strakhova SI, Bartschat K, Douguet N, Venzke J, Iablonskyi D, Kumagai Y, Takanashi T, Ueda K, Fischer A, Coreno M, Stienkemeier F, Ovcharenko Y, Mazza

	T, Meyer M (2016). Coherent control with a short-wavelength free-electron laser. NATURE PHOTONICS, vol. 10, p. 176-179, ISSN: 1749-4885, doi: 10.1038/nphoton.2016.13

Anno della pubblicazione Year of publication:	2019
Citazione Citation:	Rebernik Ribič P, Abrami A, Badano L, Bossi M, Braun H-H, Bruchon N, Capotondi F, Castronovo D, Cautero M, Cinquegrana P, Coreno M, Couprie ME, Cudin I, Boyanov Danailov M, De Ninno G, Demidovich A, Di Mitri S, Diviacco B, Fawley WM, Feng C, Ferianis M, Ferrari E, Foglia L, Frassetto F, Gaio G, Garzella D, Ghaith A, Giacuzzo F, Giannessi L, Grattoni V, Grulja S, Hemsing E, Iazzourene F, Kurdi G, Lonza M, Mahne N, Malvestuto M, Manfredda M, Masciovecchio C, Miotti P, Mirian NS, Petrov Nikolov I, Penco GM, Penn G, Poletto L, Pop M, Prat E, Principi E, Raimondi L, Reiche S, Roussel E, Sauro R, Scafuri C, Sigalotti P, Spampinati S, Spezzani C, Sturari L, Svandrlik M, Tanikawa T, Trovó M, Veronese M, Vivoda D, Xiang D, Zaccaria M, Zangrando D, Zangrando M, Allaria E (2019). Coherent soft X-ray pulses from an echo-enabled harmonic generation free-electron laser. NATURE PHOTONICS, vol. 13, p. 555-561, ISSN: 1749-4885, doi: 10.1038/s41566-019-0427-1

Anno della pubblicazione Year of publication:	2015
Citazione Citation:	Roussel E, Ferrari E, Allaria E, Penco G, Di Mitri S, Veronese M, Danailov M, Gauthier D, Giannessi L (2015). Multicolor High-Gain Free-Electron Laser Driven by Seeded Microbunching Instability. PHYSICAL REVIEW LETTERS, vol. 115, ISSN: 1092-0145, doi: 10.1103/PhysRevLett.115.214801

Anno della pubblicazione Year of publication:	2015
Citazione Citation:	Gauthier D, Ribič PR, De Ninno G, Allaria E, Cinquegrana P, Danailov MB, Demidovich A, Ferrari E, Giannessi L, Mahieu B, Penco G (2015). Spectrotemporal Shaping of Seeded Free-Electron Laser Pulses. PHYSICAL REVIEW LETTERS, vol. 115, ISSN: 1092-0145, doi: 10.1103/PhysRevLett.115.114801

Anno della pubblicazione Year of publication:	2023
Citazione Citation:	Allaria E, De Ninno G (2023). A step towards cavity-based X-ray free electron lasers. NATURE PHOTONICS, vol. 17, p. 841-842, ISSN: 1749-4893, doi: 10.1038/s41566-023-01302-0

Anno della pubblicazione Year of publication:	2016
Citazione Citation:	Gauthier D, Ribič PR, De Ninno G, Allaria E, Cinquegrana P, Danailov MB, Demidovich A, Ferrari E, Giannessi L (2016). Generation of Phase-Locked Pulses from a Seeded Free-

	Electron Laser. PHYSICAL REVIEW LETTERS, vol. 116, ISSN: 1092-0145, doi: 10.1103/PhysRevLett.116.024801

DESCRIZIONE DEI PRINCIPALI PROGETTI DI RICERCA E PREMI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PRINCIPAL INVESTIGATOR O COORDINATORE LOCALE DI PROGETTI DI RICERCA COMPETITIVI NAZIONALI O INTERNAZIONALI, SIGNIFICATIVI PREMI CONSEGUITI PER LA PROPRIA ATTIVITÀ DI RICERCA)/ DESCRIPTION OF THE MAIN RESEARCH PROJECTS AND AWARDS AWARDED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 ACHIEVEMENTS, INCLUDING, FOR EXAMPLE, PRINCIPAL INVESTIGATOR OR LOCAL COORDINATOR OF NATIONAL OR INTERNATIONAL COMPETITIVE RESEARCH PROJECTS, SIGNIFICANT AWARDS AWARDED FOR YOUR RESEARCH ACTIVITY):

Descrizione Description:	*August 2019: International Free Electron Laser Conference (FEL2019) Awarded with the FEL prize "for his seminal contributions to seeded FELs including advanced operating modes in HGHG FEL as well as the first demonstration of EEHG FEL in the soft X-ray regime"*

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SVILUPPO DI RETI E RELAZIONI SCIENTIFICHE NAZIONALI E INTERNAZIONALI (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PARTECIPAZIONE O ORGANIZZAZIONE DI CONVEGNI NAZIONALI E INTERNAZIONALI; CONTRIBUTI A CONSORZI DI RICERCA) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF DEVELOPMENT OF NATIONAL AND INTERNATIONAL SCIENTIFIC NETWORKS AND RELATIONS (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, PARTICIPATION OR ORGANIZATION OF NATIONAL AND INTERNATIONAL CONFERENCES; CONTRIBUTIONS TO RESEARCH CONSORTIA):

Descrizione Description:	

Descrizione Description:	Conference and workshop Committees - Member of the Scientific Program Committee for

	few editions of the International Free Electron Laser conference (2014, 2024). - Member of the Scientific Program Committee for the SPIE conferences “X-Ray Free-Electron Lasers: Advances in Source Development and Instrumentation” - Member of the Scientific Committee for the Future of Seeded free Electron lasers (FUSEE) workshop organized by Elettra – Sincrotrone Trieste in 2022. - Member of the programm committee of SILS 2024 conference - Member of a tematic workshop at FISMAT2025

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SUPPORTO ALLA COMUNITÀ SCIENTIFICA (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, RESPONSABILITÀ DI DIREZIONE DI COMITATI EDITORIALI; INCARICHI DI VALUTAZIONE DELLA RICERCA PRESSO ISTITUZIONI NAZIONALI O INTERNAZIONALI; RESPONSABILITÀ ISTITUZIONALI ALL'INTERNO DELL'ISTITUZIONE DI APPARTENENZA O DI ALTRE ISTITUZIONI) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF SUPPORT TO THE SCIENTIFIC COMMUNITY (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, MANAGEMENT RESPONSIBILITIES OF EDITORIAL COMMITTEES; RESEARCH EVALUATION ROLES AT NATIONAL OR INTERNATIONAL INSTITUTIONS; INSTITUTIONAL RESPONSIBILITIES WITHIN THE INSTITUTION OF AFFILIATION OR OTHER INSTITUTIONS):

Descrizione Description:	*Review Committees: - From Dec. 2023: Member of the Machine Advisory Committee for the SHINE light facility, SARI and Shanghai Tech University, Shanghai (China). - December 2022: Reviewer at the International review on the physics design progress of the Shanghai HIgh repetitioN rate XFEL and Extreme (SHINE) accelerator and FEL schemes, SARI, Shanghai (China). - 2015: Member of the Design Review Panel of the SINAP X-ray FEL Test facility SXFEL, SINAP Shanghai (China). - 2014: Member of the International Commissioning Committee for the seeding at SACLA (Japan). Referee: - Referee for scientific journals: Phys. Rev., Europ. Phys. Journ., D, Chaos, Opt. Commun., IEEE Jour. of Quant. Elect, Communications in Nonlinear Science and Numerical Simulation, Nature, Nature photonics, and others. - Referee and evaluator for scientific proposal at funding agencies: ERC (EU), DOE (USA), SNF (Swiss), CAS (China), ANR (France). - Referee for PhD and Master thesis at University of Milan, Trieste, Hamburg*

Descrizione Description:	Cluster coordinator at Elettra - Sincrotrone Trieste with responsability on internation al projects Referee and evaluator for scientific proposal at funding agencies: ERC (EU), DOE (USA), SNF (Swiss), CAS (China), ANR (France).

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI VALORIZZAZIONE DELLE CONOSCENZE (CON ANNESSO ELENCO DI MASSIMO 3 RISULTATI, RELATIVI ALLA PARTECIPAZIONE DEL CANDIDATO ALLE ATTIVITÀ DI VALORIZZAZIONE DELLE CONOSCENZE) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF KNOWLEDGE VALORIZATION (WITH ATTACHED LIST OF MAXIMUM 3 RESULTS, RELATING TO THE CANDIDATE'S PARTICIPATION IN KNOWLEDGE VALORIZATION ACTIVITIES):

Descrizione Description:	

Informazioni aggiornate alla data di candidatura 19-05-2025

Enrico Massimiliano ALLARIA

Il presente curriculum costituisce allegato e parte integrante dell'incarico sottoscritto