

Curriculum Vitae

NICOLAS LEENAERTS, M.D., Ph.D.

Psychiatrist / Postdoctoral Researcher
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EDUCATION

2018-2025	Master after Master in Specialized Medicine Faculty of Medicine, KU Leuven, Belgium
2022-ongoing	Postgraduate Degree in Cognitive Behavioral Therapy Faculty of Psychology, KU Leuven, Belgium
2019-2023	Doctor of Philosophy in Biomedical Sciences Cognitive and Molecular Neurosciences, Faculty of Medicine, KU Leuven, Belgium
2014-2018	Master of Science in Medicine (Magna Cum Laude) Faculty of Medicine, KU Leuven, Belgium
2011-2014	Bachelor of Science in Medicine (Summa Cum Laude) Faculty of Medicine, KU Leuven, Belgium

ADDITIONAL TRAINING

2024	Reinforcement Learning Specialization University of Alberta (Online)
2022	Multivariate Statistics KU Leuven, Belgium
2022	Writing Course Nature Publishing (Online)
2021	Eastern European Machine Learning Summer School EEML (Online)
2021	4th Modelling Symposium: Introducing Deep Neural Networks NeuroWissenschaftliche Gesellschaft (Online)
2021	Longitudinal Data Analysis KU Leuven, Belgium
2021	Introduction to Clustering Analysis KU Leuven, Belgium

2021	Introduction to Social Network Analysis FLAMES
2020	Summer School on Affective Neuroscience University of Maastricht
2020	Data Transformations FLAMES
2020	Missing Data Methodology FLAMES
2020	Concepts of Multilevel, Longitudinal and Mixed Models KU Leuven, Belgium
2019	Statistical Parametric Mapping for fMRI and PET University College London
2019	Python for Everybody University of Michigan (Online)

ACADEMIC APPOINTMENTS

2025-Ongoing	Postdoctoral researcher (USA) Statistical reinforcement Learning Lab, Harvard University Responsible Faculty: Prof. Dr. Susan Murphy
2023-2025	Voluntary researcher (Belgium) Faculty of Medicine, KU Leuven Responsible Faculty: Prof. Dr. Elske Vrieze
2019-2023	PhD Candidate (Belgium) Faculty of Medicine, KU Leuven Responsible Faculty: Prof. Dr. Elske Vrieze, Dr. Ir. Jenny Ceccarini, Prof. Dr. Stefan Sunaert
2022	Visiting Student Researcher (USA) Idiographic Dynamics Lab, Department of Psychology, University of California, Berkeley Responsible Faculty: Prof. Dr. Aaron Fisher
2015-2016	Student Researcher (Belgium) Faculty of Medicine, KU Leuven Responsible Faculty: Pascal Delheyne

CLINICAL APPOINTMENTS

2024-2025	Psychiatry Resident (Belgium) UPC KU Leuven: Franciscus
2023-2024	Psychiatry Resident (Belgium) Zorggroep Sint-Kamillus: iFOR, FRB, FRC Strafinrichting Merksplas

2023-2023	Psychiatry Resident (Belgium) OPZ Geel: Opname-eenheid 1 Netwerk GGZ Kempen: CKB-team
2018-2023	Psychiatry Resident (Belgium) UPC KU Leuven: Angst & Depressie, ADHD/Atmosfeer, Perinatale psychiatrie, Eetstoornissen

OTHER APPOINTMENTS

Ad Hoc Reviewer	Appetite Clinical Psychological Science European Eating Disorders Review Frontiers in Psychology International Journal of Eating Disorder Journal of Eating Disorder Journal of Nuclear Medicine Psychology of Addictive Behaviors Psychological Medicine
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HONORS, AWARDS, AND SUPPORT

2025	UZ Leuven Future Fund UPC KU Leuven
2025	Postdoctoral Fellowship Belgian American Educational Foundation
2025	Prijs Prof. Dr. Bernard Sabbe Koninklijke Academie voor Geneeskunde
2025	EFPT Port Research Award European Federation of Psychiatric Trainees
2023	Grant for participating in a conference abroad Fonds Wetenschappelijk Onderzoek
2022	Grant for participating in a conference abroad Fonds Wetenschappelijk Onderzoek
2022	Grant for a long stay abroad Fonds Wetenschappelijk Onderzoek
2022	Omkadering Jonge Onderzoekers The Flemish Government
2021	Omkadering Jonge Onderzoekers The Flemish Government
2021	Poster Prize European College Of Neuropsychopharmacology
2016	Erasmus+ Grant European commission

PUBLICATIONS

1. **Leenaerts N**, Broeders TAA, Ceccarini J, Sunaert S, Schoonheim MM, Vinkers CH, Vrieze E. Dynamic reconfigurations of brain subnetworks in female patients with alcohol use disorder or bulimia nervosa: a resting-state functional magnetic resonance imaging study. *Eur Arch Psychiatry Clin Neurosci*. 2025 Jul 3. doi: 10.1007/s00406-025-02055-3. Epub ahead of print. PMID: 40608112.
2. Hagan K, **Leenaerts N**, Walsh BT, Ranzenhofer L. Applying machine learning to ecological momentary assessment data to identify predictors of loss-of-control eating and overeating severity in adolescents: A preliminary investigation. *Appetite*. 2025 Feb 6;207:107900. doi: 10.1016/j.appet.2025.107900. Epub ahead of print. PMID: 39922228.
3. **Leenaerts, N.**, Vaessen, T., Sunaert, S., Ceccarini, J., & Vrieze, E. (2024). Affective dynamics surrounding craving, non-heavy alcohol use and binge drinking in female patients with alcohol use disorder and controls: An experience sampling method study. *Addiction* (Abingdon, England), 10.1111/add.16682. Advance online publication. <https://doi.org/10.1111/add.16682>
4. Crotti, M., Ortibus, E., Ben Itzhak, N., Kleeren, L., Decraene, L., **Leenaerts, N.**, Feys, H., & Mailleux, L. (2024). The relation between visual functions, functional vision, and bimanual function in children with unilateral cerebral palsy. *Research in developmental disabilities*, 152, 104792. Advance online publication. <https://doi.org/10.1016/j.ridd.2024.104792>
5. **Leenaerts, N.**, Ceccarini, J., Sunaert, S., & Vrieze, E. (2024). The relation between stress-induced dopamine release in the ventromedial prefrontal cortex, fronto-striatal functional connectivity, and negative urgency: A multimodal investigation using [18F]Fallypride PET, MRI and experience sampling. *Behavioural brain research*, 115138. Advance online publication. <https://doi.org/10.1016/j.bbr.2024.115138>
6. **Leenaerts, N.**, Soyster, P., Ceccarini, J., Sunaert, S., Fisher, A., & Vrieze, E. (2024). Person-specific and pooled prediction models for binge eating, alcohol use and binge drinking in bulimia nervosa and alcohol use disorder. *Psychological medicine*, 1–16. Advance online publication. <https://doi.org/10.1017/S0033291724000862>
7. Vrieze, E., & **Leenaerts, N.** (2023). Neuronal activity and reward processing in relation to binge eating. *Current opinion in psychiatry*, 36(6), 443–448. <https://doi.org/10.1097/YCO.0000000000000895>
8. Schroyen, G., Sleurs, C., Ottenbourghs, T., **Leenaerts, N.**, Nevelsteen, I., Melis, M., Smeets, A., Deprez, S., & Sunaert, S. (2023). Changes in leukoencephalopathy and serum neurofilament after (neo)adjuvant chemotherapy for breast cancer. *Translational Oncology*, 37, 101769. <https://doi.org/10.1016/J.TRANON.2023.101769>
9. Melis, M., Schroyen, G., Blommaert, J., **Leenaerts, N.**, Smeets, A., Van Der Gucht, K., Sunaert, S., & Deprez, S. (2023). The Impact of Mindfulness on Functional Brain Connectivity and Peripheral Inflammation in Breast Cancer Survivors with Cognitive Complaints. *Cancers*, 15(14), 3632. <https://doi.org/10.3390/cancers15143632>

10. Melis, M., Schroyen, G., **Leenaerts, N.**, Smeets, A., Sunaert, S., Van der Gucht, K., Deprez, S. with Melis, M. (2023). The impact of mindfulness on cancer-related cognitive impairment in breast cancer survivors with cognitive complaints. *Cancer*, 129 (7), 1105-1116. doi: 10.1002/cncr.34640
11. **Leenaerts, N.**, Vaessen, T., Sunaert, S., Ceccarini, J., Vrieze, E. with Leenaerts, N. (2023). How Negative Affect Does and Does Not Lead to Binge Eating-The Importance of Craving and Negative Urgency in Bulimia Nervosa. *Journal Of Psychopathology And Clinical Science*. doi: 10.1037/abn0000830
12. Schroyen G, Schramm G, Van Weehaeghe D, **Leenaerts N**, Vande Castele T, Blommaert J, Koole M, Smeets A, Van Laere K, Sunaert S and Deprez S (2022) Cerebral glucose changes after chemotherapy and their relation to long-term cognitive complaints and fatigue. *Front. Oncol.* 12:1021615. doi:10.3389/fonc.2022.1021615
13. Radwan, A., Decraene, L., Dupont, P., **Leenaerts, N.**, Simon-Martinez, C., Klingels, K., Ortibus, E., Feys, H., Sunaert, S., Blommaert, J., Mailleux, L. with Blommaert, J. (joint last author), Mailleux, L. (joint last author), Blommaert, J. (2023). Exploring structural connectomes in children with unilateral cerebral palsy using graph theory. *Human Brain Mapping*. doi: 10.1002/hbm.26241
14. **Leenaerts, N.**, Jongen, D., Ceccarini, J., Van Oudenhove, L., & Vrieze, E. (2022). The neurobiological reward system and binge eating: A critical systematic review of neuroimaging studies. *International Journal Of Eating Disorders*, 38 pages. doi:10.1002/eat.23776
15. **Leenaerts, N.**, Ceccarini, J., Sunaert, S., & Vrieze, E. (2022). The impact of COVID-19-related smell and taste disorders on a patient with bulimia nervosa: a case report. *Neurocase*, 28(1), 72-76. doi:10.1080/13554794.2021.2024859
16. Demyttenaere, K., **Leenaerts, N.**, Acsai, K., Sebe, B., Laszlovszky, I., Barabassy, A., . . . Correll, C. U. (2021). Disentangling the symptoms of schizophrenia: Network analysis in acute phase patients and in patients with predominant negative symptoms. *European Psychiatry*, 65(1), 10 pages. doi:10.1192/j.eurpsy.2021.2241
17. **Leenaerts, N.**, Vaessen, T., Ceccarini, J., & Vrieze, E. (2021). How COVID-19 lockdown measures could impact patients with bulimia nervosa: Exploratory results from an ongoing experience sampling method study. *Eating Behaviors*, 41, 1-6. doi:10.1016/j.eatbeh.2021.101505

PREPRINTS

1. **Leenaerts, N.**, Ceccarini, J., Weygandt, M., Sunaert, S., Vrieze, E. (2022). The effect of stress on delay discounting in bulimia nervosa and alcohol use disorder: a functional magnetic resonance imaging study.. *PsyArXiv*. doi: 10.31234/osf.io/cvqpk
2. Fisher, A. J., **Leenaerts, N.**, & Victor, S. E. (2023, September 16). A Logical Approach to Necessity and Sufficiency. <https://doi.org/10.31234/osf.io/jt7m4>

ABSTRACTS, PRESENTATIONS, AND POSTERS

1. **Leenaerts, N.**, Broeders, T., ceccarini, j., Sunaert, S., Schoonheim, M., Vinkers, C., & Vrieze, E. (2024). Dynamic reconfigurations of brain subnetworks in alcohol use disorder or bulimia nervosa: A resting-state functional magnetic resonance imaging study. In Eating Disorders Research Society. Sitges, Spain.
2. **Leenaerts, N.**, Vrieze, E., Ceccarini, J., & Sunaert, S. (2024). Spinning Out Of Control: How Stress and Negative Affect Lead to Binge Behavior in Bulimia Nervosa and Alcohol Use Disorder. Psychiatry Research Day. Leuven, Belgium.
3. **Leenaerts, N.**, Vaessen, T., Sunaert, S., Ceccarini, J., & Vrieze, E. (2023). Person-specific and pooled prediction models for binge eating, alcohol use and binge drinking in bulimia nervosa and alcohol use disorder. In Eating Disorders Research Society. Boston, United States of America.
4. **Leenaerts, N.**, Vaessen, T., Sunaert, S., Ceccarini, J., & Vrieze, E. (2022). HOW NEGATIVE AFFECT LEADS TO BINGE EATING: THE IMPORTANCE OF IMPULSIVITY AND CRAVING IN BULIMIA NERVOSA. In Eating Disorders Research Society. Philadelphia, United States of America.
5. **Leenaerts, N.**, Ceccarini, J., Sunaert, S., & Vrieze, E. (2021). Temporal dynamics of impulsivity and craving before and after a binge drinking episode: results from an ongoing experience sampling study. In ESBRA 2021. Timisoara, Romania.
6. **Leenaerts, N.**, Ceccarini, J., Sunaert, S., & Vrieze, E. (2021). Striatal cerebral blood flow changes in patients with recent-onset bulimia nervosa and alcohol use disorder. In ECNP 2021. Lisbon, Portugal.
7. **Leenaerts, N.**, Ceccarini, J., Sunaert, S., & Vrieze, E. (2021). Temporal dynamics of impulsivity and craving before and after a binge eating episode: results from an ongoing experience sampling study. In EDRS 2021. Online.
8. **Leenaerts, N.**, Vaessen, T., Ceccarini, J., & Vrieze, E. (2021). How COVID-19 lockdown measures could impact patients with bulimia nervosa: Exploratory results from an ongoing experience sampling method study. In European Psychiatric Association. Online.
9. **Leenaerts, N.**, Vaessen, T., Ceccarini, J., & Vrieze, E. (2020). Beloningsgevoeligheid bij patiënten met bulimia nervosa: voorlopige resultaten van een experience sampling method studie. In Nationale Academie Eetstoornissen. Beesd.
10. **Leenaerts, N.**, Vaessen, T., Ceccarini, J., & Vrieze, E. (2020). How COVID-19 lockdown measures could impact patients with bulimia nervosa: exploratory results from an ongoing experience sampling method study.. In VAE Congres 2020 'Andere Perspectieven'. Online.
11. **Leenaerts, N.**, Vaessen, T., Ceccarini, J., & Vrieze, E. (2020). Linking stress to impulsivity in recent-onset bulimia nervosa and alcohol use disorder: preliminary results from an ecological momentary assessments study. In European College of Neuropsychopharmacology. Vienna.

12. **Leenaerts, N.**, Vrieze, E., Sunaert, S., Van Laere, K., & Ceccarini, J. (2020). Effects of lifetime alcohol consumption on surface morphometry in alcohol-dependent patients. In Organization for Human Brain Mapping. Montreal.

SOFTWARE

1. <https://github.com/nicolasleenaerts/NLML>: A GitHub repository with wrappers that allow researchers to build methodologically valid pooled and person-specific elastic net regression models to predict daily life behavior.
2. <https://github.com/nicolasleenaerts/NLMLapp>: An easy to use R Shiny app that allows researchers to analyze their data with the wrappers from the NLML GitHub repository.

PRESS

1. <https://nicolasleenaerts.github.io/press/>: An overview of all instances my work appeared in the press.

MENTORING

2022-2023	Ellen Boon (Role: Daily Supervisor) Master of Science in Biomedical Sciences, KU Leuven Thesis: The effect of stress on interoception in patients with Anorexia Nervosa.
2021-2022	Lotte Buyle (Role: Daily Supervisor) Master of Science in Biomedical Sciences, KU Leuven Thesis: Reward functioning in patients with Bulimia Nervosa or an Alcohol Use Disorder: Looking at daily life.
2020-2021	Maxime Voet (Role: Daily Supervisor) Master of Science in Biomedical Sciences, KU Leuven Thesis: Stress reactivity is related to higher dopamine release in the prefrontal and cingulate cortex.
2020-2021	Danny Majid (Role: Daily Supervisor) Master of Science in Medicine, Linköping university, Sweden Thesis: Stress and delay discounting in patients with bulimia nervosa: a functional magnetic resonance study

OTHER ACTIVITIES

2024-Ongoing	Vlaamse Vereniging Assistenten Psychiatrie Organization representing psychiatry residents in Flanders (Role: Member)
2024-Ongoing	Student Representative in UPC KU Leuven campus Kortenberg
2022	Psychiatry 2.0: Towards a new way of thinking Inter-university seminar (Role: Organizer)

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| 2021 | Machine Learning in Psychiatry for Dummies
Inter-university seminar (Role: Organizer) |
| 2021-Ongoing | Current Topics in Psychiatry
Journal Club (Role: Co-founder) |
| 2015 | Summer School of Psychiatry
Summer school (Role: Organizer) |

COMMUNITY SERVICE

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| 2023-ongoing | Te Gek
Charity aiming to break the stigma around mental health (Role: Volunteer) |
| 2021-2023 | Bijleshuis
Company offering tutoring services (Role: Tutor of statistics and medical writing) |
| 2014 - 2016 | Medica
Student organization (Role: Member, Chief Editor of the 'Akuut' journal, volunteer for the 'Warme Landen' charity) |
| 2003-Ongoing | Koninklijke Harmonie "De Heren van Zichem"
Harmonic Orchestra (Role: Saxophone player, co-organizer of local events) |