


## PERSONAL INFORMATION

## Stefan - Andrei Irimiciuc

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Sex Male | Date of birth 14 Jun 1990 | Nationality Romanian

## EDUCATION AND TRAINING

1 Oct 2009–10 Jun 2012

**Bachelor in Physics - Investigation Methods for Low Temperature Plasmas**

"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania)

1 Oct 2012–7 Jul 2014

**Master of Physics in Nanotechnologies and Advanced Materials**

"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania)

1 Oct 2014–Present

**PhD - "Experimental and theoretical studies on the dynamics of transient plasma plumes generated by laser ablation in various temporal regimes"**

"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania) and Université Lille 1 - Sciences et Technologies, Lille (France)

1 Jun 2011–31 Aug 2011

**Erasmus Practice Stage**

Université Lille 1 - Sciences et Technologies, Lille (France)

21 Nov 2011–28 Nov 2011

**Summer School: Plasma diagnostics by electrical probes and lasers**

"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania)

16 Nov 2013–20 Nov 2013

**Summer university for Plasma Physics and Fusion Research**

IPP Max Plank Institute, Greifswald (Germany)

22 Nov 2014–28 Nov 2014

**1st Autumn School on Physics of Advanced Materials**

"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania)

1 Mar 2014–31 Aug 2014

**Ceepus Scholarship**

University of Innsbruck Institut für Ionenphysik und Angewandte Physik, Innsbruck (Austria)

10 Jul 2016–17 Jul 2016

**International School on Lasers in Materials Science Lasers for the Nano-Engineering of Surfaces**

Polytechnic University of Milan, Venice (Italy)

8 Sep 2016–14 Sep 2016

**2nd Autumn School on on Physics of Advanced Materials**

"Alexandru Ioan Cuza" Univeristy of Iasi, Cluj (Romania)

## WORK EXPERIENCE

- 1 Jun 2010–2 Jun 2014 **Member in Iasi Plasma Advanced Research Center**  
"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania)
- 1 Mar 2014–1 Oct 2014 **Member on WP S1 (W7-X Campaigns) Project**  
University of Innsbruck Institut für Ionenphysik und Angewandte Physik, Innsbruck (Austria)
- 1 Jun 2014–1 Jun 2016 **Member in RO-CERN (ELI-NP; FAIR) Program (Project Nr. E03)**  
"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania)
- 1 Oct 2014–Present **Member of LOA-SL Laboratory**  
"Alexandru Ioan Cuza" University of Iasi, Iasi (Romania)

## PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	A2	A2	A2	A2	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages

**Communication skills** -good communication skills gained from all the oral presentations at national and international conferences  
- experience in communicating science to larger audiences gained at the workshop for the FameLab competition

**Organisational / managerial skills** -leadership  
- good organizational skills gained as volunteer at Researcher Night in 2014 and 2015 , responsible promoting the event and organizing the Science Cafe Booth  
-good team-leading skills gained as the student representative in the Physics Faculty's Council and "Alexandru Ioan Cuza" University's Senate

**Job-related skills** - expertise in optical and electrical investigations of low temperature plasmas  
- expertise in developing investigations systems for transient phenomena  
  
- the ability to develop and use Langmuir probes for plasma investigations  
- the ability to use lasers in different temporal regimes (nanosecond, femtosecond and picosecond)  
- ability to use specific scientific software for the correlation between experimental data and valid theoretical models  
  
- knowledge in working with high voltage sources

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Proficient user

Digital competences - Self-assessment grid

- good command of office suite (word processor, spread sheet, presentation software)
- good command of Origin Pro software for scientific research
- good command of specific software for optical and electrical measurements of transient physical phenomena
- good command of COMSOL for basic fluid-matter interaction, laser heating and evaporation phenomena

ADDITIONAL INFORMATION

Publications

- S. A. Irimiciuc, S. Gurlui, G. Bulai, P. Nica, M. Agop and C. Focsa, "Langmuir probe investigation of transient plasmas generated by femtosecond laser ablation of several metals: Influence of the target physical properties on the plume dynamic", Appl. Surf. Sci., 418, 594-600, 2017.
- S. A. Irimiciuc, S. Gurlui, P. Nica, C. Focsa, and M. Agop, "A compact non-differential approach for modelling laser ablation plasma dynamics", J. Appl. Phys. 121, 083301, 2017.
- S. Irimiciuc, R. Boidin, G. Bulai, S. Gurlui, P. Nemeç, V. Nazabal and C. Focsa, "Laser ablation of (GeSe<sub>2</sub>)<sub>100-x</sub>(Sb<sub>2</sub>Se<sub>3</sub>)<sub>x</sub> chalcogenide glasses: Influence of the target composition on the plasma plume dynamics", Appl. Surf. Sci., 417, 108-118, 2017.
- R. W. Schrittwieser, C. Ionita, C. T. Teodorescu-Soare, O. Vasilovici, S. Gurlui, S. A. Irimiciuc and D. G. Dimitriu Spectral and electrical diagnosis of complex space-charge structures excited by a spherical grid cathode with orifice, Phys. Scr., 92, 044001, 2017.
- D. G. Dimitriu, S. A. Irimiciuc, S. Popescu, M. Agop, C. Ionita, and R. W. Schrittwieser, "On the interaction between two fireballs in low-temperature plasma", Phys. Plasmas, 22, 113511, 2015.
- S.A. Irimiciuc, O. Vasilovici, D.-G. Dimitriu, "Chua's circuit: Control and synchronization 2015 Int. J. Bifurcat. and Chaos, 25, 1550050, 2015.
- S.A Irimiciuc, M. Agop, P. Nica, S. Gurlui, D. Mihaileanu, S. Toma and C. Focsa, "Dispersive effects in laser ablation plasmas", Jpn. J. Appl. Phys., 53, 116202, 2014.
- Ş. A. Irimiciuc, I. Mihăilă, and M. Agop, "Experimental and theoretical aspects of a laser produced plasma," Phys. Plasmas, 21, 093509, 2014.
- D. Mardare, N. Comei, D. Luca, M. Dobromir, Ş. A. Irimiciuc, L. Pungă, A. Pui, and C. Adomniței, "Synthesis and hydrophilic properties of Mo doped TiO<sub>2</sub> thin films," J. Appl. Phys., 115, 213501, 2014.
- O. Vasilovici, S. A. Irimiciuc, and D. G. Dimitriu, "Signal Encryption Using Chua ' s Chaotic Circuits," J. Adv. Res. Phys., 4, 1 – 3, 2013.

Conferences

- ✓ S. A. Irimiciuc, P. Nica, S. Gurlui, M. Agop, C. Focsa, "Femtosecond laser ablation of selected metals: Influence of the target physical properties on the plume dynamics", Conference on Laser Ablation (COLA), 3 – 8 September 2017, Marseille, France.
- ✓ S. A. Irimiciuc, P. Nica, S. Gurlui, M. Agop, C. Focsa, "A compact non-differential approach for modeling laser ablation plasma dynamics", Conference on Laser Ablation (COLA), 3 – 8 September 2017, Marseille, France.
- ✓ S. A. Irimiciuc, P. Nica, S. Gurlui, M. Agop, C. Focsa, "Experimental investigations of transient plasma plumes generated by laser ablation in various temporal regimes", European Materials Research Society Spring Meeting, 22 - 26 May 2017, Strasbourg, France.
- ✓ S. A. Irimiciuc, P. Nica, S. Gurlui, M. Agop, C. Focsa, "A non-differentiable approach for modeling laser ablation plasma dynamics", European Materials Research Society Spring Meeting, 22 - 26

May 2017, Strasbourg, France.

- ✓ S.A. Irimiciuc, B. C. Hodoroaba S.Gurlui, P. Nica, M. Agop, C. Focsa, "Experimental and theoretical studies of laser produced plasma plumes on various metallic targets" The 5th international colloquium "physics of materials" (pm 5), 10-11 november 2016 Bucharest, Romania
- ✓ S.A. Irimiciuc, B. C. Hodoroaba S.Gurlui, P. Nica, M. Agop, C. Focsa, "Experimental and Theoretical Investigations of Transient Plasma Plumes Generated by Laser Ablation" The 6-th National Conference of Applied Physics, November, 19th-20th 2010 Iasi, Romania
- ✓ S.A. Irimiciuc, B.C. Hodoroaba, S.Gurlui, P. Nica, M. Agop, C. Focsa, "Space- and time-resolved Langmuir probe investigations of nanosecond laser ablation plasma plumes", International Conference on Advanced Materials, 7-14 September 2016, Cluj, Romania
- ✓ S.A. Irimiciuc, S.Gurlui, P. Nica, M. Agop, C. Focsa, "Picosecond and femtosecond laser ablation plasma plumes investigated by time-resolved optical and electrical methods", International Conference on Advanced Materials 7-14 September 2016, Cluj, Romania
- ✓ S. Irimiciuc, P. Nica, S. Gurlui, M. Agop, C. Focsa, "Time-resolved electrical investigations of transient plasmas generated by laser ablation of various metallic targets", International Conference of Photoexcited Processes and Applications 28 August – 2 September 2016, Brasov, Romania
- ✓ S.A. Irimiciuc, "Experimental and theoretical studies of laser produced plasma plumes on various metallic targets", 15th IUVSTA School - Lasers for the Nano-Engineering of Surfaces, International School on Lasers in Materials Science, S. Servolo Island, Venice, Italy July 10-17, 2016
- ✓ S.A. Irimiciuc, B.C. Hodoroaba, G. Bulai, S.Gurlui, P. Nica, M. Agop, C. Focsa, "Optical and electrical Diagnostics of Nanosecond Laser Ablation Plasmas", European Materials Research Society Spring Meeting, 2-6 May 2016, Lille, France
- ✓ S. Irimiciuc, R. Boidin, G. Bulai, S. Gurlui, P. Nemeč, V. Nazabal, C. Focsa, "Laser ablation of (GeSe<sub>2</sub>)<sub>100-x</sub>(Sb<sub>2</sub>Se<sub>3</sub>)<sub>x</sub> chalcogenide glasses : Influence of the target composition on the plasma plume dynamics", European Materials Research Society Spring Meeting, 2-6 May 2016, Lille, France
- ✓ P. Nica, S. Irimiciuc, S. Gurlui, M. Agop, C. Focsa, "Electrical Characterization of Femtosecond Laser-Produced Plasma from Various Metallic Targets", European Materials Research Society Spring Meeting, 2-6 May 2016, Lille, France,
- ✓ S.A. Irimiciuc, B.C. Hodoroaba, S.Gurlui, P. Nica, M. Agop, C. Focsa, "Nanosecond and femtosecond laser ablation plasmas investigated by time-resolved electrical methods", International Conference on Extreme Light (ICEL), 23-27 November 2015, Bucharest, Romania
- ✓ S.A. Irimiciuc, B.C. Hodoroaba, G. Bulai, S.Gurlui, M. Agop, C. Focsa, "Space- and time-resolved optical diagnosis of transient plasmas generated by nanosecond laser ablation of metallic targets", International Conference on Extreme Light (ICEL), 23-27 November 2015, Bucharest, Romania
- ✓ S.A. Irimiciuc, S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa, "Langmuir Probe Measurements in Femtosecond Laser Ablation of Several Metals", EMRS - Strasbourg - SPRING 15: Conference Mai 2015, Lille, Franta – oral talk
- ✓ S.A. Irimiciuc, S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa, "Optical and electrical investigations of transient plasmas generated by femtosecond laser ablation", International conference on phenomena in ionized Gases, Iulie 2015, Iasi, Romania
- ✓ S.A. Irimiciuc, S. Gurlui, P. Nica, M. Agop, M. Osiac, C. Focsa, "Electrical and optical investigations of plasma plumes generated by femtosecond laser ablation of various metal", The 13th Conference on Laser Ablation (COLA-2015), Septembrie 2015, Cairns, Australia
- ✓ B.C. Hodoroaba, S.A. Irimiciuc, G. Bulai, S. Gurlui, "Study of cobalt ferrite laser produced plasmas", National Conference on Physics and modern Technologies, Mai, 2015, Iasi, Romania
- ✓ M. Toma, L. Punga, D. Mihu, C. Padurariu, V. Ifrosie, S.A. Irimiciuc, M. Dobromir, V. Nica, F. Iacomi, "Structural investigation of Ni and Co doped ZnO thin films grown by spin coating", 10th International Conference on Physics of Advanced Materials, Octombrie, 2014, Iasi, Romania
- ✓ S.A. Irimiciuc, M. Boicu, M. Agop, "Laser produced plasma dynamics: A non-differentiable approach", 10th International Conference on Physics of Advanced Materials, Octombrie, 2014, Iasi, Romania
- ✓ S.A. Irimiciuc, I. Mihaila, D. Mihaileanu, M. Agop, "Langmuir probe investigations of laser produced plasma", 10th International Conference on Physics of Advanced Materials Octombrie 2014, Iasi, Romania
- ✓ C. Ionita, S.A. Irimiciuc, D.G. Dimitriu, S. Popescu, M. Agop, R.W. Schrittwieser, "Interaction Between Three Fireballs In Low-Temperature Plasma", 17<sup>TH</sup> International Congress on Plasma Physics 5-10 Septembrie, 2014, Lisbon, Portugal
- ✓ S.A. Irimiciuc, I. Mihaila, S.Gurlui, A. Năstută, I. Rusu, "Hot probe measurements of a laser ablation plasma", 6<sup>th</sup> International Workshop and Summer School on Plasma Physics 2-5 Iunie, 2014, Kiten, Bulgaria
- ✓ C. Ionita, S.A. Irimiciuc, D.G. Dimitriu, S. Popescu, M. Agop, R.W. Schrittwieser, "Experimental Investigations of the interaction between two fireballs in low temperature plasma", 41<sup>st</sup> EPS Conference on Plasma Physics, 23-27 Iunie 2014, Berlin, Germany
- ✓ V. Tiron, A. V. Nastuta, S.A. Irimiciuc, C. Costin, G. Popa, C. Ionita, R. Schrittwieser, "Dynamics of

- High Power Impulse Hollow Cathode Discharge”, 41<sup>st</sup> EPS Conference on Plasma Physics , 23-27 Iunie 2014, Berlin, Germany
- ✓ S.A. Irimiciuc, D.G.Dimitriu, C. Teodorescu, R. Scwritwieser, C. Ionita, “Interaction between three simultaneously produced fireballs in low temperature plasma”, National Conference on Physics and modern Technologies, 8 Mai 2014, Iasi, Romania
  - ✓ S.A. Irimiciuc, I. Mihaila, S. Gurlui, “Langmuir probe measurement of laser produced magnesium plasma”, TIM international Physics Conference, Noiembrie 2014, Timisoara, Romania
  - ✓ S.A. Irimiciuc, I. Mihaila, I. Rusu, S. Gurlui, “Electrical diagnosis of a laser produced plasma”, National Conference on Physics and modern Technologies, 8 Mai 2014, Iasi, Romania
  - ✓ S.A. Irimiciuc, S. Popescu, D. G. Dimitriu, “Nonlinear Dynamics of Multiple Fireballs in Low-Temperature Plasma”, TIM international Physics Conference, Noiembrie 2013, Timisoara, Romania
  - ✓ S.A. Irimiciuc, O. Vasilovici, D. G. Dimitriu, “Study of Chaotic Systems With Applications to Secure Communication”, TIM international Physics Conference, Noiembrie 2013, Timisoara, Romania
  - ✓ S.A. Irimiciuc, O. Vasilovici, D. G. Dimitriu, “Signal Encryption Using Chua's Chaotic Circuits”, National Conference on Physics and modern Technologies, 21 Octombrie 2013, Iasi, Romania
  - ✓ S.A. Irimiciuc, O. Vasilovici, D. G. Dimitriu, “Signal Encryption Using Chua's Chaotic Circuits”, National Conference on Physics and modern Technologies, 21 Octombrie 2013, Iasi, Romania
  - ✓ S.A. Irimiciuc, D. G. Dimitriu, “Experimental investigation of the interaction between two fireballs in plasma”, National Conference on Physics and modern Technologies, 21 Octombrie 2013, Iasi, Romania
  - ✓ S.A. Irimiciuc, O. Vasilovici, D. G. Dimitriu, “Synchronization of two chaotic systems”, National Conference on Physics and modern Technologies, 21 Octombrie 2013, Iasi, Romania
  - ✓ Neagu, S. Irimiciuc, C. Padurariu, L. Punga, V. Iofrosie, M. Toma, D. Mihu, L. Curecheriu, “Preparation and non-linear properties of BaTiO3 based composite”, IEE Student Branch Meeting Mai 2013, Iasi, Romania
  - ✓ S. A. Irimiciuc, O. Vasilovici, D. G. Dimitriu, “The dynamics of Chua's chaotic circuit. Chaos control”, IEE Student Branch Meeting Mai 2013, Iasi, Romania
  - ✓ V. Tiron, A. V. Nastuta, S.A. Irimiciuc, C. Costin, G. Popa, C. Ionita, R. Schrittwieser, “High power pulsed hollow cathode plasma source characterization”, 12<sup>th</sup> international Conference on Global Research and Education, 15-20 Septembrie 2013, Sofia, Bulgaria
  - ✓ S. A. Irimiciuc, O. Vasilovici, D. G. Dimitriu, “Chua's Circuit: Chaotic Dynamics and Control of Oscillations”, National Conference on applied physics, 22 Mai 2013, Iasi, Romania
  - ✓ S. A. Irimiciuc, I. Mihaila, I. Rusu “Electrical probe method used for the study of transient plasmas” National Student Conference FarPhys, 21 October 2012, Iasi, Romania
  - ✓ S. A. Irimiciuc, O. Pompilian, C. Focsa, I. Mihaila, I. Rusu, “Optical Diagnostics of Plasma Plume Produced by High-Fluence Nanosecond Laser Ablation”, 5<sup>th</sup> International Workshop & Summer School on Plasma Physics, 25-30 Iunie 2012, Kiten, Bulgaria
  - ✓ S. A. Irimiciuc, O. Pompilian, C. Focsa, I. Mihaila, I. Rusu, “Space and time resolved optical diagnosis for the study of laser ablation plasma”, National Conference on Physics and modern Technologies, 17 -19 Mai 2012, Iasi, Romania
  - ✓ S. A. Irimiciuc, O. Pompilian, C. Focsa, I. Rusu, “Optical diagnostics of a laser produced plasma”, National Student Conference FarPhys, 22 Octombrie 2011, Iasi, Romania
  - ✓ I. Mihaila, S. A. Irimiciuc, D. Luca, “ Electrical Diagnostics of Plasma Plume Produced by High-Fluence Nanosecond Laser Ablation”, 10<sup>th</sup> international Conference on Global Research and Education, 15-20 Septembrie 2011, Iasi, Romania

Honours and awards

- 2<sup>nd</sup> place at 2014 Physics and Modern Education Technologies National Conference, Iasi Romania
- 2<sup>nd</sup> place in the Best poster competition Prize at 2015 Physics and Modern Education Technologies National Conference, Iasi Romania
- Best Poster Prize at 2016 European Materials Research Society Spring Meeting, 2-6 May Lille, France
- 2<sup>nd</sup> place in the Best poster competition at International Conference of Photoexcited Processes and Applications 28 August – 2 September 2016, Brasov, Romania
- Best original work presented by a young scientist prize at International Conference on Advanced Materials 7-14 September 2016, Cluj, Romania