

# Fateme Nateghi Haredasht

## Curriculum Vitae

### Education

- 2019–2023 **PhD Candidate in Biomedical Sciences**  
◦ **Thematic program: Health & Technology**  
**Faculty of Medicine, KU Leuven, Belgium**
- 2014–2017 **M.Sc. Biomedical Engineering (Bioinformatics)**, *Department of Biomedical Engineering, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran*  
GPA: **19.15/20** (First Rank.)
- 2011–2012 **M.Sc. Communications Engineering (Left to study at AUT)**, *Department of Electrical Engineering, University of Guilan, Rasht, Iran*
- 2007–2011 **B.Sc. Electrical Engineering**, *Electrical Engineering Department, University of Guilan, Rasht, Iran*  
GPA: **16.41/20** (3rd Rank.)

### PhD Thesis

- Title ***Development of predictive models for critically ill patients with acute kidney injury***
- Supervisor Prof. dr. Celine Vens
- Co-supervisor Prof. dr. Hans Pottel
- Co-supervisor dr. Wouter De Corte
- Co-supervisor dr. Liesbeth Viaene

### Master Thesis

- Title ***Nonlinear dynamic causality inference in microarray short-term time series.***
- Supervisor Prof. Mohammad Hassan Moradi

### Research Interests

**Machine Learning**  
**Semi-supervised Learning**  
**AI for Healthcare**  
**Survival Analysis**  
**Biostatistics**

### Publications

*Public Health and Primary Care – KU Leuven, Kulak – Kortrijk, Belgium*

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- Journal Pooya Ashtari, Fateme Nateghi Haredasht, Hamid Beigy, **"Supervised fuzzy partitioning,"** Pattern Recognition, vol. 97, p. 107013, 2020.
- Journal Fateme Nateghi Haredasht, Maria Antonatous, Etienne Cavalier, Pierre Delanaye, Hans Pottel, Konstantinos Makris, **"The effect of different consensus definitions on diagnosing Acute Kidney Injury-events and their association with in-hospital mortality,"** Journal of Nephrology (2022), pp.1-9.
- Journal Fateme Nateghi Haredasht, Celine Vens, **"Predicting Survival Outcomes in the Presence of Unlabeled Data,"** Machine Learning 2022 (accepted).
- Journal Fateme Nateghi Haredasht, Liesbeth Viaene, Celine Vens, Nico Callewaert, Wouter De Corte, Hans Pottel, **"Comparison between cystatin C- and creatinine-based estimated glomerular filtration rate in the follow-up of patients recovering from a stage 3 AKI in ICU,"** Journal of Clinical Medicine: 2022 (under review).
- Journal Fateme Nateghi Haredasht, Laban Vanhoutte, Celine Vens, Hans Pottel, Liesbeth Viaene, Wouter De Corte, **"Validated prediction models for outcomes of acute kidney injury: systematic review,"** Journal of Critical Care: 2022 (under review).
- Journal Fateme Nateghi Haredasht, Kazeem Adesina Dauda, Celine Vens, **"Exploiting censored information in self-training for time-to-event prediction,"** Scientific Reports: 2022 (under review).
- Journal Fateme Nateghi Haredasht, Liesbeth Viaene, Wouter De Corte, Hans Pottel, Celine Vens, **"Predicting outcomes of acute kidney injury in critically ill patients using machine learning,"** (under preparation).
- Conference Fateme Nateghi Haredasht, Konstantinos Makris, Pierre Delanaye, Hans Pottel, **"Association of AKI-event defined by Different Definitions with In-hospital Mortality",** 2021.ERA-EDTA.
- Conference Fateme Nateghi Haredasht, Liesbeth Viaene, Wouter De Corte, Celine Vens, **"Exploiting unlabeled data to predict the development of CKD after AKI in critically ill patients",** 2021. Intelligence Artificielle & Néphrologie.
- Symposium Fateme Nateghi Haredasht, Celine Vens, **"Predicting Survival Outcomes in the Presence of Unlabeled Data",** 2019. Annual IEEE EMBS Benelux Chapter Symposium.
- Conference Fateme Nateghi Haredasht, Mohammad H. Moradi, **"Nonlinear Causality Inference in Microarray Time Series",** 2019. Published in BNAIC/BENELEARN.
- Conference Fateme Nateghi Haredasht, Farnaz Ghassemi, Mohammad H. Moradi, **"Causal inference of gene expression data using a clustering-based extension of kernel-Granger causality",** 2016. Published in the Iranian Conference of Biomedical Engineering (ICBME). (indexed by IEEE).

## Supervisory Experience

- 2019 **Time to event analysis for regularized high-dimensional survival analysis models,** *Daily supervisor of Mateusz Blommaert for Master of Science in Engineering,* KU Leuven.
- 2020 **Student researcher,** *Daily supervisor of Laban Vanhouttes,* Medical student, KU Leuven-Kulak.
- 2021 **Student researcher,** *Daily supervisor of Fauve Goethals,* Medical student, KU Leuven-Kulak.

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- 2022 **The quest for early markers for Alzheimer's disease using genomic and machine learning approaches**, *Daily supervisor of Adnan Kaan Ekiz for Masters of Bioinformatics*, KU Leuven.

## Honors and Awards

- 2016 **1<sup>st</sup> Rank**, among all graduate students in Bioinformatics and Bioelectric (about 40) at AmirKabir University of Technology
- 2011 **3<sup>rd</sup> Rank**, among all undergraduate students in Electrical Engineering (about 35) at University of Guilan, Rasht
- 2012 **Awarded** candidacy for entering M.Sc. program of University of Guilan without entrance exam because of exceptional students policy.
- 2007 **Awarded** a four-year entrance scholarship, Faculty of Engineering University of Guilan.

## Teaching Experience

- Spring 2020-2022 **Teacher assistant for practical sessions**, *Bioinformatics course*, Prof. Vens, KU Leuven-Kulak campus
- Fall 2019 **Teacher assistant for practical sessions**, *Bioinformatics course*, Prof. Vens, KU Leuven-Kulak campus
- Fall 2016 **Teacher assistant for R**, *Statistical analysis of medical data*, Dr. Ghassemi, AmirKabir University of Technology
- Spring 2016 **Graduate teaching assistant**, *Advanced digital signal processing*, Dr. Almasganj, AmirKabir University of Technology
- Fall 2012 **Graduate teaching assistant**, *Stochastic processes*, Dr. S. Harsini, University of Guilan

## Workshops and summer schools

- Winter 2019 **Milan Critical Care Datathon and ESICM's Big Datatalk**, *ESICM*, Milan, Italy
- Summer 2019 **Summer School FLAMES 2019**, *FLAMES*, Gent, Belgium
- Summer 2021 **4th International School on Deep Learning DeepLearn 2021 Summer**, *DeepLearn 2021 Summer*, Las Palmas de Gran Canaria, Spain
- Summer 2022 **Cambridge Ellis Machine Learning Summer School**, *Cambridge Ellis*, Cambridge, UK
- The Cambridge Ellis Machine Learning Summer program accepted me and provided me with a travel grant.

## Featured Graduate Courses

- Fall 2015 **Statistical Analysis of Medical Data**, 19.25/20, (Ranked 1st in class) AmirKabir University of Technology.
- Spring 2015 **Biomedical Signal Processing**, 18/20, (Ranked 1st in class) AmirKabir University of Technology.
- Spring 2015 **Advanced Digital Signal Processing**, 19/20, (Ranked 1st in class) AmirKabir University of Technology.

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- Fall 2014 **Bioinformatics**, 19.5/20, (Ranked 1st in class)  
AmirKabir University of Technology.
- Fall 2012 **Convex Optimization**, 17.96/20  
University of Guilan.
- Fall 2012 **Advanced Engineering Mathematics**, 18.42/20  
University of Guilan.
- Fall 2011 **Stochastic Processes**, 17.42/20  
University of Guilan.

## Technical Skills

Programming R, Python  
Processor L<sup>A</sup>T<sub>E</sub>X, Microsoft office

## Languages

Persian **Native**  
English **Fluent**  
Dutch **Beginner**  
Turkish **Beginner**

## Hobbies

Reading books, High intensity interval training (hiit), Cooking, Biking, Movies

## References

- Supervisor **Prof. dr. Celine Vens**, *Assiatant Professor*, Faculty of Medicine, KU Leuven, Kulak Kortrijk, Belgium
- Co-supervisor **Prof. dr. Hans Pottel**, *Professor*, Faculty of Medicine, KU Leuven, Kulak Kortrijk, Belgium
- Co-supervisor **dr. Wouter De Corte**, *Anesthesiologist, Intensivist*, Department of Intensive Care Medicine, AZ Groeninge Hospital Kortrijk, Belgium
- Co-supervisor **dr. Liesbeth Viaene**, *Nephrologist*, Nephrology center, AZ Groeninge Hospital Kortrijk, Belgium
- Prof. dr. Mohammad Hassan Moradi**, *Professor*, Department of Biomedical Engineering, AmirKabir University of Technology, Hafez, Tehran, Iran
- Prof. dr. Farnaz Ghassemi**, *Assistant Professor*, Department of Biomedical Engineering, AmirKabir University of Technology, Hafez, Tehran, Iran