## Francisco Nunes

Born: December 20, 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, medicine, design, and social sciences. I am an expert in ethnographically informed design, user-centred design, and participatory design approaches.

Broad keywords for my work would be: Human-Computer Interaction, Computer-Supported Cooperative Work, Health Informatics, and Science and Technology Studies.

## Education

2012-2017 PHD in Informatics (Human-Computer Interaction), TU Wien

Thesis: "The Everyday Life with Parkinson's and Self-care Technologies"

2005-2010 MSc & BSc in Informatics and Computing Engineering, University of Porto

Thesis: "Healthcare TV Based User Interfaces for Older Adults"

# Experience

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

2019 €117K - "Demonstration of EyeFundusScope with Non-Expert Ophthalmology users" funded

by ANI (PT) - Lead proposal writer and Co-PI.

€137K - "Smartphones for Smart Seniors (S4S)" funded by ANI (PT) – Lead proposal writer.

€411k - "Personal Health Device for the Remote and Autonomous Management of Parkin-

son's Disease (REMPARK)" funded by FP7-ICT (EU) – Co-proposal writer.

€76K - Industry contracted research e.g., Alcatel-Lucent, ALMASCIENCE, Doist.

#### OTHER GRANTS AND HONOURS

2016	Two special recognitions for an 'Excellent Review' at CHI 2016
2012	Vienna PhD School of Informatics scholarship (3 years of funding)
2012	Dance! Don't Fall was on the Top-25 Apps. CES Mobile Apps Showdo

Smart Companion was 2nd most creative app, ZON Creativity Award (prize: €6250)
Mover was 5th best Lifestyle app, Android Developer Challenge II (prize: equipment)

# Teaching & supervision experience

#### **Courses**

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2019-2020	Learning from Users:	User Research Methods for Technology I	Jesign (MSC, PhD (@AICOS)

Design Project Management and Methodology (Post-graduate @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

HCI in Healthcare (MSc @TU Wien) – Co-teaching and project supervision
User Research Methods (MSc @TU Wien) – Co-teaching and project supervision

#### Supervised students

ongoing	Niloufar Chakhmaghi, MSc Media Informatics @TU Wien
2019	João Simões, MSc Biomedical Engineering @Universidade Nova de Lisboa
2018	Cristiana Braga, MSc Service Design @FEUP
2018	João Almeida MSc Informatics Engineering @FFIIP

João Almeida, MSc Informatics Engineering @FEUP
Martin Herndl, BSc Medical Informatics @TU Wien
João Cevada, MSc Informatics Engineering @FEUP

\* Other 8 students as unofficial MSc co-supervisor

#### Supervised PhD internships

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

## **Projects**

### Ongoing

*EyeFundusScopeNEO* (PT2020) – This project is piloting EyeFundusScope, a solution to screen diabetic retinopathy, in CUF Infante Santo. I am PI at AICOS.

### SELECTION OF PREVIOUS PROJECTS

Clockwork (EU AAL-JP) – This project developed technologies to support the self-care of shift workers. I was in charge of supervising the user research, design, and evaluation of the smartphone app and the smart badge, the tasks of AICOS. I also coordinated the project consortium for 24 months. http://clockworkproject.eu/

2016-2019 Physio@Home (PT2020) – This project is developing a solution to support physical rehabilitation for the home and clinic, using wearables and serious games. I am involved in the design and evaluation of the system; I also replaced the PI of the project for 14 months.

Smart Companion (Internal) – This project created an Android skin specifically designed for older people. I participated in the user research, design, and evaluation of the smartphone applications. Smart Companion is today being sold by GOCIETY under the name GOLIVEPHONE. http://smartcompanion.projects.fraunhofer.pt

eCAALYX (EU AAL-JP) – This project created a telehealth system for older adults with chronic conditions. I participated in the the user research, design, and evaluation of the TV interfaces for older adults. http://ecaalyx.org

## Service

#### PROGRAM COMMITTEE MEMBER

CHI 2020, 2019 CSCW 2018 PervasiveHealth 2015, 2016

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Mindcare 2016

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

#### Workshop organizer

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

2019

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

#### STUDENT VOLUNTEER

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

## Publications & talks

h-index: 13; citations: 519 (source Google Scholar as at 05/2020)

## 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

- 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): 213–2220.

### Full conference papers (peer-reviewed)

- 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)

- 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)

- 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 Workshop at INTERACT 2011, 41–43.
- P. M. Teixeira, P. A. Silva, F. Nunes, L. F. Teixeira (2011) "Mover Activity Monitor and 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 Usability Testing", *Proc. of HCI4WELL Workshop at HCI2010*.
- A. Aguiar, F. Nunes, M. Silva, D. Elias (2009) "Personal Navigator for a Public Transport System Using RFID Ticketing", *Proc. of inMotionog Workshop at Pervasive 2009.*

#### **INVITED PRESENTATIONS**

- <sup>09/09/2019</sup> "Towards Mundane Personal Assistants" Keynote at Ubicomp Workshop on Ubiquitous Personal Assistance, London, UK.
- 03/05/2019 "Technology Assessment in Real Life" at Escola Superior de Saúde, Porto, Portugal.
- "Understanding and Promoting the Creation of Patient Knowledge Online" at University of Trento & FBK, Italy.
- "How can technology help people improve their self-care? Supporting engagement in their clinical consultations" at IT University of Copenhagen, Denmark.
- "Designing Self-care Technology for People with Parkinson's: A Focus on Everyday Life" at University of Copenhagen, Denmark.
- o6/o5/2011 "eCAALYX project" at the course Multimodal Interfaces of University of Porto, Portugal.

#### MEDIA MENTIONS

Mover was mentioned in the Jornal de Negócios (30/04/2010) and Diário de Notícias (29/05/2010). Smart Companion was described in RTP (01/08/2011), Porto Canal, and another time at Porto Canal (26/07/2012) when I was even interviewed.

# Languages

Portuguese – native English – proficient Spanish – fluent French – intermediate (DELF A4 certificate) German – intermediate (B1.1 certificate)

# References

Geraldine Fitzpatrick, TU Wien (geraldine.fitzpatrick@tuwien.ac.at)
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