

PERSONAL INFORMATION

Liliana - Anca Lighezan



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Sex female | Date of birth 29/09/1971 | Nationality romanian

WORK EXPERIENCE

2015 - present

Lecturer at The West University of Timisoara, Faculty of Physics

Bd. Vasile Parvan nr. 4, Timisoara, 300223, Romania, <http://www.physics.uvt.ro>

- **Didactic activity:** *Optics* (the second year - courses, seminar activity and laboratory activity), *General biophysics* (the third year - laboratory activity), *Complements of biophysics and applications in medicine* (master – courses and seminar activity).
- **Research activity:** Studies of the structure and function of biomolecules using molecular dynamic simulation methods.

2003 - 2015

Instructor at The West University of Timisoara, Faculty of Physics

Bd. Vasile Parvan nr. 4, Timisoara, 300223, Romania, www.physics.uvt.ro

- **Didactic activity:** *Optics* (the second year - seminar and laboratory activity), *General biophysics* (the third year - laboratory activity), *Atomic and molecular physics* (the second year - seminar and laboratory activity), *Nuclear physics* (the second year - seminar and laboratory activity), *Oscillations and waves* (the second year - seminar and laboratory activity), *Optics of laser resonator* (master – laboratory activity), *Spectroscopy and lasers* (the third year - laboratory activity), *Spectroscopy of laser crystals* (master – seminar activity), *Simetry of crystals* (master – seminar activity), *Technology of crystalline materials* (master – laboratory activity), *Laser crystals: growth and properties* (master – laboratory activity), *Structural defects in crystals* (master – laboratory activity).
- **Research activity:** Studies of the structure and function of biomolecules using biophysics methods; growth and characterisation of crystals; color centers in crystals.

2009 - 2015

Victor Babes Medicine and Pharmacy University of Timisoara, Faculty of Medicine, Department III – Functional Sciences

Piața Eftimie Murgu nr. 2-4, Timișoara, 300041, România,

http://www.umft.ro/facultatea-de-medicina_2/disciplina-de-biofizica_10

- **Didactic activity:** *Biophysics* (the first year – courses, seminar and laboratory activity).
- **Research activity:** Studies of the structure and function of biomolecules using biophysics methods.

1999 - 2003

Instructor at „Politehnica” University of Timisoara, Department of Physics

Piața Regina Maria nr. 1, Timișoara, 300004, România, <http://www.fiz.upt.ro>

- **Didactic activity:** *General Physics* (the first year - seminar and laboratory activity).
- **Research activity:** Growth and characterisation of crystals; color centers in crystals.

1997 - 1999

Associated instructor at „Politehnica” University of Timisoara, Department of Physics

Piața Regina Maria nr. 1, Timișoara, 300004, România, <http://www.fiz.upt.ro>

- **Didactic activity:** *General Physics* (the first year - seminar and laboratory activity).
- **Research activity:** Optical properties of lasers.

- 1996 **Teacher at General School no 24 of Timisoara**
 Str. Brândușei nr. 7, Timișoara, 300624, România, <http://www.scoala24timisoara.ro>
 ▪ **Didactic activity:** Physics hours.

EDUCATION AND TRAINING

- 2009 - 2014 **Doctor in Medicine, Summa cum Laude**
 Victor Babeș University of Medicine and Pharmacy of Timisoara, Romania
 ▪ Title of the thesis: *Studies of the structure and function of some biomolecules using biophysical methods.*
 ▪ Scientific coordinator: Prof. Dr. Adrian Neagu
- 1996 - 1997 **Master studies in Physics**
 Faculty of Physics, West University of Timisoara, Romania
 ▪ Domain: Physics
 ▪ Specialization: Optics and Spectroscopy of Laser Materials
- 1990 - 1995 **Licence studies in Physics**
 Faculty of Physics, West University of Timisoara, Romania
 ▪ Domain: Physics
 ▪ Specialization: Optics – Spectroscopy – Plasma – Lasers
- 1986 - 1990 **Baccalaureate studies**
 High School of Mathematics and Physics No 1 (Grigore Moisil - presently), Timisoara, Romania
 ▪ Domain: Mathematics
 ▪ Trade: Computer programmer analyst in helper, Computer operator.

PERSONAL SKILLS

Mother tongue Romanian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
Certificate of linguistic competence in English language, Department of Modern Languages and Literatures, West University of Timisoara. Level B2.					
French	B1	B1	B1	B1	B1
Serbian	B2	B2	B2	B2	B2
	-				

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

RESEARCH INTERNSHIPS

25 Jan. – 5 Febr. 2016

Resesarch stage

In the field of protein structure and function, using molecular dynamics simulations.

- Location: Max Planck Institute for Molecular Biomedicine, Münster, Germany.
- Research subject: *Study of Sox2 and Pax6 protein interactions, using molecular dynamics simulation method.*

1 Febr. – 30 Apr. 2009

Research fellowship

Obtained by competition, from the Federation of European Biochemical Societies (FEBS).

- Location: Curie Institute, Paris, France.
- Research subject: *Biophysics characterization of protein structure.*

TRAINING AND
SPECIALIZATION COURSES

15 – 18 Jul. 2015

EBSA Satellite Workshop „Spectroscopy in Biology”

Radeberg, Dresden, Germany.

10 – 13 Jul. 2013

EBSA / IUPAB Workshop „Bionanotechnology – Recent Advances”

Sesimbra, Portugal.

With oral presentation of the work: Liliana Lighezan, Ralitsa Georgieva, Adrian Neagu, Thermal properties of the S-layer protein from *Lactobacillus salivarius*.

9 - 26 Apr. 2013

Specialization stage

In the field of experimental technique "Patch Clamp" of measuring ionic transmembrane currents. University of Szeged, Medicine Faculty, Department of Pharmacology and Pharmacotherapy, Szeged, Hungary.

17 – 19 Sept. 2008

Sofia School of Protein Science

Sofia, Bulgaria.

5 – 11 Aug. 2007

The 13th International Summer School on Crystal Growth

Park City, Utah, S.U.A.

19 – 31 Jan. 2004

Specialization course

In the field of Fourier transform IR spectrometry. University of Agriculture and Veterinary Medicine, Bucharest, Romania.

6 – 11 Apr. 1998

Specialization course

„New trends in laser physics with application to optical communication”
„Politehnica” University of Timisoara, Faculty of Electronics and Telecommunications.

ADDITIONAL INFORMATION

Publications • Published books

1. Daniela - Susan Resiga, **Liliana Lighezan**, Paul Barvinschi, *Mecanică, oscilații și unde elastice - Îndrumător de laborator pentru studenți*, West University of Timisoara Publishing, 2014 (150 pages, including 45 pages of personal contribution).
2. **Liliana Lighezan**, Eleonora Preda, Daniel Vizman, *Probleme de Mecanică, Acustică, Oscilații și Unde*, Eurobit Publishing, Timișoara, 2009 (248 pages).
3. **Liliana Lighezan** *Creșterea și caracterizarea cristalelor. Teme de laborator.*, Mirton Publishing, Timișoara, 2008 (100 pages).
4. Marcu C, Mihalca I, Crăciun P, Cristea M, Dorobanțu V, Popov D, Damian I, Luminosu I, Boldan M, Gangăl M, Barvinschi F, Zaharie I, **Lighezan L**, Pretorian S, Chirțoiu V, *Teste grilă de fizică pentru bacalaureat și admiterea în învățământul superior*, Politehnica Publishing Timisoara, 2003 (87 pages).

• Scientific works published in ISI classified journals

1. **Lighezan L**, Georgieva R, Neagu A (2016) The secondary structure and the thermal unfolding parameters of the S-layer protein from *Lactobacillus salivarius*, *European Biophysics Journal* **45**:491–509.
2. **Lighezan L**, Meiri D, Breiman A, Neagu A (2013) Circular dichroism and the secondary structure of the ROF2 protein from *Arabidopsis thaliana*, *Journal of Biological Physics*, **39**:635-648, doi:10.1007/s10867-013-9323-y
3. **Lighezan L**, Georgieva R, Neagu A (2012) A study of the thermal denaturation of the S-layer protein from *Lactobacillus salivarius*, *Physica Scripta* **86** 035801 doi:10.1088/0031-8949/86/03/035801
4. Nicoara I, **Lighezan L**, Enculescu M & Enculescu I (2008) Optical spectroscopy of Yb²⁺ ions in YbF₃-doped CaF₂ crystals, *Journal of Crystal Growth* **310**, 2026–2032.
5. Stelian C, Susan-Resiga D, **Lighezan L** & Nicoara I (2008) Analysis of Transport Phenomena during Bridgman Growth of Calcium Fluoride Doped Crystals, *Crystal Growth & Design* **8**, No. 2, 402-406.
6. **Lighezan L**, Stelian C, Susan-Resiga D & Nicoara I (2006) FIDAP simulation of the F color center formation in alkali halides crystals using additive method of crystal coloring, *Journal of Optoelectronics and Advanced Materials* **8**, No. 2, 749 – 753.
7. Nicoara I, Munteanu M, Pecingina-Garjoaba N, Stef M & **Lighezan L** (2006) Dielectric spectrum of rare-earth-doped calcium fluoride crystals, *Journal of Crystal Growth* **287**, 234–238.

• Scientific works published in BDI classified journals

1. **Lighezan L**, Neagu A, Isvoran A (2014), Using bioinformatics to compare the ROF2 (FKBP65) protein from *Arabidopsis thaliana* to its human homolog FKBP52, *Romanian Journal of Biophysics* **24**, No 3.
2. Nicoara I, Munteanu M, Pecingina-Garjoaba N, Stef M, **Lighezan L** (2006), Dielectric relaxation in PbF₂-doped and x-ray irradiated CaF₂ crystals *ECS Transactions*, Vol. 3, Issue 11, 51-58.
3. **Lighezan L**, Nicoara I & Negrea P (2004) UV – VIS absorption of the color centers formed in electrolytic colored CaF₂ crystals, *Buletinul Științific al Universității "Politehnica" din Timișoara*, Seria Matematică – Fizică, Tom 49 (63), Fascicola 2, 103-108.
4. **Lighezan L** (2002) The application of the symmetry groups theory on the study of the F color center energy levels in alkali halides, *Buletinul Științific al Universității „Politehnica” din Timișoara*, Seria Matematică – Fizică, Tom 47 (61), Fascicola 2, 99-106.

• Scientific works published in other journals

1. Nicoara I, Munteanu M, Pecingina – Gârjoabă N, Stef M & **Lighezan L** (2006) Some optical and dielectrical properties of YbF₃-doped CaF₂ crystals, *Analele Universității de Vest din Timișoara XLIX*, Seria Fizică, 129–134.
2. Stelian C, Susan – Resiga D, Nicoara I & **Lighezan L** (2006) Solute distribution in CaF₂ crystals doped with Pb²⁺ ions, *Analele Universității de Vest din Timișoara XLIX*, Seria Fizică, 144-148.
3. **Lighezan L**, Stelian C, Susan – Resiga D & Nicoara I (2005) Numerical calculation of the F color center distribution in additively colored alkali halide crystals, *Analele Universității de Vest din Timișoara 47*, Seria Fizică, 125–128.
4. **Lighezan L**, Nicoara I & Negrea P (2004) Spectroscopic studies of electrolytic colored shaped CaF₂ and BaF₂ crystals, *Analele Universității de Vest Timișoara 45*, Seria Științe Fizice, 111–114.
Lighezan L & Nicoara I (2003) Some properties of the energy levels of the F_A(II) laser color centers in alkali halides, *Analele Universității de Vest Timișoara 44*, Seria Fizică, 244–247.

Conferences - Scientific works published in extenso in conference volumes

1. **Lighezan L**, Nicoara I & Negrea P (2005) Electrolytic creation and room-temperature stability of the color centers in BaF₂ colored crystals, *Scientific reunion of the special program of the Alexander von Humboldt Foundation concerning the reconstruction of the South Eastern Europe*, Sustainability for humanity & Environment in the extended connection field Science-Economy-Policy, Vol.2, 129-132, Ed. "Politehnica" Timisoara.
2. Avram N & **Lighezan L** (2003) Site symmetry of the color centers in crystals, *Proceedings of The 10th International Symposium of Mathematics and its Applications*, Nov. 6-9, 341-348.
3. Damian I & **Lighezan L** (2003) Damped oscillations: What the textbooks usually do not say, *Proceedings of "The Fifth General Conference of the Balkan Physical Union"*, Vrnjacka Banja, Serbia and Montenegro, August 22-29, 1915-1918.
4. **Lighezan L** & Nicoară I (2003) Some properties of the energy levels of the F_A(II) laser color centers in alkali halides, *Proceedings of "The Fifth General Conference of the Balkan Physical Union"*, Vrnjacka Banja, Serbia and Montenegro, August 22-29, 977-980.
5. **Lighezan L**, Nicoară I & Avram N (2002) The spin-orbit interaction of color center in alkali halides, "Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică" - cu participare internațională - *Proceedings*, Novembre 29 - 30, Timisoara.

- Scientific works presented at international conferences and published as abstracts

1. **Lighezan L**, Paul Guichard P, Isvoran A, Neagu A, Interaction between the neuronal SL21 protein and calmodulin, *9th EBSA European Biophysics Congress*, Lisbon, Portugal, 13 - 17 July 2013, published in *European Biophysics Journal* 42, Supplement 1, July 2013.
2. **Lighezan L**, Georgieva R, Neagu A (2013) Thermal properties of the S-layer protein from *Lactobacillus salivarius*, EBSA / IUPAB workshop „Bionanotechnology – Recent Advances”, 10 - 13 July 2013, Sesimbra, Portugal.
3. **Lighezan L**, Georgieva R, Neagu A, Thermal properties of S-layer protein from *Lactobacillus salivarius*, *Trends in Nanotechnology (TNT2012) International Conference*, September 10-14 2012, Madrid, Spain.
4. **Lighezan L**, Adjadj E, Neagu A, Curmi P, Study of the SL21 peptide structure and its interaction with calmodulin, *The 32nd European Peptide Symposium*, September 2-7, 2012, Athens, Greece.
5. **Lighezan L**, Georgieva R, Neagu A, Study of the thermal denaturation of S-layer protein from *Lactobacillus salivarius*, *III International School and Conference on Photonics*, Belgrade, Serbia, 29 August - 2 September 2011.
6. **Lighezan L**, Breiman A, Neagu A, Circular dichroism and the secondary structure of the ROF2 protein from *Arabidopsis thaliana*, *8th European Biophysics Congress*, Budapest, Hungary, 23 - 27 August 2011.
7. Nicoara I, Stef M, **Lighezan L** (2007) Growth of YbF₃-doped CaF₂ crystals and characterisation of the Yb³⁺/Yb²⁺ conversion, *The 15th International Conference on Crystal Growth*, August 12 - 17, Salt Lake City, Utah, SUA.
8. **Lighezan L**, Nicoara I, Topa V, Polosan S, Apostol E, Enculescu M, Secu M (2006) Optical properties of CaF₂ crystals doped with Pb²⁺ ions, *10th Europhysical Conference on Defects in Insulating Materials EURODIM*, July 10-14, Milano, University of Milano - Bicocca, Italy.

- Scientific works presented at national conferences and published as abstracts

9. **Lighezan L**, Neagu A, Isvoran A, Using bioinformatics to compare the ROF2 (FKBP65) protein from *Arabidopsis thaliana* to its human homolog FKBP52, *TIM-14 Physics conference - Physics without frontiers*, West University of Timisoara, Romania, 20-22 November 2014.
10. **Lighezan L**, Georgieva R, Neagu A, Structural properties and thermal stability of the S-layer protein from *Lactobacillus salivarius*, *Physics Conference TIM-13*, Timisoara, Romania, 21-24 November 2013.
11. **Lighezan L**, Paul Guichard P, Isvoran A, Neagu A, Study of an SL21 peptide structure and its interaction with calmodulin, *Physics Conference TIM-12*, Timisoara, Romania, 27-30 November 2012.
12. **Lighezan L**, Neagu A, Circular dichroism in the study of the structure of biomolecules, *Physics Conference TIM-11*, Timisoara, Romania, 24-27 November 2011.
13. **Lighezan L**, Tenger K, Fulop L, Neagu A, Zimanyi L, The impact of electrolyte cosolutes on the conformation of a peptide from cytochrome c heme lyase: a circular dichroism study, *The 11th National Biophysical Conference*, Sibiu, Romania, 10-12 November 2011.
14. **Lighezan L**, Georgieva R, Todea C, Neagu A, Study of the thermal denaturation of some biomolecules involved in laser therapy, using circular dichroism, *International Conference on Lasers in Medicine*, 4th edition, Sibiu, Romania, 22 - 24 September 2011.
15. **Lighezan L**, Quichard P, Zambrano N, Marco S, Adjadj E, Craescu C, Curmi P, Study of the interaction between SL21 protein and calmodulin, *Exploratory Workshop: New Tendency in Computational Biophysics*, West University of Timisoara, Department of Chemistry, 4-6 June, 2009, Timisoara, Romania.
16. **Lighezan L**, Nicoara I & Negrea P (2004) Spectroscopic studies of electrolytical colored shaped CaF₂ and BaF₂ crystals, *7th International Conference on Physics of Advanced Materials*, June 10-12, Iasi, Romania.

- H index**
- **Web of Science:** $H_{WOS} = 4$
 - **Scopus:** $H_S = 4$
 - **Google Scholar:** $H_{GS} = 5$

Research Projects - **Scientific research grants**

1. Grant cod HURO/0901/219/2.2.2,
 - Title: *"Joint efforts to describe the solute effects on the structure and function of bioenergetically and medically relevant proteins and peptides"*
 - Address site: <http://www.prorec.ro/Sesprot/>
 - Period of time: 2009 - 2012
 - Function: member in the research team.
2. Grant HURO/1101/086/2.2.1
 - Title: *"Implementation of a regional project for translational medical research concerning diseases with high impact in population"*
 - Function: member in the research team.
3. Grant CEEEX, Nr. 72 / 2006, director: Prof. Dr. Irina Nicoară
 - Title: *"Growth and characterization of fluorides crystalline materials – potential laser active media"*
 - Period of time: 2006 – 2008
 - Function: member in the research team.
4. Grant CEEEX, Nr. 64 / 2006, director: Dr. Ing. Sebastian Munteanu
 - Title: *"The Integration of the Special Magneto – Reological Technologies and Advanced Control of the Flow Industrial Applications"* (iSMART flow)
 - Period of time: 2006 – 2008
 - Function: second partner: West University of Timisoara, member in the research team.
5. Grant CNCSIS type A, Nr. 1376 / 2005, director: Prof. Dr. Irina Nicoara
 - Title: *"Growth and characterization of several crystalline materials used as pasive optical components and laser media"*
 - Period of time: 2005 – 2007
 - Function: member in the research team.

Memberships

- Romanian Society of Pure and Applied Biophysics
- Romanian Society of Physics

Date:
31.01.2023

Signature:
Liliana Lighezan

