

**Prof. Dr. Elena Peneva**

*University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria*

### General information

1. Name: Elena Peneva Peneva-Zlatkova
2. Date of birth: 09.11. 1972
3. Place of birth: Sofia

### Fields of Research

Physical geodesy, Theoretical Geodesy, Gravimetry, Geoid determination, Precise levelling, Satellite geodesy, Geodynamics

### Honours and Memberships

#### **Membership in scientific and professional organizations:**

- Member of National Committee for Geodesy and Geophysics since 2009 – Order VI-38/02.10.09 BAS; Order 32-09-38/08.06.15, Order 01-185/27.10.16;
- Member of International Association of Geodesy (IAG) № 431 issued on 01.01.2012;
  - Member of European Geoscience Union № 483054;
- Member of the Board of Geodesy as an expert National Agency Geodesy, Cartography and Cadastre based on Order № РД-01-47/27.02.2014;
- Member of the European Gravity and Geoid Project (CP2.1: EGGP) for Bulgaria, part of Committee 2 of the International Association of Geodesy. "Gravitational field" Subcommittee 2.4 Regional geoid determination;
- Member of the editorial board of thematic series "Geodesy" ISSN 032-1114 from 2015;
- Member of the Standing Committee on Post-accreditation Monitoring and Control - National Evaluation and Accreditation Agency (NEAA) to the Council of Ministers of the Republic of Bulgaria from 11.09.2014 to 08.03.2016;
- Licensed expert to the National Agency Geodesy, Cartography and Cadastre since 2003 - Certificate of National Agency Geodesy, Cartography and Cadastre competence for cadastral activities Ref. № 1484 on the basis of Order 300-2-2 / 14.01.2003;
- Licensed expert at Chamber of Independent evaluators in Bulgaria since 1997 - Certificate of Chamber of Independent evaluators in Bulgaria for assessment capacity, Ref. № 10011927 from 30.12.2010 on the basis of License № 5510/07.05.1997, Privatization Agency

**Education and Qualifications**

<b>Institution [From-To]</b>	<b>Degree</b>	<b>Specialty</b>
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria (01.04.1997 – 18.02.1980)	Master's	Geodesy Diploma № 000034 ВДФС-95-УАСТ

<b>Institution [From-To]</b>	<b>Course / Programme</b>	<b>Certificate</b>
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria (01.04.1997 – 20.06.2001)	“DOCTOR IN SURVEYING, GEODESY AND APPLIED GEODESY”	Diploma from Higher Attestation Commission to the Council of Ministers of the Republic of Bulgaria № 27508 / 23.08.2001
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria (20.06.2001 – 23.01.2008)	“ASSOCIATE PROFESSOR IN SURVEYING, GEODESY AND APPLIED GEODESY (GEODESY)”	Diploma from Higher Attestation Commission to the Council of Ministers of the Republic of Bulgaria № 24735 / 23.01.2008
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria (23.01.2008 – 23.11.2015)	“PROFESSOR IN SURVEYING, GEODESY AND APPLIED GEODESY”	Diploma from UACEG № 115 / 23.11.2015

**Language skills**

*A scale from 1 to 5 (5 – excellent; 1 – basic)*

Language	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken introduction	
English First Certificate in English, University of Cambridge № 0385711, June 1998, Certificate № 986BG0020138	5	5	5	5	5
Russian	4	4	4	4	4

Professional experience

**Occupation and position:**

- **DEAN of the Faculty of Geodesy**, University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria
- **ASSOCIATE PROFESSOR of the Department „Geodesy“**, National Institute of Geophysics, Geodesy and Geography, Bulgarian academy of science

**Experience in the professional field as well as experience in management/implementation of infrastructure projects**

Organization	Period	Position	Description
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria	01.04.1997 – 20.06.2001	<b>Ph.D. in Department Geodesy</b>	Research and design in the field of Surveying, geodesy and applied geodesy
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria	27.11.2001 - 08.11.2004	<b>Senior Assistant in Department Geodesy</b>	Research, design and teaching in the field of Surveying, geodesy and applied geodesy
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria	08.11.2004 – 13.02.2008	<b>Chief Assistant in Department Geodesy</b>	Research, design and teaching in the field of Surveying, geodesy and applied geodesy
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria	13.02.2008 – 23.11.2015	<b>Associate Professor in Department Geodesy</b>	Research, design and teaching in the field of Surveying, geodesy and applied geodesy
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria	01.03.2008 – 23.01.2012	<b>Deputy Dean for Academic Activities of Faculty of Geodesy</b>	Research, design, teaching and administrative work in the field of Surveying, geodesy and applied geodesy

<b>Organization</b>	<b>Period</b>	<b>Position</b>	<b>Description</b>
National Institute of Geophysics, Geodesy and Geography, BAS	18.07.2012 to date	<b>Associate Professor in Department Geodesy</b>	Research and design in the field of Surveying, geodesy and applied geodesy
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria	23.11.2015 to date	<b>Professor in Department Geodesy</b>	Research, design and teaching in the field of Surveying, geodesy and applied geodesy
National Evaluation and Accreditation Agency	11.09.2014 – 08.03.2016	<b>Member of Standing Committee on Post-accreditation Monitoring and Control</b>	Post-accreditation Monitoring and Control of Higher Education Institutions in Republic of Bulgaria
University of Architecture, Civil Engineering and Geodesy, Sofia, Bulgaria	09.03.2016 to date	<b>Dean of the Faculty of Geodesy</b>	Research, design, teaching and administrative work in the field of Surveying, geodesy and applied geodesy

**Teaching activities at university:**

**Lecture courses as a lecturer at the Department of Geodesy on:**

**1. Ellipsoidal geodesy**

45 hours - for full-time students 3rd course in MSc Geodesy;  
23 hours - for part-time students 3rd course in MSc Geodesy;

**2. Gravimetry**

15 hours - for full-time students 3rd course in MSc Geodesy;  
8 hours - for part-time students 3rd course in MSc Geodesy;

**3. Physical Geodesy**

30 hours - for full-time students 3rd course in MSc Geodesy;  
15 hours - for part-time students 4th course in MSc Geodesy;

**4. Geoid determination**

30 hours - for full-time students 4th course in MSc Geodesy, specialization Geodesy;  
15 hours - for part-time students 5th course in MSc Geodesy, specialization Geodesy;

---

## Research work

### **Published textbooks and teaching materials:**

1. **Physical Geodesy**, Stoinov, Peneva, 2002, Polygraphic base at UACEG, 254 p.
2. **Bulgarian - English - Russian, English - Bulgarian, Russian - Bulgarian Glossary of Geodetic and Surveying Terms**, Stoinov, Peneva, Koceva, 2009, Villa Agency, ISBN 978-954-91225-6-5, Sofia, 355 p.
3. **Height and height systems**, Peneva, 2015, "Military Geographical Service", ISBN 978-954-91225-0-3, 173 p.

### **Projects:**

**Participating in 16 projects as a team member or supervisor from 1998 to 2017.**

#### **Some Projects:**

#### **Unified Gravity System of Central and Eastern Europe (UNIGRACE) 1998 – Absolute and gravity measurements on the territory of Bulgaria**

European Gravity and Geoid Project (EGGP)- The European Gravity and Geoid Project (EGGP) is incorporated within Commission 2 (Gravity Field), Sub-commission 2.4 (Regional Geoid Determination), of the International Association of Geodesy (IAG). The project was established directly after the IUGG General Assembly in Sapporo, Japan, 2003, and is running during the four-year period from 2003 to 2007. The main goal of the project is the re-computation of a European geoid and quasigeoid model with significantly improved accuracy as compared to the previous model EGG97 (Denker und Torge 1998).

**World Gravity Map - 2007-2009** - The WGM project consists in the realization of a digital gravity anomaly/disturbance map of the world based on the compilation of all available measurements of the earth gravity field acquired on land and sea. Undertaken under the aegis of the Commission for the Geological Map of the World (CGMW) and of the International Association of Geodesy (IAG) - and of its International Gravity Field Services (IGFS) - this project is supported by the United Nations Educational Scientific and Cultural Organization (UNESCO).

**Modernization of National Gravity Network of Republic of Bulgaria** - Investigation and Optimization of the Gravimetric Network of Bulgaria 2008-2010

#### **A complex investigation of contemporary geodynamics in South – West Bulgaria**

**Investigation of landslide processes in the area of Botanic garden of Bulgarian Academy of Sciences**

**Geodesy Activities in Bulgaria - National GPS Network Realization of the European Terrestrial Reference Frame ETRS89 in Bulgaria** -- existing points – 219; new points – 123

Permanent GNSS networks - active stations – 24; Gravimetric networks -Main network; Zero network; First network; Second network

**Determination of the Gravity Field for the territory of Bulgaria** – processing of Gravimetric data for calculation quasigeoid model for Bulgaria EGG08

**Modernization of National Gravity Network of Republic of Bulgaria** - Gravity remeasurements on 176 points from the National Gravity Network

**Publications:**
**More than 40 publications in national and international editions.**

№	Туре	Title (in original language of publication)	Co-authors	Year of issue (source, number of pages)	Information Data Base
1.	T	Физическа геодезия	Владимир Стойнов	2002, 254 страници, Полиграфическа база при УАСГ, София	
2.	B	Българско – Английско -Руски, Английско-Български, Руско-Български Геодезически Терминологичен Речник	Владимир Стойнов, Катя Коцева	2009,355 страници	ISBN 978-954-91225-6-5
3.	M	Височини и височинни системи	-	2017, 173 страници	ISBN 978-954-91225-0-3
4.	R	Reference Systems Realization for the Territory of Bulgaria - Status and Perspectives	Slaveyko Gospodinov, Yuri Tzanovski, Tatyana Lambeva	2018, Conference and plenary meeting of the Permanent , Committee on Cadastre in the European Union, 13-15 March 2018, Sofia	
5.	R	Изследване на европейски модел на геоида EGG2015 за ограничен район от територията на Р Македония	Господинов Сл., Постолювски Ал.	2017, Международна Юбилейна Научна Конференция „75 години УАСГ”, 1-3 Ноември 2017	
6.	R	Новият европейски модел на квазигеоида EGG2015 и неговото изчисление и оценка	Георгиев Ив.	2017, Международна Юбилейна Научна Конференция „75 години УАСГ”, 1-3 Ноември 2017	

		за територията на България			
7.	R	Приложение на метода на колокацията за извеждане на локален модел на геоида за част от територията на Р Македония	Паталов Ст.	2017, Международна Юбилейна Научна Конференция „75 години УАСГ”, 1-3 Ноември 2017	
8.	R	Дейности по изграждане на Софийска гравиметрична калибрационна линия	Господинов Сл., Радев Ив.	2017, Международна Юбилейна Научна Конференция „75 години УАСГ”, 1-3 Ноември 2017	
9.	R	Realization of the Tidal Standards in European and Global Height Reference Systems	Gospodinov S., Lambeva T	2016, International Symposium on Gravity, Geoid and Height Systems 2016 September 19-23, 2016 Thessaloniki, Greece	
10.	R	Vertical reference system over territory of Bulgaria- activities and problems on implementation	Slaveyko Gospodinov	2015, WMESS 2015 Prague, Multidisciplinary Earth science symposium, 7-11 September 2015, Prague, Czech republic	
11.	P	Basic Gravimetric Network of Republic of Macedonia – a New Reality	S. Gospodinov, P. Penev, K. Seckov, S. Dimeski, M. Starcevic	2017, Journal of Civil Engineering (SJCE) volume 6 issue 2 December 2017, pp. 29-36	ISSN 1857-839X
12.	P	Тестови гравиметрични	Б. Астарджиев,	2017, Годишник на УАСГ, брой 50, том	ISSN 1310-814X

		измервания по линия от Държавната нивелачна мрежа	Т. Ламбева, Г. Митрев, Г. Маринов	4, 2017, София, стр. 41-51	
13	P	Realization of the Tidal Standards in European and Global Height Systems	Gospodinov S., T. Lambeva	2017, Slavic Forum, Materials of the International Conference on Integration, Analytics and Geoinformation, November 15-19, 2017, Moscow, p. 24-39	
14	P	Съвременни аспекти на геометричната нивелация	Господинов Сл., П. Пенев, Т. Ламбева, Юри Цановски, С. Джорова, Г. Маринов, И. Радев	2016, Годишник на УАСГ, XLIV том 2016 св. V	ISSN 1310-814X
15	R	Some Aspects on Basic Gravimetric Network Adjustment	Gospodinov S., Lambeva T., Penev P.	2015, FIG Working Week 2015 "From the Wisdom of the Ages to the Challenges of the Modern World", Sofia, Bulgaria, 17 – 21 May 2015, 16 pp.	
16	R	Basic Gravimetric Network of Republic Macedonia – a New Reality	Gospodinov S., Penev P., Seckov K., Dimeski S.	2015, FIG Working Week 2015 "From the Wisdom of the Ages to the Challenges of the Modern World", Sofia, Bulgaria, 17 – 21 May 2015, 12 pp.	



17	P	Сравнение на европейския модел на геоида EGG08 с глобални геопотенциални модели за територията на България	Стрински Б., Георгиев И.	2012, Сборник доклади „70 години УАСГ”. Международна юбилейна научно-приложна конференция УАСГ 2012, Том 1, стр. 385-392	ISBN 978-954-724-049-0
18	P	Европейският модел на квазигеоида EGG08 и използването му на територията на България	Георгиев И.	2012, Сборник доклади „70 години УАСГ”. Международна юбилейна научно-приложна конференция УАСГ 2012, Том 1, стр. 379-384	ISBN 978-954-724-049-0
19	P	Преобразование правоъгълных геоцентрических координат в геодезические без применения итерации	Пенев П.	2012, Известия высших учебных заведений. геодезия и аэрофотосъемка, № 3, Москва, стр. 34-38	
20	BC	Geodesy activities in Bulgaria, National report 2007-2011	Georgiev I., A. Lazarov, V. Koritarova, T. Bochev, G. Gladkov, P. Danchev, T. Belyashki, D. Dimitrov, M. Minchev, S. Gospodinov, P. Gabenski, M. Nikolov	2011, National report 2007-2011, XXVth General Assembly of International Association of Geodesy, Melbourne, Australia, June28-July07, 2011, 32 pp.	

21	P	Evaluation of the Quasigeoid Models EGG97 and EGG07 with GPS/levelling Data for the Territory of Bulgaria	I. Georgiev	2010, In IAG Book series "Gravity, Geoid and Earth Observation", International Association of Geodesy Symposia 135, Mertikas (ed.), Springer Berlin Heidelberg, p. 303-307	ISBN 978-3-642-10633-0, DOI 10.1007/978-3-642-10634-7_39
22	P	Реализация на Европейската земна координатна система ETRS89 и Европейската вертикална координатна система EVRS на територията на България	Георгиев И., Т. Беляшки, Е. Михайлов, Д. Димитров, П. Данчев, Г. Михайлов, Г.Гладков, П. Гъбенски, М. Минчев	2010, Геомедия, Брой 4, стр. 38-41	
23	P	Реализация на Европейската земна координатна система ETRS89 и Европейската вертикална координатна система EVRS на територията на България	Георгиев И., Т. Беляшки, Е. Михайлов, Д. Димитров, П. Данчев, Г. Михайлов, Г.Гладков, П. Гъбенски, М. Минчев	2010, Геомедия, Брой 5, стр. 32-39	ISSN 1313-3365
24	P	Гравиметрични дейности за целите на геодезията в Република България	Господинов Сл., Беляшки Т., Димитров Д., Михайлов Г.	2009, Годишник на УАСГ 2008-2009, том XLIII, св. VI, стр. 151 – 157	ISSN 1310-814X

25 .	P	Резултати от гравиметрични измервания за изследване на свлачищни процеси в района на Ботаническата градина на БАН, гр. София	Господинов Сл., Ценков Ц., Георгиев Д.	2006, гр. София, SGEM 2006, International collection of papers, 205 - 214	
26 .	P	A Preliminary gravimetric geoid model on the territory of Bulgaria	-	2004, Allgemeine Vermessungs-Nachrichten, 10-2004, 322-324	
27 .	P	National Gravity System for Bulgaria	Milev G., Vassileva K., Stoyanov L., Stoinov V., Tashkov T., Valev G., Belyashki T., Mikhailov E.	2003, IGS Proceedings, 2003, 6 pp.	
28 .	P	По въпроса за използване на чисти аномалии при определяне на смущаващия потенциал	-	2001, Годишник на УАСГ. Том XL, св. III-A, стр. 7 - 20	ISSN 1310-814X
29 .	P	Дилемата геоид – квазигеоид	Стойнов В.	2000, Сп. “Геодезия, картография и земеустройство”. бр. 2-3 / 2000, стр. 3 – 9	ISSN 0324-1610

---

30	P	National report of Bulgaria	Milev G., Stoyanov L., Minchev M., Beljashki T., Vassileva K., Mihailov E., Rangelova E.	1999, 2nd UNIGRACE Working Conference, Warsaw, February 22-23, 1999, стр. 13 - 19	
----	---	-----------------------------	--	---	--

**Reports and presentations:**

**Presented 13 papers in national and international scientific events.**