

PERSONAL INFORMATION



Sofia Rita Cardoso Fernandes

 Rua Aliança Operária, 50, 2º Direito, 1300-049 Lisboa (Portugal)

 914072685

 sofiarita19@gmail.com

Sex | Date of birth 19/07/1976 | Nationality Portuguese

WORK EXPERIENCE

01/03/2015–Present

Health Sciences Researcher

Fundação para a Ciência e Tecnologia (FCT), Instituto de Biofísica e Engenharia Biomédica (IBEB), Instituto de Medicina Molecular (IMM), Lisboa (Portugal)

Scientific Research in Neurosciences on the neuromodulatory effects of transcutaneous direct current stimulation (tsDCS) of the spinal cord.

Simulation of electric field distribution using realistic human trunk models based on full-body MRI, calculation of direct current neuromodulatory effects on spinal neurons at cellular level model, using MIMICS, COMSOL and MATLAB softwares.

Protocol design based on simulation studies and application of these protocols in exploratory studies on humans to ascertain on the therapeutic effects of tsDCS.

12/2012–02/2015

Physiotherapist

Lar de São José, Ajuda – Lisboa, Lisboa (Portugal)

Physiotherapy treatment in Muscular-skeletal, Cardiopulmonary, Neurological and Chronic Pain conditions.

03/2011–02/2015

Home-based personal Physiotherapist

Physiotherapy home based treatment in Muscular-skeletal, Cardiopulmonary, Neurological conditions and Paediatrics

10/1995–02/2015

Home based tutoring students

Sofia Rita Fernandes, Lisboa (Portugal)

Tutoring high school and university students in the areas of Maths, Physics and Chemistry.

02/2011–01/2013

Home based personal Physiotherapist

Etapas Felizes - Serviços de Apoio Domiciliário, Lisboa (Portugal)

Physiotherapy treatment in Musculo-skeletal, Cardiopulmonary and Neurological conditions and Paediatrics.

Business or sector Human health and social work activities

02/2011–08/2011

Physiotherapist

Casa Pia de Lisboa, Lisboa (Portugal)

Physiotherapy in Paediatrics in public foster homes (volunteering).

Business or sector Human health and social work activities

- 01/10/2010–01/03/2011 **Physiotherapist**
 Clínica Costas d'Anjo
 Rua da Indústria, Lisboa (Portugal)
 Physiotherapy treatment in Muscular-skeletal, Cardiopulmonary, Neurological and Chronic Pain conditions.
Business or sector Human health and social work activities
- 16/08/2009–15/08/2010 **Physiotherapist**
 Clínica de Fisioterapia e Reabilitação Ideal de coruche
 Coruche, Santarém (Portugal)
 Physiotherapy treatment in Muscular-skeletal, Cardiopulmonary, Neurological, Chronic Pain conditions and Paediatrics.
Business or sector Human health and social work activities
- 01/10/2001–01/10/2003 **Physical science researcher**
 Fundação para a Ciência e Tecnologia (FCT), Faculdade de Ciências da Universidade de Lisboa (FCUL)
 Campo Grande, Lisboa (Portugal)
 Scientific Research in Astrophysics for the Science and Technological Portuguese Foundation (FCT) and the European Space Observatory (ESO) - Project PESO/P/PRO/40154/2000, "The Nearest Planet Nurseries".
 Space Image Data reduction and analysis and study of planet and star formation, using IRAF (Image Reduction and Analysis Facility) and computer programming in IDL (Interactive Data Language).
Business or sector Professional, scientific and technical activities

EDUCATION AND TRAINING

- September 2013–Present **PhD Student in Neurosciences**
 Faculdade de Medicina da Universidade de Lisboa (FMUL), Lisboa (Portugal)
 General knowledge covering several topics related to Neurosciences: Neurophysiology, Neuroanatomy, Cellular Neuroscience, Neuropathology, Biostatistics, Computational Neurosciences, Research in Neurosciences.
 Development of research skills in neurosciences, related to computer simulation and calculation using realistic human models, analysis of scientific data results, design and application of exploratory clinical protocols using a specific therapeutic technique.
- 19/09/2005–20/07/2009 **Graduation in Physiotherapy (B.Sc.)** 16 points in 20
 Escola Superior de Tecnologia da Saúde de Lisboa (EstesL)
 Moscavide, Lisboa (Portugal)
 Physiotherapy Functional Diagnosis, Intervention and Treatment in Muscular-skeletal, Cardiopulmonary and Neuromuscular conditions and Paediatrics; Psychology, Ergonomy and Biomechanics applied to Physiotherapy.

23/09/2001–31/10/2003

Master's degree in AstrophysicsVery good
(qualitative
classification)

Faculdade de Ciências da Universidade de Lisboa (FCUL)
Campo Grande, Lisboa (Portugal)

Astrophysics Research in Extrasolar planetary systems, with computer programming and image data reduction and analysis.

Advanced studies in Solar System, Star and Extragalactic Astronomy and Cosmology.

19/09/1994–12/12/2001

Graduation in Physics (B.Sc.)

14 points in 20

Faculdade de Ciências da Universidade de Lisboa (FCUL)
Campo Grande, Lisboa (Portugal)

Mechanics, Electromagnetism, Thermodynamics, Nuclear and Condensed Matter Physics, Organic and Inorganic Chemistry, Astrophysics, Biophysics, Statistics, Applied Maths and computer programming in Fortran and Turbo Basic.

Laboratory Physics, Chemistry and Electronics.

16/11/2015–17/11/2015

INSTICC - Institute for Systems and Technologies of Information Control and Communication, Lisboa (Portugal)

3rd International Congress on Neurotechnology, Electronics and Informatics – Neurotechnix 2015, Lisboa, Portugal, 2015, with an oral communication entitled "Transcutaneous Spinal Direct Current Stimulation: Modelling the Electric Field Distribution in the Cervical Spinal Cord".

25/08/2015–29/08/2015

IEEE Engineering in Medicine and Biology Society, Milan (Italy)

37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milan, Italy 2015, with poster presentation entitled "Transcutaneous Spinal Cord Stimulation: Modeling the Electric Field Distribution using the Finite Element Method."

12/01/2012–15/01/2012

Johan Lambeck, BPT, from International Aquatic Therapy Foundation.
Fisiogaspar, Lisboa (Portugal)

Muscularskeletal and Sports Aquatic Therapy

20/11/2010–21/11/2010

APPI (The Australian Physiotherapy & Pilates Institute)
Hotel Príncipe Lisboa, Lisboa (Portugal)

Pilates Matwork 3: Intermediate/Advanced, Matwork certification.

03/07/2010–04/07/2010

APPI (The Australian Physiotherapy & Pilates Institute)
Hotel Príncipe Lisboa, Lisboa (Portugal)

Pilates Matwork 2: Class Instructor, Matwork Certification.

20/02/2010–21/02/2010

APPI (The Australian Physiotherapy & Pilates Institute)
Hotel Sana Reno, Lisboa (Portugal)

Pilates Matwork 1: The Foundation, Matwork Certification.

28/05/2008–28/05/2008

Hospital Garcia d'Orta
Almada, Setúbal (Portugal)
Seminar on Paediatric Basic Life Support

19/09/2007–20/10/2007

Escola Superior de Tecnologia da Saúde de Lisboa (EstesL)
Moscaidade, Lisboa (Portugal)
First Degree Cycle in Fundamental Sofrologia Caycediana

26/05/2006–27/05/2006

Escola Superior de Tecnologia da Saúde de Lisboa (EstesL)
Moscaide, Lisboa (Portugal)
III Jornadas de Educação em Fisioterapia

25/09/2003–26/09/2003

Faculdade de Ciências da Universidade de Lisboa
Campo Grande, Lisboa (Portugal)
Workshop: "A Física que se faz na Faculdade de Ciências", with poster presentation - "Circumstellar Disk Dissipation in Young Clusters"

29/06/2003–04/07/2003

Paris University, Paris (France)
XIXth IAP Colloquium: "Extrasolar Planets, Today and Tomorrow", with oral presentation entitled "What can we learn from Disk Frequency in Young Clusters".

03/09/2002–06/09/2002

Faculdade de Ciências da Universidade do Porto, Porto (Portugal)
"Workshop on Star Formation" with poster presentation: "Timescale for Circumstellar Disk Dissipation."

10/03/2002–14/03/2002

ESO, La Serena (Chile)
"Workshop on Galactic Star Formation Across the Stellar Mass Spectrum", with poster presentation entitled "Protoplanetary Disk Fraction in Young Clusters and the Timescale for Planet Formation".

02/08/2001–08/08/2001

Centro de Astronomia e Astrofísica da Universidade de Lisboa
Tapada da Ajuda, Lisboa (Portugal)
2nd Summer School on the Solar System (EVISS)

01/09/2000–03/09/2000

Universidade do Algarve, Faro (Portugal)
Third International Workshop: New Worlds in Astroparticle Physics

27/07/2000–28/07/2000

Instituto Superior Técnico de Lisboa, Lisboa (Portugal)

X Encontro Nacional de Astronomia e Astrofísica, Lisboa, 2000

17/04/2000–18/04/2000

Museu de Ciência da Universidade de Lisboa, Lisboa (Portugal)

Workshop: Portugal-ESO-VLT: Portuguese Astrophysical Research for the VLT Era

PERSONAL SKILLS

Mother tongue(s) Portuguese

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C1
French	B1	B2	B1	B1	B1

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 leadership, team spirit and communication skills, having been developed through:

- being catechist of children, adolescents and young adults (from 1992 to date) in local parish;
- organizing and encouraging youth and children religious meetings,
- directing the youth vocal choir (until 2005), and the vocal children choir in local parish (since October 2010);
- through the presentation of oral communications during the academic studies; - being a PhD student's commission member of the Mind-Brain College of the Universidade de Lisboa (from 2015 to date);
- the activity of tutoring young people in the fields of Mathematics, Physics and Chemistry for high school and university degrees since 1995.

Sport activities that contributed to the development of persistence and team spirit:

- acrobatics and dance (until 1993);
- Yoga (from 1992 to 1994); - rowing (from 2001 to 2003);
- Pilates (since 2010);
- swimming (since 2011).

Volunteering experience through the Sociedade de São Vicente de Paulo called "Projecto Irmão," consisting of two interventions of two weeks during the months of August 1996 and 1997 (Comunidade Juvenil de São Francisco de Assis in Coimbra and in a kindergarden in Lisbon, respectively):- this experience has provided skills in developing relationships and communication skills with children and young people from different cultures and social contexts. Volunteer Physiotherapist in the "Liga Portuguesa dos Deficientes Motores" in the area of Functional Therapy, during the period of 14 to 28 July 2008, allowing the development of contacts and experience in health care in physiotherapy with children and youth with mental and motor disabilities.

Organisational / managerial skills

Good organizational skills and event working team management, developed in activities taken in local parish (Igreja de Nossa Senhora da Ajuda):

- Training and vocal direction of the youth choir until 2005 and the choral choir of children since October 2010;
- Organization of the Taizé meeting in Lisbon at the parish level in December 2004, a missionary week in 2005, and the "Jornadas da Juventude da Vigararia III - Lisbon 2009";
- Preparation of parish Christian Song Festival in 2005, 2006, 2007 and 2009;
- Arranging and conducting concert of youth choir in 2005, 2008 and 2010;
- Arranging and conducting concert of children choir in 2011.

Job-related skills

Computational skills in modelling and physics simulations in biophysical systems and in presenting research results in oral and poster presentations in scientific meetings in the biomedical context.

Physiotherapy intervention techniques acquired during the Physiotherapy Graduation and at places of clinical practice:

- Clínica Espaço Diagnóstico in Lisbon (36 hours) - Musculo-Skeletal Physiotherapy;
- Clínica SAMS, Lisbon (36 hours) - Musculo-Skeletal Neuromuscular Physiotherapy;
- Hospital of Montijo (40 hours) - Musculo-Skeletal Physiotherapy;
- Hospital Curry Cabral, Lisbon (40 hours) - Musculo-Skeletal Physiotherapy and Orthopedics;
- Hospital of São Francisco Xavier in Lisbon (36 hours) - Musculo-Skeletal Physiotherapy;
- Portuguese Institute of Oncology Francisco Gentil, Lisbon (36 hours) - Oncology;
- Santa Maria Hospital, Lisbon (150 hours) - Musculo-Skeletal Physiotherapy in Orthopaedics;
- Fernando Fonseca Hospital in Amadora (150 hours) - Cardiopulmonary physiotherapy, Pulmonary Rehabilitation and Cardiac Rehabilitation - Phase I;
- Hospital of Barreiro (210 hours) - Neuromuscular Physiotherapy;
- Garcia d'Orta Hospital in Almada (210 hours) - Physiotherapy in Pediatrics;
- Hospital de Dona Estefania, Lisboa (360 hours) - Physiotherapy in Pediatrics and Obstetrics.

Physiotherapy intervention techniques in the context of private practice, acquired during Internship IEFEP in "Clínica de Reabilitação Ideal de Coruche" and "Clinica Costas d'Anjo" in Lisbon, in the areas of orthopedics, neurology (mainly in recovery after stroke) and cardio-respiratory.

Technical skills in reducing and analysing astronomical data, in presenting research results in oral and poster presentations in scientific meetings in the astrophysical context and in writing a scientific article for a scientific publication with peer review.

Pedagogical methods of teaching mathematics, physics and chemistry.

Digital competence

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

Digital competences - Self-assessment grid

User skills in the Windows operating system, Microsoft Office (Word, Excel and Power Point). Knowledge of Linux at user level. LaTeX text processing.

User skills in the MIMICS, COMSOL and MATLAB softwares.

Programming in Turbo Basic, Turbo Pascal, Fortran, Quick Basic and IDL (Interactive Data Language). Knowledge of reduction of infrared images with the package IRAF (Image Analysis Facility Reduction).

Other skills Member of parish choirs in the local parish (Igreja de Nossa Senhora da Ajuda):

- director's assistant of children's choir from 1983 until 2000 and musician (guitar);
- Psalmist and member of the Parish Choir since 1983;
- founder and member of youth Choir from 1998 until September 2010, with the function of vocal director until 2005;
- member of the Lisbon's Cathedral Choir since June 2011.

Participation in choral concerts, being the vocal director.
Music studies at "Academia de Amadores de Música" in Lisbon, from 2004 to 2006:

- 2nd grade in Musical Theory;
- 2nd grade in Vocal Group;
- 1st degree in Vocal Training.

Seminar for Psalmists in Lisbon, November 2006.
Vocal Training Seminar I, directed by Maestro Vianey in 2007.
Vocal Training Seminar II, directed by Maestro Vianey in 2008.
Completed the 3-year Music Course of the the School of Sacred Music of the Diocese of Lisbon. Basic knowledge of guitar. Production capacity at the level of creative music, having been awarded with two prizes for best lyrics in the Christian Song Festivals in 2007 and 2006.

Driving licence B

ADDITIONAL INFORMATION

Publications:

"Transcutaneous Spinal Direct Current Stimulation: Modelling the Electric Field Distribution in the Cervical Spinal Cord", 2015, Fernandes SR, Salvador R, Wenger C, de Carvalho M, Miranda PC, Extended Abstract presented in the 3rd International Congress on Neurotechnology, Electronics and Informatics – Neurotechnix 2015, Lisboa, Portugal, 2015.

"Transcutaneous Spinal Cord Stimulation: Modeling the Electric Field Distribution using the Finite Element Method", 2015, Fernandes SR, Wenger C, Salvador R, de Carvalho MA, Miranda PC, 1-page late-break paper presented in the proceedings of the 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milan. Italy, 2015 (<http://emb.citengine.com/event/embc-2015/>) .

"Near Infrared Imaging of NGC2316", 2004, Teixeira, P., Fernandes, S., Alves, J., Correia, J., Lada, C., Lada, E. & Santos, F., Astronomy & Astrophysics, vol. 413, pgs. L1-L4.

"What can we learn from Protoplanetary Disk Fraction", 2003, Fernandes, S., Teixeira, P., Alves, J., Correia, J., Lada, C., Lada, E. & Santos, F., in the proceedings of the "XIXth IAP Colloquium: Extrasolar Planets, Today and Tomorrow", Paris, França, 2003

"Circumstellar Disk Dissipation in Young Clusters", 2003, Teixeira, P., Fernandes, S., Alves, J., Correia, J., Lada, C., Lada, E. & Santos, F., in the proceedings of the "XIXth IAP Colloquium: Extrasolar Planets, Today and Tomorrow", Paris, França, 2003

"What can we learn from Circumstellar Disk Fraction", 2003, Teixeira, P., Fernandes, S., Alves, J., Correia, J., Lada, C., Lada, E. & Santos, F., in the proceedings of the "IAU Symposium 221: Star Formation at High Angular Resolution", Sydney, Australia, 2003

"Circumstellar Disk Frequency in Young Clusters", Teixeira, P., Fernandes, S., Alves, J., Correia, J., Lada, C., Lada, E., Santos, F., in the proceedings of the "Workshop JETS of the JENAM 2002, The Unsolved Universe: Challenges for the Future", Porto, Portugal, 2002

"Protoplanetary Disk Fraction in Young Clusters and the Timescale for Planet Formation", Fernandes, S., Teixeira, P., Alves, J., Correia, J., Lada, C., Lada, E., Santos, F., in the proceedings of the "Workshop on Galactic Star Formation Across the Stellar Mass Spectrum", La Serena, Chile, 2002