



## Europass Curriculum Vitae



### Personal information

First name(s) / Surname(s) **Fatima Sapundzhi**

Address 2700 Blagoevgrad (Bulgaria)

E-mail(s) [sapundzhi@swu.bg](mailto:sapundzhi@swu.bg)

Nationality Bulgarian

Gender Female

**Desired employment / Occupational field** Assistant, PhD at the Department of "Communication and Computer Engineering and Technologies", Faculty of Engineering

### Work experience

Dates 19/03/2015 -

Occupation or position held Chief Assistant, PhD

Main activities and responsibilities Scientific and Research activities

Name and address of employer South-West University "Neofit Rilski", 66 Ivan Mihaylov Str., 2700 Blagoevgrad

Type of business or sector Education

Dates 01/03/2012 – 12/10/2015

Occupation or position held PhD degree

Main activities and responsibilities Scientific and Research activities

Name and address of employer South-West University "Neofit Rilski", 66 Ivan Mihaylov Str., 2700 Blagoevgrad

Type of business or sector Education

Dates 01/03/2012

Occupation or position held PhD student in the Department of Informatics

Main activities and responsibilities Thesis: "Computer and mathematical models in ligand-target interactions"

Name and address of employer South-West University "Neofit Rilski"  
66 Ivan Michailov st., 2790 Blagoevgrad (Bulgaria)

### Education and training

Dates 15/09/2009 - 30/07/2010

Title of qualification awarded Master in Informatics

Principal subjects / occupational skills covered  
- Encrypt and protect information, Programming with XML,  
- Design of Information Systems client-server, Component-oriented software technologies

	<ul style="list-style-type: none"> <li>- Mathematical modelling of discrete structures and processes</li> <li>- Neural networks, Practice in server administration</li> <li>- Digital communications, Theory of algorithms,</li> </ul>				
Name and type of organisation providing education and training	South-West University "Neofit Rilski" (University) 66 Ivan Michailov st., 2700 Blagoevgrad (Bulgaria)				
Level in national or international classification	ISCED 5				
Dates	15/09/2005 - 30/07/2008				
Title of qualification awarded	Bachelor in Informatics				
Principal subjects / occupational skills covered	<ul style="list-style-type: none"> <li>- Linear Algebra and Analytic Geometry,</li> <li>- Mathematical Analysis, Mathematical Logic,</li> <li>- Probability and Statistics, Programming and Data Structures</li> <li>- Computer Architectures, Information Technology</li> <li>- Object-Oriented Programming, Combinatorics, coding and cryptography</li> <li>- Operating Systems, Programming with Perl, Programming with Object Pascal and Delphi,</li> <li>- Functional Programming, Logic Programming, Programming the Internet</li> <li>- Computer Networks and Communications</li> <li>- Database, Multimedia databases, Object-oriented and distributed database</li> <li>- Workshop on Web design, Software technologies, Internet technologies</li> <li>- Data protection;</li> </ul>				
Name and type of organisation providing education and training	South-West University "Neofit Rilski" (University) 66 Ivan Michailov st., 2700 Blagoevgrad (Bulgaria)				
Level in national or international classification	ISCED 5				
Dates	15/09/2006 - 30/07/2010				
Title of qualification awarded	Bachelor in Finance				
Principal subjects / occupational skills covered	<ul style="list-style-type: none"> <li>- Microeconomics, Macroeconomics, Marketing, Fundamentals of Management</li> <li>- Principles of Law, Financial Law, Commercial Law</li> <li>- Company Finance, Public Finance, Municipal Finance,</li> <li>- Social Policy and Social Security, Investments and investment policy</li> <li>- Economics of Labour, Accounting, Company Accounting, Banking Accounting</li> <li>- Budget Accounting, Prices and pricing, Banking, Theory of Money and Credit</li> <li>- Fundamentals of Insurance, Fundamentals of financial control, tax control</li> <li>- Information systems, International Finance, Financial Analysis, Planning and Forecasting</li> <li>- Financial Management, Stock Exchange</li> </ul>				
Name and type of organisation providing education and training	South-West University "Neofit Rilski" (University) 66 Ivan Michailov st., 2700 Blagoevgrad (Bulgaria)				
Level in national or international classification	ISCED 5				
Dates	15/09/2009 - 30/07/2010				
Title of qualification awarded	After graduation qualification "Teacher of Informatics and Information Technologies"				
Principal subjects / occupational skills covered	<ul style="list-style-type: none"> <li>- Psychology, Technology for data processing pedagogical experiments</li> <li>- Audio-visual and information technology training, Theory of education and didactics</li> <li>- Synthesis and analysis of algorithms, Content Methodology of Teaching Computer and IT;</li> <li>- Algorithms and tasks outside the classroom work in informatics, Hospetirane,</li> </ul>				
Name and type of organisation providing education and training	South-West University "Neofit Rilski" (University) 66 Ivan Michailov st., 2700 Blagoevgrad (Bulgaria)				
Level in national or international classification	ISCED 5				
Mother tongue(s)	<b>Bulgarian</b>				
Other language(s)					
Self-assessment	<b>Understanding</b>		<b>Speaking</b>		<b>Writing</b>
<i>European level (*)</i>	Listening	Reading	Spoken interaction	Spoken production	

<b>English</b>	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user
<b>German</b>	B1	Independent user	B1	Independent user	A2	Basic User	A2	Basic User	B1	Independent user
	(*) <a href="#">Common European Framework of Reference (CEF) level</a>									
Social skills and competences	I work well in a team; I adapt quickly to new people and new surroundings; I think that I have good communication skills acquired during my studies in Informatics (Bachelor and Master), Finance (Bachelor) Studies' Master in Computer and Information Technology "and during my work in Digital photography and Design house.									
Organisational skills and competences	- Experience in managing teams and projects - gained during the establishment of investment projects related to my work in "Chikalov" Ltd - design of electrical installations; - Sense of organization - in the majority of the projects I have held an important place in the allocation and implementation of the tasks related to the implementation and performance of projects;									
Computer skills and competences	<ul style="list-style-type: none"> <li>- Programming,</li> <li>- Computer modelling</li> <li>- Ligand-receptor interactions</li> <li>- Docking experiments;</li> <li>- Microsoft Office (MS Word, MS Excel, MS Access, Power Point);</li> <li>- PhotoShop, Corel Draw, MS Paint;</li> <li>- Apex Oracle Application Express, Borland Turbo C++</li> <li>- PHP, SQL, Java Script, MS SQL, HTML;</li> <li>- Auto CAD, DIALux, EPLAN, PV SYST;</li> <li>- PRIZM 3.0, OriginPro, Matlab;</li> <li>- GOLD, Mollegro, GenDoc, Avogadro, AutoDock, CHIMERA, MOE;</li> <li>- Protein Data Bank;</li> <li>- CISCO.</li> </ul>									
<b>DRIVING LICENCE(S)</b>	Yes – Category B									
<b>PUBLICATIONS:</b>	<ol style="list-style-type: none"> <li>1. Dzimbova T., Sapundzhi F., Pencheva N., Milanov P. (2012). Computer modelling of human <math>\mu</math>-opioid receptor. Journal of Peptide Science, Volume 18 (S1), S84, ISSN: 1099-1387, (IF = 1.951).</li> <li>2. Dzimbova T., Sapundzhi F., Pencheva N., Milanov P. (2013). Computer modelling of human delta opioid receptor. Int. J. Bioautomation, Volume 17(1), 5-16, Online ISSN: 1314-2321,1314-1902, (SJR=0.228).</li> <li>3. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2014). GOLD scoring functions comparison to establish the relationship structure-biological action, Journal of Peptide Science, Volume 20 (S1), S294, Online ISSN: 1099-1387, (IF= 1.951). Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2015). Exploring the interactions of enkephalin and dalargin analogues with the mu-opioid receptor, Journal of Bulgarian Chemical Communication, Volume 2, 613-618 (IF=0.349).</li> <li>4. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2015). Determination of the relationship between the docking studies and the biological activity of <math>\delta</math>-selective enkephalin analogues, Journal of Computational Methods in Molecular Design, Volume 5 (1), 98-108, Online ISSN:2231-3176.</li> <li>5. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2015). Exploring the interactions of enkephalin and dalargin analogues with the mu-opioid receptor. Bulgarian Chemical Communication, 2, 613-618, ISSN: 0324-1130, (IF=0.349), (Web of Science).</li> <li>6. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2016). Comparative evaluation of four scoring functions with three models of delta opioid receptor using molecular docking, Der Pharma Chemica, Volume 8 (11),118-124 (SJR=0.21).</li> </ol>									

## PARTICIPATION IN CONFERENCES

7. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2016). QSAR modelling and molecular docking studies of three models of delta opioid receptor. Proceedings of the 3rd International Congress: Microbial Biotechnology for Development – MICROBIOD3, Morocco, 24-26 October 2016, Mohammedia, Morocco, 92-93, ISBN : 978-9954-38-547-0.
8. Vladimirov V., KraleV V., KraleVa R., Sapundzhi F. (2016). Software for working with graphs (in Bulgarian). Proceedings of the first students and PhD scientific session - SDSS 2016, 19 – 20 May 2016, Blagoevgrad, Bulgaria, Volume 1, p. 44-53, ISSN 2367-9441.
9. D. Peychev, Y. Dimitrova, K. Tsenov, I.Trenchev, F. Sapundzhi, Investigation of the working principle of the electronic signature, (2017), Proceedings of the second students and PhD scientific session - SDSS 2017, 18 – 20 May 2017, Blagoevgrad, Bulgaria, Volume 2, 57-63, ISSN 2367-9441.
10. K. Tsenov, D. Peychev, I.Trenchev, F. Sapundzhi, Developing a web based system for content management, (2017), Proceedings of the second students and PhD scientific session - SDSS 2017, 18-20 May 2017, Blagoevgrad, Bulgaria, 2, 64-69, ISSN 2367-9441.
11. M. Popstoilov, N. Nikolova, M. Bozhinova, F.Sapundzhi, I. Georgieva. C# implementation of the shortest path problem, (2017), Proceedings of the second students and PhD scientific session-SDSS 2017,18-20 May 2017, Blagoevgrad, Bulgaria, 2, 70-75, ISSN 2367-9441.
12. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. Modelling the relationship between biological activity of delta-selective enkephalin analogues and docking results by polynomials. (2017) Bulgarian Chemical Communication, 49, Number 4, 768 – 774, (IF=0.349), (Web of Science).
13. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. QSAR modelling and molecular docking studies of three models of delta opioid receptor, (2017), Bulgarian Chemical Communication, 49, Special issue E, 23-30, ISSN: 0324-1130, (IF=0.349), (Web of Science).
14. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. Computer modelling of the human cannabinoid receptors. (2017), Proceedings of international conference on mathematical methods and models in biosciences (Biomath 2017), June 25-30, 2017, Skukuza Camp, Kruger Park, South Africa, 4 (1), ISSN 2367-5241.
15. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. Computer modelling of Cannabinoid receptor type 1, (2018), ITM Web of Conferences, AMCSE 2017 16, 02008.
1. Dzimbova T., Sapundzhi F., Pencheva N., Milanov P. (2012). Computer modelling of human delta opioid receptor, Proceedings of the 9th Annual Meeting of the Bioinformatics Italian Society, 2- 4 May 2012, p. 122, Catania, Italy.
2. Dzimbova T., Sapundzhi F., Pencheva N., Milanov P. (2012). Computer modelling of human  $\mu$ -opioid receptor. Peptides 2012: Proceedings of the 32nd European Peptide Symposium, George Kokotos, Violetta Constantinou-Kokotou, John Matsoukas (Editors), 2-7 September 2012, Athens, Greece, 232-233, ISBN 978-960-466-121-3.

3. Sapundzhi F. (2013). Optimization of Homology modelling of  $\delta$ -opioid receptor by Molecular Operating Environment, Proceedings of 5th International Scientific Conference - FMNS2013, 12–16 June 2013, Volume 1, p.193, Online ISSN 1314-0272.
4. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2014). Comparative Evolution of four Scoring Functions with Three Models of Delta Opioid Receptor Using Molecular Docking, Journal Biomath Communications, June 2014, Volume 2, Issue 1, p. 84, ISSN 2367-5241, ISSN 2367-5233 (print).
5. Sapundzhi F. (2014). Queueing systems–some basic theory, Proceedings of the Scientific Conference, F.IND.CONSULTING/Enhancement of the competitiveness and restructuring of the food subsectors through benchmarking, 15 May 2014, Blagoevgrad, Bulgaria, Volume 1, 59-70.
6. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2015). Modelling the Relationship between Biological Activity of Delta-selective Enkephalin Analogues and Docking Results by Polynomials, Journal Biomath Communications, Volume 2, Issue 1, p. 81, Online ISSN 2367-5241, ISSN 2367-5233 (print).
7. Milanov P., Sapundzhi F., Pencheva N. (2015). Mathematical models of pharmacological agonism. MMSC 2015: Workshop on Mathematical Modelling and Scientific Computing, December 09-11.12.2015, Bulgaria, Velingrad.
8. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2015). Determination of the relationship between the docking studies and the biological activity of  $\delta$ -selective enkephalin analogues. International congress on Mathematics MICOM 2015, 22-26.09.2015, Athens, Greece.
9. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2015). GOLD scoring functions comparison to establish the relationship structure-biological action, Peptides 2015: Proceedings of the 33rd European Peptide Symposium, Emilia Naydenova, Tamara Pajpanova, Dancho Danalev (Eds). 31 August-5 September 2014, Sofia, Bulgaria, Volume 1, 376-377, Online ISBN 978-619-90427-2-4.
10. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2015). Surface Fitting of the Results of Molecular Docking and the Biological Activity of Delta Opioid Selective Enkephalin Analogues. Proceedings of 6th International Scientific Conference–FMNS 2015, 10 – 14 June, Volume 1, 104-112, Online ISSN 1314-0272.
11. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2016). QSAR modelling and molecular docking studies of three models of delta opioid receptor. Proceedings of 7th Bulgarian Peptide Symposium, Emilia Naydenova, Tamara Pajpanova, Dancho Danalev (Eds). 10-12 June 2016, Volume 1, p.89, Blagoevgrad, Bulgaria.
12. Milanov P., Pencheva N., Sapundzhi F. (2016). Quantitative analysis and mathematical models of a partial agonism, Biomath Communications, 19-25 June 2016, Volume 3, Issue 1, p.47, ISSN 2367-5241, ISSN 2367-5233 (print).
13. Vladimirov V., Sapundzhi F., Krалева R., Krалев V. (2016). Modified genetic algorithm to travelling salesman problem for large input datasets, Biomath Communications, 19-25 June 2016, Volume 3, Issue 1, p.71, ISSN 2367-5241, ISSN 2367-5233 (print).
14. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. (2017). Computer modelling of Cannabinoid receptor type 1. International Conference Applied Mathematics, Computational Science and Systems Engineering, Athens, Greece, October 6-8, 2017.

**SPECIALIZATIONS:**

15. Sapundzhi F., Dzimbova T., Pencheva N., Milanov P. Computer modeling of the human cannabinoid receptors. (2017), Proceedings of international conference on mathematical methods and models in biosciences (Biomath 2017), June 25-30, 2017, Skukuza Camp, Kruger Park, South Africa, 4 (1), ISSN 2367-5241.
16. Sapundzhi F. Scoring Functions for Molecular Docking Studies. (2017), Second International Conference "Mathematics Days in Sofia" July 10–14, 2017, Sofia, Bulgaria
  1. "Enhancement of the competitiveness and restructuring of the food subsectors through benchmarking" (F.IND. CONSULTING), European Territorial Cooperation Programme "Greece-Bulgaria 2007-2013";
  2. "Bioinformatics research: protein folding, docking and prediction of biological activity", NSF I02/16, 12.12.14, National Science Fund "Mathematical models and statistical methods for studying entrepreneurship and business competitiveness in Southwestern Bulgaria", SWU "Neofit Rilski"
  3. Specialization in IRISA - Institut de Recherche en Informatique et Systèmes Aléatoires - University of Rennes 1, France, October 01-30, 2013, on "Science and Business" Project, Ministry of Education, Youth and Science, Bulgaria.
  4. An intensive course in "Applied Dynamic Programming", Ohrid, Macedonia, August 20-26, 2013, on DAAD-Project in the framework of the Stability Pact for South East Europe Center of excellences for applications of mathematics.
  5. An intensive course in "Numerical Optimization and Applications", Novi Sad, Serbia, May 28 - June 2, 2012, on DAAD-Project in the framework of the Stability Pact for South East Europe Center of excellences for applications of mathematics.
  6. Training School "In silico tools for drug discovery", October 15-20, 2012 Siena, Italy. Training School of the Working Group 1 of COST Action CM0801 on "New Drugs for Neglected Diseases".
  7. Seminars of "Bioinformatics studies on the structure and activity of proteins and drug-receptor interactions DVU 01/197 and National Science Fund -Ministry of Education and Science";
  8. Training courses in project "Interregional Cooperation at Scientific Computing in Interdisciplinary Science" - ICOSCIS:
    - Programming in C, 02-03/02/2013 at SWU "Neofit Rilski";
    - Programming in C + +, 09-10/02/2013 at SWU "Neofit Rilski";
    - Programming in C #, 16-17/02/2013 at SWU "Neofit Rilski";
    - Introduction to Linux, 09-10/03/2013 at SWU "Neofit Rilski".