

# 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

|           |   |
|-----------|---|
| 2020-2022 | Master course in Academic and Clinical Education, University of Porto   |
| 2012-2017 | PhD in Informatics (Human-Computer Interaction), TU Wien<br><i>Thesis: “The Everyday Life with Parkinson’s and Self-care Technologies”</i>    |
| 2005-2010 | Master in Informatics and Computing Engineering, University of Porto<br><i>Thesis: “Healthcare TV Based User Interfaces for Older Adults”</i> |

## 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 | Junior researcher, Fraunhofer Portugal AICOS, Porto                             |

## Grants, honours & awards

ACQUIRED PROJECT GRANTS (€ VALUES FOR MY INSTITUTION)

|      |   |
|------|---|
| 2022 | €174K - “Design and validation of ultra-personalised nutritional system to support the self-care of women with gestational diabetes” funded by FCT (PT) – <i>PI</i> .             |
| 2021 | €106K - “Adaptation, development, and deployment of a chatbot to improve health literacy and care of first-time parents” funded by Aga Khan Dev. Network & FCT (PT) – <i>PI</i> . |
| 2020 | €190K - “Mobile Patient-centred System to Improve Drug Trials and Care of Older-adults with Rheumatic Diseases” funded by H2020 AAL & FCT (PT) – <i>PI</i> .                      |
| 2019 | €117K - “Demonstration of EyeFundusScope with Non-Expert Ophthalmology users” funded by ANI (PT) – <i>Lead proposal writer and Co-PI</i> .  |
| *    | €96K - Industry contracted research e.g., Alcatel-Lucent, ALMASCIENCE, Doist.   |

## HONOURS AND AWARDS

|      |   |
|------|---|
| 2022 | Honorable mention for Campaignhas, Tech. Innovation prize Eng. Jaime Filipe         |
| 2016 | Two special recognitions for an 'Excellent Review' at CHI 2016                      |
| 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

|           |   |
|-----------|---|
| 2023-now  | Human-Computer Interaction Laboratory (PhD @U. Porto)   |
| 2023-now  | Digital Health and data (Lecturers of Copenhagen University College @U. of Copenhagen)<br>– <i>Invited lecture on self-care technologies</i>            |
| 2021-2022 | Media Laboratory (PhD @U. Porto)  |
| 2019-2023 | Learning from Users: User Research Methods for Technology Design (MSc/PhD @AICOS)   |
| 2019-2022 | Design Project Management and Methodology (Post-graduation @U. Porto)   |
| 2016-2018 | Qualitative methods and co-design of self-care technologies (MSc @U. of Copenhagen) –<br><i>Invited lecture on self-care and self-care technologies</i> |
| 2015      | HCI in Healthcare (MSc @TU Wien) – <i>Co-teaching and project supervision</i>   |
| 2014      | User Research Methods (MSc @TU Wien)– <i>Co-teaching and project supervision</i>  |

### SUPERVISED STUDENTS

|          |   |
|----------|---|
| 2023-now | Leonor Fonseca, PhD in Computational Media Design @U. Coimbra |
| 2023-now | Diana Liebetrau, MSc in IT @U. of Cape Town                   |
| 2023-now | Juliana Assis, MSc Multimedia Design @U. Coimbra              |
| 2023-now | Pedro Garruço, MSc Multimedia Design @U. Coimbra              |
| 2022     | Petra Grego, MSc Multimedia Design @U. Coimbra                |
| 2022     | 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              |

### SUPERVISED PHD INTERNSHIPS

|           |  |
|-----------|--|
| 2019-2021 | Cristina Mendes Santos, PhD Internet Interventions @Linköping University |
| 2018      | Martina Čaić, PhD Service Design @Maastricht University                  |

## Projects

### SELECTION OF ONGOING PROJECTS

|           |   |
|-----------|---|
| 2023-2025 | <i>NUTRIA</i> (FCT) – is conducting user research and co-designing a meal recommendation system for women with gestational diabetes. I am the project PI.     |
| 2022-2024 | <i>ParentCoach</i> (FCT) – is conducting co-design workshops and adapting a chatbot for first-time parents in Portugal and South Africa. I am the project PI. |

- 2021-2024 *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 passive smartphone sensing. I am the project PI. <https://cotidiana.eu/>
- 2021-2023 *HomeSenseALS* (FCT) – is creating a mobile app to track Amyotrophic Lateral Sclerosis in clinical research field trials. I am leading the user research activities.

## Service

### PROGRAM COMMITTEE MEMBER

CHI ('19, '20, '21), CSCW '18, GROUP '23, PervasiveHealth ('16, '15), Mindcare '16

### WORKSHOP ORGANIZER

- 2022 Revisiting Patient-Clinician Interaction in 2022: Challenges from the Field and Opportunities for Future Research at ECSCW '22 ([link](#))
- 2021 Realizing AI in Healthcare: Challenges Appearing in the Wild at CHI '21 ([link](#))
- 2020 Dis-entangling later life: ageing processes, innovative practices & critical reflections? at STS Italia '20
- 2019 Who Cares? Exploring the Concept of Care Networks for Designing Healthcare Technologies at ECSCW '19 ([link](#))
- 2014 Designing Self-care for Everyday Life at NordiCHI '14 ([link](#))

### REVIEWER

Health Informatics Journal, IwC, IJCCI, IJHCS, IxD&A, JAMIA, JCSCW, JMIR, TOCHI. CHI ('14-'23), CSCW ('15-'22), DIS '18, GROUP ('16, '23), 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: 15; citations: 1027 (source Google Scholar as of 09/2023)

### PROCEEDINGS AND SPECIAL ISSUES EDITED

- 2023 T. O. Andersen, F. Nunes, L. Wilcox, E. Coiera, Y. Rogers (2023) "Special Issue on Human-Centred AI in Healthcare: Challenges Appearing in the Wild", *ACM Transactions on Computer Human Interaction*, 30(2).
- 2016 P. A. Silva, F. Nunes, eds. (2016) "Special issue on fun and engaging computing technologies for health", *Entertainment Computing*, 15: 41–70.
- 2015 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).
- 2014 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

- 2023 E. Kuosmanen, E. Huusko, N. van Berkel, F. Nunes, J. Vega, J. Goncalves, M. Khamis, A. Esteves, D. Ferreira, S. Hosio (2023) “Exploring crowdsourced self-care techniques: A study on Parkinson’s disease”, *International Journal of Human-Computer Studies*, 177, 103062.
- 2023 S. Rêgo, M. Dutra-Medeiros, F. Nunes (2023) “The Challenges of Setting Up a Clinical Study with the New European Union Medical Device Regulation”, *Acta Médica Portuguesa*, 2023 Jul-Aug;36(7-8):455–457.
- 2022 C. Mendes-Santos, F. Nunes, E. Weiderpass, R. Santana, G. Andersson (2022) “Development and Evaluation of the Usefulness, Usability, and Feasibility of iNNOV Breast Cancer: Mixed Methods Study”, *JMIR Cancer* 8(1):e33550.
- 2022 C. Mendes-Santos, F. Nunes, E. Weiderpass, R. Santana, G. Andersson (2022) “Understanding Mental Health Professionals’ Perspectives and Practices Regarding the Implementation of Digital Mental Health: Qualitative Study”, *JMIR Formative Research* 6 (4), e32558.
- 2022 F. Miele, F. Nunes (2022) “Has COVID-19 Changed Everything? Exploring Turns in Technology Discourses and Practices Related to Ageing”, *TECNOSCIENZA* 12(2), 61-68.
- 2022 S. Rêgo, M. Monteiro-Soares, M. Dutra-Medeiros, F. Soares, C. C. Dias, F. Nunes (2022) “Implementation and Evaluation of a Mobile Retinal Image Acquisition System for Screening Diabetic Retinopathy: Study Protocol”, *Diabetology* 3(1), 1-16.
- 2021 F. Nunes, P. Madureira, S. Rêgo, C. Braga, R. Moutinho, T. Oliveira, F. Soares (2021) “A Mobile Tele-Ophthalmology System for Planned and Opportunistic Screening of Diabetic Retinopathy in Primary Care”, *IEEE Access*, 9: 83740-83750.
- 2020 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 - JIRAT*, 7(1).
- 2017 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.
- 2016 F. Gldenpfennig, F. Nunes, G. Fitzpatrick (2016) “Making Space to Engage: An Open-ended Exploration of Technology Design with Older Adults”, *International Journal of Mobile Human Computer Interaction*, 8(2): 1–19.
- 2016 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.
- 2015 F. Nunes, N. Verdezoto, G. Fitzpatrick, M. Kyng, E. Grnvall, C. Storni (2015) “Self-care Technologies in HCI: Trends, Tensions, and Opportunities”, *ACM Transactions on Computer Human Interaction*, 22(6), article 33: 1–45.
- 2015 F. Nunes, G. Fitzpatrick (2015) “Self-care Technologies and Collaboration”, *International Journal of Human Computer Interaction*, 31(12): 869–881.
- 2012 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)

- 2021 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.
- 2019 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*.

- 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*.
- 2018 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.
- 2018 F. Nunes, J. Ribeiro, C. Braga, P. Lopes "Supporting the Self-care Practices of Shift Workers", *Proc. of MUM 2018*, 71–81.
- 2018 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.
- 2013 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 Inter-caregiver Collaboration", *Proc. of HICSS 2013*, 2474–2483.
- 2013 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.
- 2012 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.
- 2012 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.
- 2012 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.
- 2010 P. A. Silva, F. Nunes (2010) "3 x 7 Usability Testing Guidelines for Older Adults", *Proc. MEXIHC 2010*, 2: 1–8.
- 2010 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)

- 2023 C. Nave, F. Nunes, T. Romão, N. Correia (2023) "Exploring Emotions: Study of Five Design Workshops for Generating Ideas for Emotional Self-report Interfaces", *Proc. of INTERACT 2023*.
- 2020 C. Braga, S. Rego, F. Nunes (2020) "Clinicians' Perspectives on Using Mobile Eye Fundus Cameras to Screen Diabetic Retinopathy in Primary Care", *Proc. of ICHI 2020*.
- 2018 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.
- 2018 V. Guimarães, F. Nunes (2018) "A Wearable, Customizable, and Automated Auditory Cueing System to Stimulate Gait in Parkinson's", *Proc. of PervasiveHealth 2018*.
- 2018 A. Pereira, F. Nunes (2018) "Physical Activity Intensity Monitoring of Hospital Workers using a Wearable Sensor", *Proc. of PervasiveHealth 2018*.
- 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*.
- 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*.
- 2017 F. Güldenpfennig, Ö. Subasi, F. Nunes, M. Urbanek (2017) "UbiKit: Learning to Prototype for Tangible and Ubiquitous Computing", *31st British HCI Conference*.
- 2015 F. Güldenpfennig, F. Nunes, G. Fitzpatrick (2015) "Proxycare: Integrating informal care into formal settings", *Proc. of PervasiveHealth 2015*, 141–144.
- 2011 T. Marques, F. Nunes, P. A. Silva, R. Rodrigues (2011) "Tangible Interaction on Tabletops

for Elderly People”, *Proc. ICEC 2011*, pp. 440–443.

- 2011 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)

- 2023 T. O. Andersen, F. Nunes, L. Wilcox, E. Coiera, Y. Rogers (2023) “Introduction to the Special Issue on Human-Centred AI in Healthcare: Challenges Appearing in the Wild”, *ACM Transactions on Computer Human Interaction*, 30 (2): article 25.
- 2023 R. Araújo, P. Matias, P. Studenic, M. Valada, R. Graca, N. Nakhosht Lotfi, D. Belo, F. Nunes (2023) “POS0978 Exploring smartphone-based digital endpoints for rheumatic conditions”, *Annals of the Rheumatic Diseases*, 2023;82:805.
- 2023 F. Nunes, C. Correia (2023) “HomeSenseALS: A mobile app for people with Amyotrophic Lateral Sclerosis”, *Proc. of WISH at CHI 2023*.
- 2022 F. Nunes, N. Verdezoto, T. Andersen, S. Matthiesen, C. Chung, S. Y. Park, W. Seo, P. Studenic (2022) “Revisiting Patient-Clinician Interaction in 2022: Challenges from the Field and Opportunities for Future Research”, *Proc. of ECSCW 2022*.
- 2021 F. Nunes, J. Silva (2021) “Monitoring patients with rheumatic conditions remotely using data from smartphone”, *Book of abstracts 3rd Digital Rheumatology Day*.
- 2021 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*.
- 2020 C. Correia, E. Oliveira, F. Nunes (2020) “Using Illustration to Create More Inclusive User Interfaces for Older Adults”, *Interactions*, 27(2), 79–81.
- 2019 F. Nunes (2019) “From medicalized to mundane self-care technologies”, *Interactions*, 26(3), 67–69.
- 2019 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*.
- 2016 P. A. Silva, F. Nunes (2016) “Preface for the special issue on fun and engaging computing technologies for health”, *Entertainment Computing*, 15: 41–42.
- 2016 F. Nunes (2016) “The medication reminder as enforcing a medicalised perspective on daily life”, *Book of abstracts of the 6th STS Italia Conference*, 58.
- 2015 F. Nunes (2015) “Designing Self-care Technologies for Everyday Life: A Practice Approach”, *Proc. of CHI EA 2015*, 215–218.
- 2014 N. Verdezoto, F. Nunes, G. Fitzpatrick, E. Grönvall (2014) “Preface to the Focus Section”, *Interaction Design and Architecture(s) Journal - IxD&A*, 23.
- 2013 F. Nunes (2013) “Improving the Self-care of Parkinson’s Through Ubiquitous Computing”, *Proc. of Ubicomp Adjunct 2013*.
- 2011 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.
- 2011 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*.
- 2010 F. Nunes, P. A. Silva (2010) “Fostering Wellness of Older Adults While Performing Usability Testing”, *Proc. of HCI4WELL Workshop at HCI2010*.
- 2009 A. Aguiar, F. Nunes, M. Silva, D. Elias (2009) “Personal Navigator for a Public Transport System Using RFID Ticketing”, *Proc. of inMotion09 Workshop at Pervasive 2009*.

#### INVITED PRESENTATIONS

- 24/02/2022 “Accompanying participants during field trials, at a distance” at University of Copenhagen, Copenhagen, Denmark.

|            |  |
|------------|--|
| 23/02/2022 | “Self-care technologies – an overview of technologies and opportunities” at University of Copenhagen, Copenhagen, Denmark.                               |
| 10/12/2021 | “Accompanying participants during field trials, at a distance” at University of Lisbon, Lisbon, Portugal.  |
| 23/10/2021 | “Avoiding reactions outside the home” at University of Porto, Porto.   |
| 24/09/2021 | “Accompanying participants during field trials, at a distance” at University College of Dublin, Dublin, Ireland.   |
| 04/06/2021 | “Avoiding reactions outside the home” at University of Coimbra, Coimbra, Portugal.   |
| 01/06/2021 | “Self-care technologies” at Escola Superior de Saúde, Porto, Portugal.   |
| 09/09/2019 | “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.   |
| 14/09/2015 | “Understanding and Promoting the Creation of Patient Knowledge Online” at University of Trento & FBK, Italy.   |
| 17/08/2015 | “How can technology help people improve their self-care? Supporting engagement in their clinical consultations” at IT University of Copenhagen, Denmark. |
| 17/08/2015 | “Designing Self-care Technology for People with Parkinson’s: A Focus on Everyday Life” at University of Copenhagen, Denmark.                             |

## 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](mailto:geraldine.fitzpatrick@tuwien.ac.at))

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Paula Alexandra Silva, University of Coimbra ([palexa@gmail.com](mailto:palexa@gmail.com))

Nuno Correia, Universidade NOVA de Lisboa ([nmc@fct.unl.pt](mailto:nmc@fct.unl.pt))

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