# 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". Supervised by

Geraldine Fitzpatrick.

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

Thesis: "Healthcare TV Based User Interfaces for Older Adults". Supervised by Teresa Galvão

and Paula Alexandra Silva.

# 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
2010-2012	Researcher, Fraunhofer Portugal AICOS, Porto
2008-2010	Research Assistant, Fraunhofer Portugal AICOS, Porto

# Grants, honours & awards

Acquired project grants

"Smartphones for Smart Seniors (S<sub>4</sub>S)" funded by ANI (Portugal) − €137K Lead proposal writer. "Personal Health Device for the Remote and Autonomous Management of Parkinson's Disease (REMPARK)" funded by FP7-ICT (EU) − €411k

Co-proposal writer.

"CellPipe UI" funded by Alcatel-Lucent – €49k

Co-proposal writer.

2011

#### Other grants and honours

2016	Two special recognitions for an 'Excellent Review' at CHI 2016
2016	Grant for attending conference from TU Wien (€1390)
2015	Grant for attending CHI 2015 doctoral consortium (\$1300)
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 Showdown
2011	Smart Companion was 2nd most creative app, ZON Creativity Award (prize: €6250)
2010	Mover was 5th best Lifestyle app, Android Developer Challenge II (prize: equipment)

# Teaching & supervision experience

## **Courses**

Summer 2015 HCI in Healthcare (MSc) – Co-teaching and supervision of student projects at TU Wien Winter 2014 User Research Methods (MSc) – Co-teaching and supervision of student proj. at TU Wien

#### Supervised students

ongoing	Cristiana Braga (MSc), Study of a self-management system for healthcare shiftworkers
2018	João Almeida (MSc), Restaurant recommendation system for people with food allergies
2015	Martin Herndl (BSc), Developing an Android Self-Management Application for People
	with Parkinson's Disease
2012	João Cevada (MSc), User Interface Design Recommendations for Fitting Smartphone Ap-
	plications to Persons With Parkinson's

# **Projects**

### Ongoing

Clockwork (EU AAL-JP) – This project is developing technologies to support the self-care of shift workers. Since April 2017, I am the PI at AICOS, in charge of supervising the user research, design, and evaluation of the smartphone app and the smart badge. I also coordinate the project consortium. http://clockworkproject.eu/

Physio@Home (PT2020) – This project is developing a solution for physical rehabilitation, at home and at clinic, using wearable sensors and serious games. Since June 2017, I am the PI at AICOS, in charge of supervising the design and evaluation of the serious games.
 MASPARK (La Marató de TV3) – This project is developing a system that can detect and address freezing of gait in patients with Parkinson's. Since April 2017, I am the PI at AICOS, in charge of supervising the design and evaluation of the system.

2.

## SELECTION OF PREVIOUS PROJECTS

<sup>2011-2015</sup> REMPARK (EU ICT-FP7) – This project developed a wearable system to monitor symptoms of people with Parkinson's, intervene in the gait, and collect data to improve the therapy. I participated in the first year of the project and was involved in user research and early design phases of the smartphone apps for patients. http://www.rempark.eu/

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

Mover (Internal) – This project created an Android app that explored the accelerometer to capture activity and thus promote movement. I participated in the design and evaluation of the app. Mover is today being sold as part of the GOLIVEPHONE mentioned above. http://mover.projects.fraunhofer.pt/

## Service

### PROGRAM COMMITTEE MEMBER

2018 CHI 2019 2018 CSCW 2018

Mindcare 2016

PervasiveHealth 2016
PervasiveHealth 2015
PervasiveHealth 2015

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

## Workshop organizer

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

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

#### STUDENT VOLUNTEER

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

## Publications & talks

H-index: 10; citations: 305 (source Google Scholar as at 09/2018)

### 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, and 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, and 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, T. Andersen, and G. Fitzpatrick (2017) "The agency of patients and carers in medical care and self-care technologies for interacting with doctors", *Health Informatics Journal*, 1–20.
- F. Güldenpfennig, F. Nunes, and 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, and 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, and 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, and D. Elias (2012) "Leveraging electronic ticketing to provide personalised navigation in a public transport network", *Intelligent Transportation Systems Transactions and Magazine*, 13(1): 213–220.

#### Full conference papers (peer-reviewed)

- F. Nunes, and 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
- 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, and R. Oliveira (2013) "mobileWAY A System to Reduce the Feeling of Temporary Lonesomeness of Persons with Dementia and to Foster Intercaregiver Collaboration", in *Proc. of HICSS* 2013, 2474–2483.
- P. A. Silva, F. Nunes, A. Vasconcelos, M. Kerwin, R. Moutinho, and 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", in Proc. of HCII 2013, 754-763.
- F. Nunes, M. Kerwin, and P. A. Silva (2012) "Design Recommendations for TV User Interfaces for Older Adults: Findings From the eCAALYX Project", in *Proc. of ASSETS 2012*, 41–48.
- M. Kerwin, F. Nunes, and P. A. Silva (2012) "Dance Don't Fall Preventing Falls and Promoting Exercise at Home", in *Proc. of pHealth* 2012, 254–259.
- A. Vasconcelos, P. A. Silva, J. Caseiro, F. Nunes, and L. F. Teixeira (2012) "Designing Tablet-based Games for Seniors: the Example of Cogniplay, a Cognitive Gaming Platform", in *Proc. of Fun & Games 2012*, 1–10.
- P. A. Silva, and F. Nunes (2010) "3 x 7 Usability Testing Guidelines for Older Adults", in *Proc. MEXIHC* 2010, 2: 1–8.
- F. Nunes, P. A. Silva, and F. Abrantes (2010) "Human-Computer Interaction and the Older Adult: an Example Using User Research and Personas", in *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", in *Proc. of PervasiveHealth 2018*.
- A. Pereira, F. Nunes (2018) "Physical Activity Intensity Monitoring of Hospital Workers using a Wearable Sensor", in *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", in *Proc. of PervasiveHealth 2018*.
- F. Aluvathingal, N. Verdezoto, and F. Nunes (2018) "Exploring Challenges and Opportunities to Support People with Food Allergies to Find Safe Places for Eating Out", in *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, and G. Fitzpatrick (2015) "Proxycare: Integrating informal care into formal settings", in *Proc. of PervasiveHealth* 2015, 141–144.
- T. Marques, F. Nunes, P. A. Silva, and R. Rodrigues (2011) "Tangible Interaction on Tabletops for Elderly People", in *Proc. ICEC 2011*, pp. 440--443.
- T. Sousa, P. Tenreiro, P. A. Silva, F. Nunes, and E. Rodrigues (2011) "Cross-platform social web application for older adults with html 5", in *Proc. ICEC 2011*, pp. 375--378.

## Position papers (juried)

- 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", in *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", in *Proc. of Ubicomp Adjunct 2013*.
- F. Nunes and, P. A. Silva (2011) "The Smartphone A Mobile Companion for Older Adults", in *Proc. of Promoting and Supporting Healthy Living by Design Workshop at INTERACT 2011*, 41–43.
- P. M. Teixeira, P. A. Silva, F. Nunes, and L. F. Teixeira (2011) "Mover Activity Monitor and Fall Detector for Android", in *Proc. of Mobile Wellness Workshop at MobileHCI 2011*.
- F. Nunes, and P. A. Silva (2010) "Fostering Wellness of Older Adults While Performing Usability Testing", in *Proc. of HCI4WELL Workshop at HCI2010*.
- A. Aguiar, F. Nunes, M. Silva, and D. Elias (2009) "Personal Navigator for a Public Transport System Using RFID Ticketing", in *Proc. of inMotionog Workshop at Pervasive 2009*.

#### **INVITED PRESENTATIONS**

- "Self-care technologies" at the course Qualitative methods and co-design of self-care technologies of University of Copenhagen, Denmark.
- "Self-care technologies" at the course Qualitative methods and co-design of self-care technologies of University of Copenhagen, Denmark.
- "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.
- "The Self-care of Parkinson's" at the Designing Self-care for Everyday Life Workshop at NordiCHI 2014 in Helsinki, Finland.
- "Design recommendations for TV user interfaces for older adults" at the Interactive Assistive Technologies for the Elderly Workshop in University of Aveiro, Portugal.
- 06/05/2011 "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)
Ana Correia de Barros, Fraunhofer Portugal AICOS (ana.barros@fraunhofer.pt)
Paula Alexandra Silva, University of Aveiro (palexa@gmail.com)
Nuno Correia, Universidade NOVA de Lisboa (nmc@fct.unl.pt)

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