ANGELO SCHIAVI
Curriculum Vitae

Roma, February 15, 2018

Part I – General Information

Full Name	Angelo Schiavi

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University graduation	1997	Università degli Studi di Padova, Italy	Laurea in Fisica conseguita presso l'Università di Padova con votazione di 110 su 110 e lode; tesi di laurea: *"Calcolo con tecniche funzionali di correlazioni e condensati nel modello di Schwinger massivo"*, relatore Prof. Antonio Bassetto.
Post-graduate studies	Jan 1999-Oct 2002	Imperial College of Science, Technology and Medicine, London.	PhD course on Plasma Physics
PhD	2004	London University - Imperial College of Science, Technology and Medicine, London.	Thesis on "*Study of Laser Produced Plasmas by X-ray and Proton Radiography*"
Dottorato di Ricerca	2005	Ministero dell'Istruzione, dell'Università e della Ricerca	Titolo di Dottore di Ricerca tramite equipollenza del precedente titolo di PhD come da decreto ministeriale del 29 agosto 2005.
Abilitazione Scientifica Nazionale	2013	Ministero dell'Istruzione, dell'Università e della Ricerca	Abilitazione Scientifica Nazionale alle funzioni di Professore Universitario di Seconda Fascia per il settore concorsuale 02/B1 (tornata 2012), a partire dal 11/12/2013

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
01/11/2010	----	Università di Roma "La Sapienza"	Ricercatore universitario per il settore scientifico disciplinare FIS/01 presso la Facoltà di Ingegneria Civile e Industriale
01/12/2008	31/10/2010	CNISM - Università di Roma "La Sapienza"	Ricercatore CNISM di III livello a tempo determinato presso l'Unità di Ricerca CNISM di Roma - Dipartimento di Energetica dell'Università di Roma "La Sapienza" sul tema *"Physics of inertial fusion targets for HiPER"*
01/01/2007	30/11/2008	Università di Roma "La Sapienza"	Assegnista di ricerca (assegno biennale) presso il Dipartimento di Energetica dell'Università di Roma "La Sapienza" sul tema *"Interazione laser-plasma e conseguente dinamica di plasma, in condizioni di interesse per la fusione inerziale"*
01/06/2005	31/12/2006	Università di Roma "La Sapienza"	Assegnista di ricerca (assegno biennale) presso il Dipartimento di Energetica dell'Università di Roma "La Sapienza" sul tema *"Interazione laser-materia e trasporto di particelle cariche"*
01/04/2005	31/05/2005	Università di Roma "La Sapienza"	Contratto Co.Co.Co. presso il Dipartimento di Energetica dell'Università di Roma "La Sapienza" sul tema "*Simulazione numerica della dinamica longitudinale di un fascio di elettroni durante la propagazione in un magnete curvante*"
01/02/2005	31/03/2005	Università di Roma "La Sapienza"	Contratto Co.Co.Co. presso il Dipartimento di Energetica dell'Università di Roma "La Sapienza" sul tema "*Modellizzazione e simulazione numerica di un sistema laser ad elettroni liberi in regime quantistico*"
01/11/2004	31/01/2005	Università di Roma "La Sapienza"	Contratto Co.Co.Co. presso il Dipartimento di Energetica dell'Università di Roma "La Sapienza" sul tema "*Studio del trasporto a molti-gruppi di particelle alfa in plasmi per fusione inerziale*"
01/11/2002	31/10/2004	Università di Roma "La Sapienza"	Assegnista di ricerca (assegno biennale) presso il Dipartimento di Energetica dell'Università di Roma "La Sapienza" sul tema *"Interazione laser-plasma ed evoluzione di plasmi prodotti da laser o da fasci di particelle"*
05/01/2000	30/09/2001	Imperial College of Science, Technology and Medicine, London.	Contratto a tempo determinato per un periodo complessivo di 13 mesi come assistente alla ricerca (Research Assistant) presso il gruppo di Fisica del Plasma del Blackett Laboratory

IIIB – Academic boards and committees

Start	End	Institution	
2003	2007	Università di Roma "La Sapienza"	Membro del Consiglio di Area di Ingegneria della Sicurezza e Protezione
2011	--	Università di Roma "La Sapienza"	Membro del Consiglio di Area di Ingegneria Energetica
2015	--	Università di Roma "La Sapienza"	Membro del Consiglio di Area di Ingegneria Chimica

Part IV – Teaching experience

Year	Institution	Lecture/Course
2002-2003	Università di Roma "La Sapienza"	Attività di tutorato per Fisica 1(Ing. Informatica)
2003-2004	Università di Roma "La Sapienza"	Fisica 2 (Ing. Sicur. e Prot., 5 CFU, 40 studenti ca.) Attività di tutorato per Fisica 1 (Ing. Informatica)
2004-2005	Università di Roma "La Sapienza"	Fisica 1 (Ing. Sicur. e Prot., 5 CFU, 60 studenti ca.) Fisica 1 (Corso su piattaforma multimediale per il progetto di formazione a distanza e-learning dell'Istituto Superiore Antincendi (ISA), Roma
2005-2006	Università di Roma "La Sapienza"	Fisica 1 (Ing. Sicur. e Prot., 5 CFU, 60 studenti ca.)
2006-2007	Università di Roma "La Sapienza"	Fisica 1 (Ing. Sicur. e Prot., 5 CFU, 60 studenti ca.) Attività di tutorato per Laboratorio di Fisica (Ing. Telecom.)
2007-2008	Università di Roma "La Sapienza"	Fisica 2 (Ing. Clinica, 5 CFU, 90 studenti ca.)
2008-2009	Università di Roma "La Sapienza"	Laboratorio sperimentale di Fisica (Ing. Aerosp., 4 CFU, 90 studenti ca.)
2009-2010	Università di Roma "La Sapienza"	Master di 30 ore su tematiche inerenti alla produzione di energia tramite reazioni nucleari e alle tecnologie dei reattori nucleari tenuto presso l'Istituto Tecnico Industriale Statale "B. Pascal' di Roma nell'ambito del concorso nazionale "PlayEnergy" indetto dall'Enel S.p.A. per gli studenti delle scuole superiori.
2011-2012	Università di Roma "La Sapienza"	Fisica 1 (Ing. Energetica, 9 CFU, 180 studenti ca.)
2012-2013	Università di Roma "La Sapienza"	Fisica 1 (Ing. Energetica, 9 CFU, 180 studenti ca.)
2013-2014	Università di Roma "La Sapienza"	Fisica 1 (Ing. Energetica, 9 CFU, 180 studenti ca.)
2014-2015	Università di Roma "La Sapienza"	Fisica 1 (Ing. Energetica, 9 CFU, 180 studenti ca.)
2015-2016	Università di Roma "La Sapienza"	Fisica Generale I (Ing. Chimica, 9 CFU, 180 studenti ca.) Fisica dei Plasmi (L. M. Ing. Energetica, 3 di 6 CFU, 30 studenti ca.)
2016-2017	Università di Roma "La Sapienza"	Fisica Generale I (Ing. Chimica, 9 CFU, 180 studenti ca.) Fisica dei Plasmi (L. M. Ing. Energetica, 3 di 6 CFU, 20 studenti ca.)
2017-2018	Università di Roma "La Sapienza"	Fisica Generale I (Ing. Chimica, 9 CFU, 180 studenti ca.) Fisica dei Plasmi (L. M. Ing. Energetica, 3 di 6 CFU, 20 studenti ca.)

In the last 10 years, advisor (Correlatore) of No. 5 II level degree (Laurea Magistrale) theses on plasma physics and inertial confinement fusion. Advisor of No. 3 II level degree (Laurea Magistrale) theses and 1 PhD thesis on proton therapy for cancer treatment.
Scientific coordinator for the research activity of one post-doc researcher (AdR) hired on the 2011 project grant funded by University of Rome "La Sapienza", as indicated in Part VI.

Part V - Society memberships, Awards and Honors and other Professional Recognitions

Part V - A Memberships, Awards and Honors

Year	Title
2012-today	Member of the Italian Physics Society (Società Italiana di Fisica, SIF)
2012-today	Individual Ordinary Member of the European Physical Society (EPS)
2012-today	Elected member of the Beam Plasma and Inertial Fusion Section (BPIF) of the Plasma Physics Division (PPD) of the European Physical Society (EPS)

Part V - B Networking, Organization activity and Participation in boards and committees

Year	Title or Activity
2004	Member of the Local Organizing Committee of the international workshop "*Simulation of intense laser-matter interaction and direct-drive inertial fusion targets",* SBAI Department, University of Rome "La Sapienza", Rome, 8 and 9 March 2004 (30 attendees)
2007	Scientific secretary of the international workshop "*Frontiers in FEL Physics and Related Topics*", ELBA, Italy (8--14 Sep 2007): more than 70 attendees
2007	Member of the editorial board for the proceedings of the workshop "*Frontiers in FEL Physics and Related Topics*", ELBA, published on NIM-A journal.
2008	Member of the Local Organizing Committee of the international workshop "*HiPER WP9 meeting Rome*", Facoltà di Ingegneria, University of Rome "La Sapienza", February 7th and 8th, 2008 (30 attendees)
2013	Member of the Local Organizing Committee of the 11th Direct-Drive and Fast-Ignition Workshop, Facoltà di Ingegneria, University of Rome "La Sapienza", Roma, 6-8 May 2013 (40 attendees)
2013-2014	Member of the Scientific Program Committee of the 41st EPS Conference on Plasma Physics, 23 - 27 June 2014, Berlin, Germany

Peer-reviewer for international journals

Referee for about 10 manuscripts per year for several international journals with peer review:
New Journal of Physics, Nuclear Fusion, Plasma Physics and Controlled Fusion, Laser and Particle Beams, Journal of Computational Physics, Nuclear Instruments and Methods, Review of Scientific Instruments, High Power Laser Science and Engineering, Journal of Plasma Physics, Physics of Plasmas, EPL.

Part V - C Invited talks (IT), Oral presentations (OP) and Seminars (S)

Year	Title
Dec 2000 **(OP)**	Oral presentation on "*Observation of laser imprinting by proton imaging*" at the High Power Laser Users Meeting, Central Laser Facility, Cosener's House, Abingdon, UK.

May 2001 **(S)**	Seminar on "*Proton probing of laser produced plasmas*", Plasma Physics Group Seminars, Imperial College, UK.
Jun 2001 **(S)**	Seminar on "*Diagnostica a fascio di protoni per plasmi preformati*" at the Istituto di Fisica Atomica e Molecolare (IFAM), CNR, Pisa.
Jan 2004 **(OP)**	Oral presentation on "*Interpretazione di esperimenti con fasci di protoni generati da laser*" at the IV Congresso Italiano di Fisica del Plasma, Arcetri, Firenze.
Mar 2004 **(OP)**	Oral presentation on "*Interpretation of proton radiography experiments with proton beams*" at the international meeting "Simulation of intense laser-matter interaction and direct-drive inertial fusion targets" at the Dipartimento di Energetica dell'Università di Roma ``La Sapienza".
Oct 2005 **(OP)**	Oral presentation on "*QFEL: numerical simulations in 1D and in 2D*" at the 46th Workshop "The Physics and Applications of High Brightness Electron Beams", Erice (Trapani).
Jun 2006 **(OP)**	Oral presentation on "*High-resolution 2D simulations of deceleration-phase RTI in the non-linear regime*" at the 33rd European Conference on Plasma Physics EPS 2006, Roma.
Sep 2006 **(IT)**	Invited talk on "*Quantum FEL: a new frontier in coherent X-ray source production*" at the XCII Congresso Nazionale della Società Italiana di Fisica (SIF), Torino.
Apr 2009 **(OP)**	Oral presentation on "*Fast Ignition crucial issues that could be investigated on OMEGA*" at the 1st Workshop of Omega Laser Users Group O.L.U.G., Rochester, NY (USA).
Apr 2010 **(OP)**	Oral presentation on "*Target tolerance to fabrication asymmetries and non-uniform irradiation*" at the 3rd HiPER Forum, Praga, 3 March 2010.
Apr 2010 **(OP)**	Oral presentation on "*Assessing target robustness and ignition performance for a direct drive ICF target*" at the 2nd Workshop of Omega Laser Users Group O.L.U.G.,, Rochester, NY (USA).
Jul 2012 **(IT)**	Invited talk on "*Optimisation of laser direct-drive irradiation schemes using start-to-end target hydrodynamic simulations with 3D beam description and laser raytracing*" at the 39th European Conference on Plasma Physics EPS 2012, Stockholm, Sweden, 2-6 July 2012
Sep 2012 **(OP)**	Oral presentation on "*Advances in Laser Fusion Energy*" at the 5th Intenational Conference on Charged and Neutral Particles Channeling Phenomena, Channeling 2012, Alghero, 23-28 Sept 2012, Italy
Sep 2013 **(IT)**	Invited talk on "*Perspectives for Inertial Fusion*" at the 1st Conferenza Italiana sulla Fisica della Materia, FisMat 2013, Milano, 9-13 Settembre 2013
Sep 2014 **(IT)**	Invited talk on "*Inertial Fusion Energy using Shock Ignition*" at the 100^{o} Congresso Nazionale della Società Italiana di Fisica, SIF 2014, Pisa, 22-26 Settembre 2014
Oct 2014 **(OP)**	Oral presentation on "*Assessing target design robustness for Shock Ignition using 3D laser raytracing"* at the 56th APS DDP Meeting, New Orleans, LA, 2014
Jun 2015 **(S)**	Seminar on "*Particle therapy in cancer research*" at the International Seminar "Advanced Accelerator & Radiation Physics", National Research Nuclear University MEPhI, Moscow, Russia, 30 June - 1 July 2015
Nov 2015 **(S)**	Seminar on "*Fred: a fast Monte Carlo code for treatment planning and recalculation*" at the Trento Institute for Fundamental Physics and Applications TIFPA, Trento, Italy, 6/11/2015
Feb 2016 **(S)**	Seminar on "*Fred: a simulation platform for particle therapy*" at the University Medical Center Groningen UMCG, Groningen, Netherlands, 4/2/2016

Oct 2017 **(OP)**	Oral presentation on *"Fred: A new GPU-based fast-MC code and its applications in proton beam therapy"* at the International Conference on Monte Carlo Techniques for Medical Applications (MCMA2017), Napoli, Italy, October 15th-18th 2017
Nov 2017 **(S)**	Seminar on "*Fast dose deposition calculation for proton therapy*" at Proton RadiothErapy research SeminarS (PRESS), Institute of Nuclear Physics, Polish Academy of Sciences, Krakow, Poland (24/11/2017)

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
2016	Fast Monte-Carlo platform development for rapid Treatment Planning System verification and dose deposition monitoring in proton therapy **(PI)**	Università di Roma "La Sapienza" Progetti di Ricerca di Ateneo C26A14WWTY	15 kEuro
2014-2017	Onde d'urto intense generate da laser **(I)**	PRIN 2012 (8.3.2014 – 8.3.2017) 2012AY5LEL [Sapienza, CNR Pisa)	150 kEuro
2014	Sviluppo di un piano di trattamento per adroterapia oncologica su GPU (**I**)	Università di Roma "La Sapienza" Progetti di Ricerca di Ateneo C26A14WWTY	7 kEuro
2013	Onde d'urto generate da laser e applicazione alla fusione a confinamento inerziale (**PI**)	Università di Roma "La Sapienza" Progetti di Ricerca di Ateneo C26A13TKPL	7 kEuro
2011	Studio di schemi di irraggiamento laser diretto per progetti di Fusione Nucleare a Confinamento Inerziale (**PI**)	Università di Roma "La Sapienza" Progetti di Ricerca di Ateneo C26A11PA38	31 kEuro (comprensivo di un Ass. di Ricerca annuale di 22818 Euro)
2011-2013	Fusione a confinamento inerziale via laser, con ignizione indotta da onde d'urto (shock – ignition) **(I)**	PRIN 2009 (17.10.2011–17.10.2013) 2009FCC9MS [Sapienza, Milano-Bicocca, Bologna, Tor Vergata, CNR-Pisa]	284 kEuro
2008-2013	Progetto HiPER – European High Power Laser Energy Research Facility (Preparatory Phase Study) **(I)**	Progetto HiPER – European High Power Laser Energy Research Facility (Preparatory Phase Study) a) project 211737, FP-7-INFRASTRUCTURES-2007-1 (28.4.2008 – 27.4.2011, prorogato al 27.4.2013), finanziato da Eur. Union b) Technical Work, finanziato dallo Science and Technology Facility Council, UK (28.4.2008 – 27.4.2011)	a) 9,6 kEuro da EU al CNISM b) 339 kEuro al CNISM, di cui il 50% circa utilizzati presso Sapienza, Dip.

			Energetica-SBAI
2008-2009	Studio della generazione e della propagazione di elettroni rapidi nel contesto di "ignizione veloce" alla fusione nucleare a confinamento inerziale **(I)**	PRIN 2007 (22.9.2008 – 22.9.2010) 20072KW45J	33 kEuro
2006-2008	Interazione laser ultraintenso - plasma **(I)**	PRIN 2005 (1.2006 – 1.2008) 2005029572 [Sapienza, U. Pisa, Milano-Bicocca, Tor Vergata]	169 kEuro
2006-2010	BLISS (Broadband Laser for ICF Strategic Studies) – Laser a larga banda per studi strategici sulla fusione a confinamento inerziale **(I)**	FIRB 2003 (6.1.2006 – 5.1.2010) RBNE03N48B	60 kEuro a Sapienza, Dip. di Energetica

Part VII – Research Activities

Legenda:

labels in brackets refer to publications listed in Parts VIII and IX according to the following formats
[A#]: article A# of the full list
[**SP%**=A#]: selected publication %, listed as A# in the full list

Numbers of citations from ISI-WoS, as of Februrary 15, 2018.

Keywords	Brief Description
laser-generated proton beams	Pioneering experimental work on ion acceleration mechanism and beam characterization in the generation of proton beams via laser irradiation of thin solid targets at intensity on the order of 10^19 W/cm^2. Proton source location and TNSA acceleration mechanism [A4; 214 cit.]; spectral control and role of fast electrons [A28 ; 65 cit.]; plasma density gradient effects on acceleration mechanism [**SP8** = A55; 26 cit.].
proton imaging laser-plasma interaction plasma evolution transient e.m. fields detection	Development of the **proton imaging** technique: a novel diagnostic tool for plasma dynamics with ps time-resolution and μm space-resolution [A3; 91 cit.]. Application of proton imaging to the detection of transient e.m. fields in plasma [A8; 269 cit. and A9; 67 cit.], and to the multi-frame temporal visual diagnostics of laser-plasma interaction [A12; 201 cit]. Experimental evidence of long-lasting e.m. structures trapped inside plasma [A6; cit. 173]; temporal evolution of accelerating e.m. fields in laser-generated proton beams [A18; 158 cit. and **SP5**=A37 ; 25 cit.]. Detection of jet formation [**SP4**=A ; 68 cit.] and impulsive electric fields [A29 ; 41 cit.] in ultra-intense laser-plasma interaction. Measurements of magnetic fields [**SP10**=A53 ; 33 cit.] and e.m. soliton drift along density gradients [**SP17**=A62 ; 13 cit.] in laser-plasma interaction. Laser-pulse channeling through underdense plasma: detection of charge-displacement dynamics [A30 ; 18 cit.] and long-term ion evolution in the wake of laser pulse [A15 ; 31 cit.].
Inertial	Development of a multi-purpose 2D hydro-radiation-nuclear code for

Confinement Fusion Direct-drive target design Hydrodynamic numerical simulations	Inertial Confinement Fusion (ICF), [A17; 53 cit.], continuously upgraded with models for neutrons, fast electrons [**SP11**=A51; 51 cit.], 3D raytracing [A76], magnetic fields[**SP27**=A74; 3 cit.]. Used in many international collaborations (both experimental and theoretical), and also used at a few European labs.
	Target design for the HiPER facility [**SP12**=A50; 37 cit.] and assessment of illumination robustness for the direct-drive scheme with 48 beams [**SP16**=A63 ; 7 cit.].
Fast-ignition (FI)	Investigations on fusion fuel ignition using high intensity external drivers, also called the fast-ignition scheme (FI). Target design for high-gain implosions using FI [A25; 87 cit.] and applications to the HiPER project [**SP1**=A46; 66 cit.]. Modelling of fast-electron beam propagation in dense plasma [**SP11**=A51; 51 cit.]. Experimental investigations of fast ignitor beam propagation inside conical targets: detrimental role of preplasma filling the cone [**SP3**=A44; 81 cit.], that could be mitigated using laser channelling to reach denser parts of the target [**SP13**=A59; 11 cit.]. Experimental evidence of electron cloud deceleration by strong electric fields arising in conical targets for FI [**SP9**=A54 ; 10 cit.].
Shock ignition (SI)	Investigations on fusion fuel ignition using laser-generated converging shock waves, also called the shock-ignition scheme (SI). High-gain implosions in SI using visible laser light [**SP20**=A65; 10 cit.], scaling laws for high-gain SI targets [**SP23**=A67; 17 cit.], non-local thermal conduction models in SI relevant regime [**SP25**=A72; 9 cit. and **SP22**=A68; 23 cit.]. Experimental investigations of laser-plasma interaction in FI and SI regime [**SP19**=A60; 6 cit.]; laser-coupling and parametric instabilities in SI [**SP24**=A66; 21 cit.], and generation of strong shocks for SI [**SP26**=A71; 33 cit.]. Detailed numerical studies of the sensitivity of fusion yield in SI taking into account uncertainties and errors in target fabrication and laser-system operation [**SP18**=A61; 33 cit.]. Scaling laws and strategies for the development of robust targets for SI [**SP28**=A73; 2 cit.].
Laboratory astrophysics Shock waves	Studies on the properties of radiative shock waves and blast waves generated using high-intensity laser pulses. Observation of radiative shocks in rarefied gas [A20; 37 cit.], and strong shocks in melted iron [A23; 17 cit.] for planetary science and astrophysics. Shock front detection techniques using hard X-rays [**SP2**=A45; 16 cit.; **SP30**=A79; 1 cit.] and laser-generated proton beams [**SP15**=A57; 12 cit.]. Numerical investigation of magnetic field generation and diffusion in laser-generated blast waves [**SP27**=A74; 3 cit.].
Free Electron Lasers	Development of a model for Free Electron Laser dynamics in the quantum regime (QFEL) [A21; 27 cit. and **SP6**=A36; 7 cit.]. Reformulation of the model using the Wigner function approach [A33; 7 cit], and its extension from 1D longitudinal dynamics to complete 3D dynamics [**SP7**=A34; 21cit.].
Proton therapy for cancer treatment Monte Carlo codes	Development of a new MC simulation platform for treatment planning in charged particle therapy of human localised cancers. Recalculation and re-optimization of a treatment plan leading to higher precision in dose delivery with respect to standard commercial tools adopted in the clinical pratice [**SP21**=A69; 37 cit.]. High-performance porting of the MC code to distributed cluster of GPUs for rapid recalculation of dose maps and for

online monitoring of dose delivery [**SP29**=A78; 1 cit.].

Part VIII – Summary of Scientific Achievements

Identifiers in international databases:

ResearcherID D-2924-2017
ORCID ID 0000-0002-7081-2747

Product type	Number	Data Base	Start	End
Peer-reviewed products	97	ISI-WoS	2001	2018
Conference proceedings without peer-review	21	Scopus	2001	2018

	ISI	Scopus
Number of products	99	118
Total Impact factor *	200,6	
Total Citations	2687	2745
Average Citations per Product	27,1	21,0
Hirsch (H) index	27	27

* IFs have been taken from Journal Citation Reports (JCR 2016) by ISI Web of Knowledge

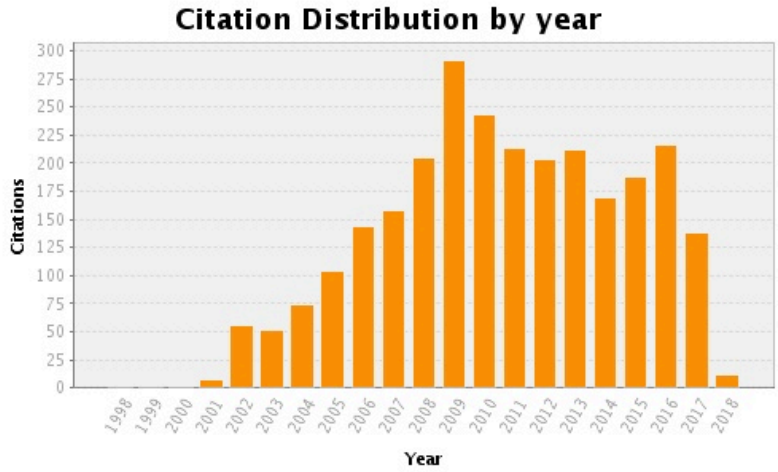
Part VIIIA - Scientific activity quality parameters on subsets of the research products, as requested in the publication of the evaluation procedure.

Quality indicators for the 30 selected publications on peer-reviewed international journals.

Total Impact factor	**94,4**
Total Citations	**693** (ISI)
Average Citations per Product	**23** (ISI)

Average scientific productivity

	ISI database	Reference threshold as stated in the publication of selection
Average number of peer-reviewed papers per year since PhD (2004-2018) present on ISI-Thomson-Reuters database	6,8	> 0.8
Number of peer-reviewed papers in the last 8 years (01/01/2010-31/12/2017)	35	> 7



Total Articles in Publication List: **99**
Articles With Citation Data: **98**
Sum of the Times Cited: **2687**
Average Citations per Article: **27.42**
h-index: **27**
Last Updated: **02/13/2018 13:46 GMT**

Figure 1 : citation summary report by ISI WoS

Part VIII – B – Full list of publications

a) Articles in peer reviewed international journals

[A80] Senzacqua M., **Schiavi A.**, Patera V., Pioli S., Battistoni G., Ciocca M., Mairani A., Magro G., Molinelli S
A fast - Monte Carlo toolkit on GPU for treatment plan dose recalculation in proton therapy,
Journal of Physics: Conference Series, **905**, (2017)
ISSN: 17426588
Doi: 10.1088/1742-6596/905/1/012027

[A79] Antonelli L., Atzeni S., **Schiavi A.**, Baton S. D., Brambrink E., Koenig M., Rousseaux C., Richetta M., Batani D., Forestier-Colleoni P., Le Bel E., Maheut Y., Nguyen-Bui T., Ribeyre X., Trela J.,
Laser-driven shock waves studied by x-ray radiography,
Physical Review E, **95**, (2017)
ISSN: 24700045
Doi: 10.1103/PhysRevE.95.063205

[A78] **Schiavi A.**, Senzacqua M., Pioli S., Mairani A., Magro G., Molinelli S., Ciocca M., Battistoni G., Patera V
Fred: A GPU-accelerated fast-Monte Carlo code for rapid treatment plan recalculation in ion beam therapy,
Physics in Medicine and Biology, **62**, 7482-7504 (2017)
ISSN: 00319155
Doi: 10.1088/1361-6560/aa8134

[A77] Rucinski A., Gajewski J., Olko P., Rinaldi I., Patera V., **Schiavi A.**,
GPU-accelerated Monte Carlo code for fast dose recalculation in proton beam therapy,
Acta Physica Polonica B, **48**, 1625-1630 (2017)
ISSN: 05874254
Doi: 10.5506/APhysPolB.48.1625

[A76] Atzeni S., Marocchino A., **Schiavi A.**,
Improved robustness study of a shock ignited target, with DUED code including non-local electron transport and 3D laser ray-tracing,

Journal of Physics: Conference Series, **688**, (2016)
Doi: 10.1088/1742-6596/688/1/012005

[A75] Antonelli L., Köster P., Folpini G., Maheut Y., Baffigi F., Cristoforetti G., Labate L., Levato T., Gizzi L. A., Consoli F., De Angelis R., Kalinowska Z., Chodukowski T., Rosinski M., Parys P., Pisarczyk T., Raczka P., Ryc L., Badziak J., Wolowski J., Smid M., Renner O., Krousky E., Pfeifer M., Skala J., Ullschmied J., Nicolaï P., Ribeyre X., Shurtz G., Atzeni S., Marocchino A., **Schiavi A.**, Spindloe C., Dell T. O., Rhee Y. J., Richetta M., Batani D.,
Study of shock waves generation, hot electron production and role of parametric instabilities in an intensity regime relevant for the shock ignition,
Journal of Physics: Conference Series, **688**, (2016)
Doi: 10.1088/1742-6596/688/1/012003

[A74] Marocchino A., Atzeni S., **Schiavi A.**,
Magnetic field generation and diffusion by a laser-produced blast wave propagating in non-homogenous plasma,
New Journal of Physics, **17**, (2015)
Doi: 10.1088/1367-2630/17/4/043052

[A73] Atzeni S., Marocchino A., **Schiavi A.**,
Shock ignition: A brief overview and progress in the design of robust targets,
Plasma Physics and Controlled Fusion, **57**, (2015)
Doi: 10.1088/0741-3335/57/1/014022

[A72] Marocchino A., Atzeni S., **Schiavi A.**,
Effects of non-local electron transport in one-dimensional and two-dimensional simulations of shock-ignited inertial confinement fusion targets,
PHYSICS OF PLASMAS, **21**, (2014)
ISSN: 1070-664X
Doi: 10.1063/1.4861389

[A71] Batani D., Antonelli L., Atzeni S., Badziak J., Baffigi F., Chodukowski T., Consoli F., Cristoforetti G., De Angelis R., Dudzak R., Folpini G., Giuffrida L., Gizzi L. A., Kalinowska Z., Koester P., Krousky E., Krus M., Labate L., Levato T., Maheut Y., Malka G., Margarone D., Marocchino A., Nejdl J., Nicolai P., O'Dell T., Pisarczyk T., Renner O., Rhee Y. J., Ribeyre X., Richetta M., Rosinski M., Sawicka M., **Schiavi A.**, Skala J., Smid M., Spindloe C., Ullschmied J., Velyhan A., Vinci T.,
Generation of high pressure shocks relevant to the shock-ignition intensity regime,
PHYSICS OF PLASMAS, **21**, (2014)
ISSN: 1070-664X
Doi: 10.1063/1.4869715

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Part IX– Selected Publications

Time span: **01/01/2008 - 31/12/2017** (10 years back from the publication of evaluation procedure)
Citation numbers according to ISI WoS database as of 15/02/2018.

	Selected Publication	Impact factor JCR - ISI	Citations ISI
SP1	Atzeni S., **Schiavi A.,** Honrubia J.J., Ribeyre X., Schurtz G., Nicolaï Ph., Olazabal-Louḿ M., Bellei C., Evans R.G., Davies J.R., *Fast ignitor target studies for the HiPER project,* Physics of Plasmas (2008), DOI: 10.1063/1.2895447	2.427	66
SP2	Ravasio A., Koenig M., Le Pape S., Benuzzi-Mounaix A., Park H.S., Cecchetti C., Patel P., **Schiavi A.**, Ozaki N., MacKinnon A., Loupias B., Batani D., Boehly T., Borghesi M., Dezulian R., Henry E., Notley M., Bandyopadhyay S., Clarke R., Vinci T., *Hard x-ray radiography for density measurement in shock compressed matter,* Physics of Plasmas (2008), DOI: 10.1063/1.2928156	2.427	16
SP3	Baton S.D., Koenig M., Fuchs J., Benuzzi-Mounaix A., Guillou P., Loupias B., Vinci T., Gremillet L., Rousseaux C., Drouin M., Lefebvre E., Dorchies F., Fourment C., Santos J.J., Batani D., Morace A., Redaelli R., Nakatsutsumi M., Kodama R., Nishida A., Ozaki N., Norimatsu T., Aglitskiy Y., Atzeni S., **Schiavi A.**,	2.427	81

	Inhibition of fast electron energy deposition due to preplasma filling of cone-attached targets, Physics of Plasmas (2008), DOI: 10.1063/1.2903054		
SP4	Kar S., Borghesi M., Bulanov S.V., Key M.H., Liseykina T.V., MacChi A., MacKinnon A.J., Patel P.K., Romagnani L., **Schiavi A.**, Willi O., *Plasma jets driven by ultraintense-laser interaction with thin foils,* Physical Review Letters (2008), DOI: 10.1103/PhysRevLett.100.225004	7.180	68
SP5	Romagnani L., Borghesi M., Cecchetti C.A., Kar S., Antici P., Audebert P., Bandhoupadjay S., Ceccherini F., Cowan T., Fuchs J., Galimberti M., Gizzi L.A., Grismayer T., Heathcote R., Jung R., Liseykina T.V., MacChi A., Mora P., Neely D., Notley M., Osterholtz J., Pipahl C.A., Pretzler G., **Schiavi A.**, Schurtz G., Toncian T., Wilson P.A., Willi O., *Proton probing measurement of electric and magnetic fields generated by ns and ps laser-matter interactions,* Laser and Particle Beams (2008), DOI: 10.1017/S0263034608000281	4.420	25
SP6	Bonifacio R., Piovella N., Cola M.M., Volpe L., **Schiavi A.**, Robb G.R.M., *The quantum free-electron laser,* Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment (2008), DOI: 10.1016/j.nima.2008.04.028	1.019	7
SP7	Piovella N., Cola M.M., Volpe L., **Schiavi A.**, Bonifacio R., *Three-dimensional Wigner-Function description of the quantum free-electron laser,* Physical Review Letters (2008), DOI: 10.1103/PhysRevLett.100.044801	7.180	21
SP8	Antici P., Fuchs J., D'Humières E., Robiche J., Brambrink E., Atzeni S., **Schiavi A.**, Sentoku Y., Audebert P., Pépin H., *Laser acceleration of high-energy protons in variable density plasmas,* New Journal of Physics (2009), DOI: 10.1088/1367-2630/11/2/023038	3.312	26
SP9	Batani D., Baton S.D., Manclossi M., Piazza D., Koenig M., Benuzzi-Mounaix A., Popescu H., Rousseaux C., Borghesi M., Cecchetti C., **Schiavi A.**, *LASER-driven fast electron dynamics in gaseous media under the influence of large electric fields,* Physics of Plasmas (2009), DOI: 10.1063/1.3080746	2.475	10
SP10	Cecchetti C.A., Borghesi M., Fuchs J., Schurtz G., Kar S., MacChi A., Romagnani L., Wilson P.A., Antici P., Jung R., Osterholtz J., Pipahl C.A., Willi O., **Schiavi A.**, Notley M., Neely D., *Magnetic field measurements in laser-produced plasmas via proton deflectometry,* Physics of Plasmas (2009), DOI: 10.1063/1.3097899	2.475	33
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SP13	Fuchs J., D'Humières E., Sentoku Y., Antici P., Atzeni S., Bandulet H., Depierreux S., Labaune C., **Schiavi A.**, *Enhanced propagation for relativistic laser pulses in inhomogeneous plasmas using hollow channels,* Physical Review Letters (2010), DOI: 10.1103/PhysRevLett.105.225001	7.622	11
SP14	Marocchino A., Atzeni S., **Schiavi A.**, *Numerical study of the ablative Richtmyer-Meshkov instability of laser-irradiated deuterium and deuterium-tritium targets,* Physics of Plasmas (2010), DOI: 10.1063/1.3505112	2.32	13
SP15	Ravasio A., Romagnani L., Le Pape S., Benuzzi-Mounaix A., Cecchetti C., Batani D., Boehly T., Borghesi M., Dezulian R., Gremillet L., Henry E., Hicks D., Loupias B., MacKinnon A., Ozaki N., Park H.S., Patel P., **Schiavi A.**, Vinci T., Clarke R., Notley M., Bandyopadhyay S., Koenig M., *Proton radiography of a shock-compressed target,* Physical Review E - Statistical, Nonlinear, and Soft Matter Physics (2010), DOI: 10.1103/PhysRevE.82.016407	2.288	12
SP16	**Schiavi A.**, Atzeni S., Marocchino A., *Illumination stability for high-repetition-rate laser facilities in direct-drive inertial confinement fusion,* EPL (2011), DOI: 10.1209/0295-5075/94/35002	2.171	7
SP17	Sarri G., Kar S., Romagnani L., Bulanov S.V., Cecchetti C.A., Galimberti M., Gizzi L.A., Heathcote R., Jung R., Kourakis I., Osterholz J., **Schiavi A.**, Willi O., Borghesi M., *Observation of plasma density dependence of electromagnetic soliton excitation by an intense laser pulse,* Physics of Plasmas (2011), DOI: 10.1063/1.3625261	2.147	13
SP18	Atzeni S., **Schiavi A.**, Marocchino A., *Studies on the robustness of shock-ignited laser fusion targets,* Plasma Physics and Controlled Fusion (2011), DOI: 10.1088/0741-3335/53/3/035010	2.731	33
SP19	Jacquemot S., Amiranoff F., Baton S.D., Chanteloup J.C., Labaune C., Koenig M., Michel D.T., Perez F., Schlenvoigt H.P., Canaud B., Cherfils Clérouin C., Debras G., Depierreux S., Ebrardt J., Juraszek D., Lafitte S., Loiseau P., Miquel J.L., Philippe F., Rousseaux C., Blanchot N., Edwards C.B., Norreys P., Atzeni S., **Schiavi A.**, Breil J., Feugeas J.L., Hallo L., Lafon M., Ribeyre X., Santos J.J., Schurtz G., Tikhonchuk V., Debayle A., Honrubia J.J., Temporal M., Batani D., Davies J.R., Fiuza F., Fonseca R.A., Silva L.O., Gizzi L.A., Koester P., Labate L., Badziak J., Klimo O., *Studying ignition schemes on European laser facilities,*	4.090	6

	Nuclear Fusion (2011), DOI: 10.1088/0029-5515/51/9/094025		
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