# Francisco Nunes

Born: 1987—Porto, Portugal

Nationality: Portuguese & Brazilian

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## Research interests

I am interested in learning about people and how they use technology. My projects are usually at the intersection of computer science, health sciences, design, and social sciences. Broad keywords for my work would be: Human-Computer Interaction, Computer-Supported Cooperative Work, Health Informatics, and Science and Technology Studies.

# Education

2020-now	Master in Academic and Clinical Education, University of Porto
2012-2017	PhD in Informatics (Human-Computer Interaction), TU Wien
	Thesis: "The Everyday Life with Parkinson's and Self-care Technologies"
2005-2010	Master in Informatics and Computing Engineering, University of Porto
	Thesis: "Healthcare TV Based User Interfaces for Older Adults"

# Experience

2019-now	Invited Assistant Professor, University of Porto, Porto
2017-now	Senior researcher, Fraunhofer Portugal AICOS, Porto
2016-2017	Researcher, NOVA-LINCS, Universidade Nova de Lisboa, Lisboa
2012-2017	PhD Student, Institute for Design and Assessment of Technology, TU Wien, Vienna
2008-2012	Researcher, Fraunhofer Portugal AICOS, Porto

# Grants, honours & awards

Acquired project grants (€ values for my institution)

2021	€106K - "Adaptation, development, and deployment of a chatbot to improve health lit-
	eracy and care of first-time parents" funded by Aga Khan Development Network & FCT
	(PT) – Project Coordinator and PI.
2020	€190K - "Mobile Patient-centred System to Improve Drug Trials and Care of Older-adults
	with Rheumatic Diseases" funded by H2020 AAL & FCT (PT) – Project Coordinator and PI.
2019	€117K - "Demonstration of EyeFundusScope with Non-Expert Ophthalmology users" funded
	by ANI (PT) – Lead proposal writer and Co-PI.
2011	€137K - "Smartphones for Smart Seniors (S4S)" funded by ANI (PT) – <i>Lead proposal writer.</i>
*	€96K - Industry contracted research e.g., Alcatel-Lucent, ALMASCIENCE, Doist.

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## Other grants and honours

Two special recognitions for an 'Excellent Review' at CHI 2016
Vienna PhD School of Informatics scholarship (3 years of funding)
Dance! Don't Fall was on the Top-25 Apps, CES Mobile Apps Showdown

# Teaching $\dot{\sigma}$ supervision experience

#### Courses

	M 1: I 1 ( (Pl D OII D ( )
2021-now	Media Laboratory (PhD @U. Porto)
2019-2021	Learning from Users: User Research Methods for Technology Design (MSc/PhD @AICOS)
2019-2021	Design Project Management and Methodology (Post-graduation @U. Porto)
2016-2018	Qualitative methods and co-design of self-care technologies (MSc @U. of Copenhagen) –
	Invited lecture on self-care and self-care technologies
2015	HCI in Healthcare (MSc @TU Wien) - Co-teaching and project supervision
2014	User Research Methods (MSc @TU Wien)- Co-teaching and project supervision

### Supervised students

current	Petra Grego, MSc Multimedia Design @U. Coimbra
current	Rui Fernandes, MSc Informatics Engineering @U. Nova de Lisboa
2020	Niloufar Chakhmaghi, MSc Media Informatics @TU Wien
2019	João Simões, MSc Biomedical Engineering @U. Nova de Lisboa
2018	Cristiana Braga, MSc Service Design @U. Porto
2018	João Almeida, MSc Informatics Engineering @U. Porto
2015	Martin Herndl, BSc Medical Informatics @TU Wien
2012	João Cevada, MSc Informatics Engineering @U. Porto
*	Other 8 students as unofficial MSc co-supervisor
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## Supervised PhD internships

Cristina Mendes Santos, PhD Internet Interventions @Linköping University
 Martina Čaić, PhD Service Design @Maastricht University

# **Projects**

## SELECTION OF ONGOING PROJECTS

	DEED FIRST OF CHACAGO TROJECTO
2022-2024	ParentCoach (FCT) – will adapt and improve a chatbot for first-time parents in Portugal and South Africa. I am project coordinator and PI at AICOS.
	1 3
2021-2023	COTIDIANA (AAL) – is creating a mobile solution to enable holistic and efficient patient
	monitoring for clinical care, clinical research, and drug trials, drawing on PROMS and pas-
	sive smartphone sensing. I am project coordinator and PI at AICOS. https://cotidiana.eu/
2021-2023	ConnectedHealth (ANI) – is creating advanced information systems that support chronic
	patients, pharmacists, and hospital clinicians, in dealing with COPD, Diabetes, and Heart
	failure. I am leading the user research team at AICOS.
2021-2023	HomeSenseALS (FCT) – is creating a mobile solution to track the condition state of patients
	with Amyotrophic Lateral Sclerosis in clinical research field trials. I am leading the user
	research team at AICOS.
2019-2021	EyeFundusScopeNEO (PT2020) - This project is piloting EyeFundusScope, a solution to
	screen diabetic retinopathy, in CUF Infante Santo. I am currently the PI at AICOS.

## Service

PROGRAM COMMITTEE MEMBER

CHI 2021, 2020, 2019

CSCW 2018

PervasiveHealth 2015, 2016

Mindcare 2016

And in workshops at CHI '20, ICEC'18, CHI'16, GROUP '14, Ubicomp '13, SouthCHI '13

#### Workshop organizer

Realizing AI in Healthcare: Challenges Appearing in the Wild at CHI '21 (link)

Dis-entangling later life: ageing processes, innovative practices  $\mathring{\sigma}$  critical reflections? at STS Italia '20

Who Cares? Exploring the Concept of Care Networks for Designing Healthcare Technologies at ECSCW '19 (link)

Designing Self-care for Everyday Life at NordiCHI '14 (link)

Designing Systems for Health and Entertainment: what are we missing? at ACE '14 (link)

#### Reviewer

2014

2015

2020

ENTCOM, Health Informatics Journal, IJCCI, IJHCS, IxD&A, JAMIA, JCSCW, JMIR, TOCHI. CHI ('14-'21), CSCW ('15-'22), DIS '18, Group '16, Healthcom '13, Interact '19, MobileHCI '17, NordiCHI ('14, '16), PervasiveHealth ('15-'17).

#### STUDENT VOLUNTEER

CHI ('13, '16), CSCW '15 PC meeting, NordiCHI '10

## Publications & talks

h-index: 14; citations: 718 (source Google Scholar as of 08/2021)

#### PROCEEDINGS AND SPECIAL ISSUES EDITED

P. A. Silva, F. Nunes, eds. (2016) "Special issue on fun and engaging computing technologies for health", *Entertainment Computing*, 15: 41–70.

N. Verdezoto, F. Nunes, E. Grönvall, G. Fitzpatrick, C. Storni, M. Kyng, eds. (2015) "Proceedings of Designing Self-care for Everyday Life. Workshop in conjunction with NordiCHI 2014, 27th October 2014, Helsinki, Finland", *DAIMI Report Series*, 41(597).

N. Verdezoto, F. Nunes, G. Fitzpatrick, E. Grönvall, eds. (2014) "Designing Self-Care For Everyday Life", *Interaction Design and Architecture(s) Journal - IxD&A*, 23: 142–190.

### JOURNAL ARTICLES

F. Nunes, P. Madureira, S. Rêgo, C. Braga, R. Moutinho, T. Oliveira, F. Soares (2021) "Mobile Tele-Ophthalmology System for Planned and Opportunistic Screening of Diabetic Retinopathy in Primary Care" *IEEE Access*, 9: 83740-83750.

J. Almeida, F. Nunes (2020) "The Practical Work of Ensuring Effective Use of Serious Games in a Rehabilitation Clinic: A Qualitative Study", JMIR Rehabilitation and Assisted Technologies - JRAT, 7(1).

- F. Nunes, T. Andersen, G. Fitzpatrick (2017) "The agency of patients and carers in medical care and self-care technologies for interacting with doctors", *Health Informatics Journal*, 25(2): 330–349.
- F. Güldenpfennig, F. Nunes, G. Fitzpatrick (2016) "Making Space to Engage: An Openended Exploration of Technology Design with Older Adults", *International Journal of Mobile Human Computer Interaction*, 8(2): 1–19.
- F. Nunes, P. A. Silva, J. Cevada, A. C. Barros, L. Teixeira (2015) "User Interface Design Guidelines for Smartphone Applications for People With Parkinson's Disease", *Universal Access in the Information Society*, 15(4): 659–679.
- F. Nunes, N. Verdezoto, G. Fitzpatrick, M. Kyng, E. Grönvall, C. Storni (2015) "Self-care Technologies in HCI: Trends, Tensions, and Opportunities", *ACM Transactions on Computer Human Interaction*, 22(6), article 33: 1–45.
- F. Nunes, G. Fitzpatrick (2015) "Self-care Technologies and Collaboration", *International Journal of Human Computer Interaction*, 31(12): 869–881.
- A. Aguiar, F. Nunes, M. Silva, P. A. Silva, D. Elias (2012) "Leveraging electronic ticketing to provide personalised navigation in a public transport network", *IEEE Transactions on Intelligent Transportation Systems*, 13(1): 213–220.

### LONG CONFERENCE PAPERS (PEER-REVIEWED)

- F. Nunes, J. Almeida, C. Chung, N. Verdezoto (2021) "Avoiding Reactions Outside the Home: Challenges, Strategies, and Opportunities to Enhance Dining Out Experiences of People with Food Hypersensitivities", *Proc. of CHI 2021*, 208:1–208:16.
- A. Pereira, D. Folgado, F. Nunes, J. Almeida, I. Sousa (2019) "Using Inertial Sensors to Evaluate Exercise Correctness in Electromyography-based Home Rehabilitation Systems", *Proc. of MEMEA 2019*.
- J. Silva, D. Gomes, F. Nunes, D. Moreira, J. Alves, A. Pereira, I. Sousa (2019) "Position-independent Physical Activity Monitoring: Development and Comparison with Market Devices", *Proc. of MEMEA 2019*.
- F. Nunes, G. Fitzpatrick (2018) "Understanding the mundane nature of self-care: Ethnographic accounts of people living with Parkinson's", *Proc. of CHI 2018*, 402:1–402:15.
- F. Nunes, J. Ribeiro, C. Braga, P. Lopes"Supporting the Self-care Practices of Shift Workers", *Proc. of MUM 2018*, 71–81.
- J. Silva, E. Oliveira, D. Moreira, F. Nunes, M. Caic, J. Madureira, Eduardo Pereira (2018) "Design and evaluation of a fall prevention multiplayer game for senior care centres", *Proc. of ICEC 2018*, 103–114.
- P. Jordan, P. A. Silva, F. Nunes, R. Oliveira (2013) "mobileWAY A System to Reduce the Feeling of Temporary Lonesomeness of Persons with Dementia and to Foster Intercaregiver Collaboration", *Proc. of HICSS 2013*, 2474–2483.
- P. A. Silva, F. Nunes, A. Vasconcelos, M. Kerwin, R. Moutinho, P. Teixeira (2013) "Using the Smartphone Accelerometer to Monitor Fall Risk While Playing a Game: The Design and Usability Evaluation of Dance! Don't Fall", *Proc. of HCII 2013*, 754–763.
- F. Nunes, M. Kerwin, P. A. Silva (2012) "Design Recommendations for TV User Interfaces for Older Adults: Findings From the eCAALYX Project", *Proc. of ASSETS 2012*, 41–48.
- M. Kerwin, F. Nunes, P. A. Silva (2012) "Dance Don't Fall Preventing Falls and Promoting Exercise at Home", *Proc. of pHealth 2012*, 254–259.
- A. Vasconcelos, P. A. Silva, J. Caseiro, F. Nunes, L. F. Teixeira (2012) "Designing Tablet-based Games for Seniors: the Example of Cogniplay, a Cognitive Gaming Platform", *Proc. of Fun & Games 2012*, 1–10.
- P. A. Silva, F. Nunes (2010) "3 x 7 Usability Testing Guidelines for Older Adults", *Proc. MEXIHC* 2010, 2: 1–8.

F. Nunes, P. A. Silva, F. Abrantes (2010) "Human-Computer Interaction and the Older Adult: an Example Using User Research and Personas", *Proc. of PETRA 2010*, 49: 1–8.

## SHORT CONFERENCE PAPERS (PEER-REVIEWED)

- C. Braga, S. Rego, F. Nunes "Clinicians' Perspectives on Using Mobile Eye Fundus Cameras to Screen Diabetic Retinopathy in Primary Care", Proc. of ICHI 2020.
- A. Vasconcelos, F. Nunes, A. Carvalho, C. Correia (2018) "Mobile, Exercise-agnostic, Sensor-based Serious Games for Physical Rehabilitation at Home", *Proc. of TEI 2018*, 271–278.
- V. Guimarães, F. Nunes (2018) "A Wearable, Customizable, and Automated Auditory Cueing System to Stimulate Gait in Parkinson's", *Proc. of PervasiveHealth 2018*.
- A. Pereira, F. Nunes (2018) "Physical Activity Intensity Monitoring of Hospital Workers using a Wearable Sensor", *Proc. of PervasiveHealth 2018*.
- R. Peixoto, J. Ribeiro, E. Pereira, F. Nunes, A. Pereira (2018) "Designing the Smart Badge: A Wearable Device for Hospital Workers", *Proc. of PervasiveHealth 2018*.
- F. Aluvathingal, N. Verdezoto, F. Nunes (2018) "Exploring Challenges and Opportunities to Support People with Food Allergies to Find Safe Places for Eating Out", *Proc. of 32nd British HCI Conference*.
- F. Güldenpfennig, Ö.Subasi, F. Nunes, M. Urbanek (2017) "UbiKit: Learning to Prototype for Tangible and Ubiquitous Computing", 31st British HCI Conference.
- F. Güldenpfennig, F. Nunes, G. Fitzpatrick (2015) "Proxycare: Integrating informal care into formal settings", *Proc. of PervasiveHealth* 2015, 141–144.
- T. Marques, F. Nunes, P. A. Silva, R. Rodrigues (2011) "Tangible Interaction on Tabletops for Elderly People", *Proc. ICEC 2011*, pp. 440–443.
- T. Sousa, P. Tenreiro, P. A. Silva, F. Nunes, E. Rodrigues (2011) "Cross-platform social web application for older adults with html 5", *Proc. ICEC 2011*, pp. 375–378.

### Position papers (juried)

- F. Nunes, J. Silva (2021) "Monitoring patients with rheumatic conditions remotely using data from smartphones", *Book of abstracts 3rd Digital Rheumatology Day*.
- T. O. Andersen, F. Nunes, L. Wilcox, E. Kaziunas, S. Matthiesen, F. Magrabi (2021) "Realizing AI in Healthcare: Challenges Appearing in the Wild", *Proc. of CHI EA 2021*.
- C. Correia, E. Oliveira, F. Nunes (2020) "Using Illustration to Create More Inclusive User Interfaces for Older Adults", in *Interactions*, 27(2), 79–81.
- F. Nunes (2019) "From medicalized to mundane self-care technologies", in *Interactions*, 26(3), 67–69.
- S. Y. Park, F. Nunes, A. Berry, A. Büyüktür, L. de Russis, M. Czerwinski, W. Seo (2019) "Who Cares? Exploring the Concept of Care Networks for Designing Healthcare Technologies", *Proc. of ECSCW 2019*.
- P. A. Silva, F. Nunes (2016) "Preface for the special issue on fun and engaging computing technologies for health", in *Entertainment Computing*, 15: 41–42.
- F. Nunes (2016) "The medication reminder as enforcing a medicalised perspective on daily life", in *Book of abstracts of the 6th STS Italia Conference*, 58.
- F. Nunes (2015) "Designing Self-care Technologies for Everyday Life: A Practice Approach", Proc. of CHI EA 2015, 215–218.
- N. Verdezoto, F. Nunes, G. Fitzpatrick, E. Grönvall (2014) "Preface to the Focus Section", in *Interaction Design and Architecture(s) Journal IxD&A*, 23.
- F. Nunes (2013) "Improving the Self-care of Parkinson's Through Ubiquitous Computing", Proc. of Ubicomp Adjunct 2013.
- F. Nunes and, P. A. Silva (2011) "The Smartphone A Mobile Companion for Older Adults",

Proc. of Promoting and Supporting Healthy Living by Design WS at INTERACT 2011, 41-43. P. M. Teixeira, P. A. Silva, F. Nunes, L. F. Teixeira (2011) "Mover - Activity Monitor and 2011 Fall Detector for Android", Proc. of Mobile Wellness Workshop at MobileHCI 2011. F. Nunes, P. A. Silva (2010) "Fostering Wellness of Older Adults While Performing Usabil-2010 ity Testing", Proc. of HCI4WELL Workshop at HCI2010. A. Aguiar, F. Nunes, M. Silva, D. Elias (2009) "Personal Navigator for a Public Transport 2000 System Using RFID Ticketing", Proc. of inMotiono9 Workshop at Pervasive 2009. **INVITED PRESENTATIONS** "Accompanying participants during field trials, at a distance" at University of Copenhagen, 24/02/2022 Copenhagen, Denmark. "Accompanying participants during field trials, at a distance" at University of Lisbon, Lis-10/12/2021 bon, Portugal. "Avoiding reactions outside the home" at University of Porto, Porto. 23/10/2021 "Accompanying participants during field trials, at a distance" at University College of 24/09/2021 Dublin, Dublin, Ireland. "Avoiding reactions outside the home" at University of Coimbra, Coimbra, Portugal. 04/06/2021 "Self-care technologies" at Escola Superior de Saúde, Porto, Portugal. 01/06/2021 "Towards Mundane Personal Assistants" Keynote at Ubicomp Workshop on Ubiquitous 09/09/2019 Personal Assistance, London, UK. "Technology Assessment in Real Life" at Escola Superior de Saúde, Porto, Portugal. 03/05/2019 "Understanding and Promoting the Creation of Patient Knowledge Online" at University 14/09/2015 of Trento & FBK, Italy.

"How can technology help people improve their self-care? Supporting engagement in 17/08/2015 their clinical consultations" at IT University of Copenhagen, Denmark.

"Designing Self-care Technology for People with Parkinson's: A Focus on Everyday Life" 17/08/2015 at University of Copenhagen, Denmark.

# Languages

Portuguese – native English – proficient Spanish - fluent French – intermediate (DELF A4 certificate) German – intermediate (B<sub>1.1</sub> certificate)

# References

Geraldine Fitzpatrick, TU Wien (geraldine.fitzpatrick@tuwien.ac.at) Ana Correia de Barros, Fraunhofer Portugal AICOS (ana.barros@fraunhofer.pt) Paula Alexandra Silva, University of Coimbra (palexa@gmail.com) Nuno Correia, Universidade NOVA de Lisboa (nmc@fct.unl.pt)

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