

**EDUCATION** *PhD*, Signal Processing, Carlos III University of Madrid, Spain. Ongoing  
*Thesis Theme*: Filtering methods for high dimensional inference and optimization  
*Supervisor*: Joaquin Miguez.

*MSc*, Telecommunications Engineering, Istanbul Technical University, Turkey. 2012  
*Thesis Title*: A structured sparse decomposition method for audio signals

*BSc*, Telecommunications Engineering, Istanbul Technical University, Turkey. 2010  
*Thesis Title*: Anisotropic diffusion in image processing

- PAPERS**
1. “On the Relationship between Online Optimizers and Recursive Filters”, Ö. D. Akyıldız, V. Elvira, J. Fernandez-Bes, J. Miguez, NIPS Workshop on Optimizing the Optimizers, Barcelona, Spain, 2016.
  2. “Matrix Factorisation with Linear Filters”, Ö. D. Akyıldız, Preprint, [arXiv:1509.02088](https://arxiv.org/abs/1509.02088), 2015.
  3. “Online Matrix Factorization via Broyden Updates”, Ö. D. Akyıldız, Preprint, [arXiv:1506.04389](https://arxiv.org/abs/1506.04389), 2015.
  4. “Primal-Dual Algorithms for Audio Decomposition Using Mixed Norms”, İ. Bayram, Ö. D. Akyıldız, Journal of Signal, Image and Video Processing, 2014.
  5. “An Analysis Prior Based Decomposition Method for Audio Signals”, Ö. D. Akyıldız and İ. Bayram, EUSIPCO 2012.

**WORK EXPERIENCE** *Research Associate*, Carlos III University of Madrid, Spain. 2015 –  
with Signal Processing Group (GTS).  
*on stochastic filters; stochastic optimisation; Monte Carlo methods.*

*Visiting Research Scientist*, Fraunhofer HHI, Berlin, Germany. August 2017  
*on proximal forward-backward splitting methods; sparse dictionary learning.*

*Research Assistant*, Boğaziçi University, Istanbul, Turkey. 2012 – 2015  
under the supervision of A. Taylan Cemgil with Statistical Inference Group.  
*on Bayesian statistics; machine learning; probabilistic inference.*

*Quantitative Researcher*, algosis inc. 2014 – 2015  
*on financial time series analysis; portfolio optimization; algorithmic trading.*

*Research Assistant*, Istanbul Technical University, Turkey. 2010 – 2012  
*on convex optimisation; machine learning; signal processing.*

**VISITS & CONFERENCES** SMC 2017 Workshop, Uppsala, Sweden 29/8 - 01/9 2017.

NIPS Conference, Barcelona, Spain. 5/12 - 10/12 2016.

European Workshop on Reinforcement Learning, Barcelona. 3/12 - 4/12 2016.

IEEE Workshop on Statistical Signal Processing, Palma, Spain. 26/6 - 29/6 2016.

School of Mathematical Sciences, Queen Mary University of London, UK.

- 14/12 - 24/12 2015 — 1/2 - 5/2 2016 — 16/5 - 20/5 2016

Sequential Monte Carlo Workshop, Imperial College London, UK. 21/12 - 23/12 2015

## TEACHING EXPERIENCE

*Teaching Assistant* (Voluntarily), Boğaziçi University, Istanbul, Turkey.

Monte Carlo methods (graduate course)  $\times$  3 2013 – 2015

Instructor: A. Taylan Cemgil, Dept. of Computer Engineering.

Bayesian statistics and machine learning (graduate course)  $\times$  2 2013 – 2014

Instructor: A. Taylan Cemgil, Dept. of Computer Engineering.

## SKILLS

MATLAB, C, Python, LaTeX.

## GRADUATE SCHOOLS

*Dobbiaco Summer School on Probabilistic Numerics*

19/6 - 23/6 2017

Dobbiaco, Italy.

*Spring School and Workshop on Volatility Dynamics*

10/4 - 13/4 April 2017

Bernoulli Center, EPFL, Lausanne, Switzerland.

*Summer School on Uncertainty Quantification for Applied Problems* 4/7 - 8/7 2016

Basque Center for Applied Mathematics, Bilbao, Spain.

*Machine Learning Summer School*

13/7 - 24/7 2015

Max Planck Institute of Intelligent Systems, Tübingen, Germany.

(accepted with extremely competitive full financial support.)

*Foundations and Advances in Stochastic Filtering*

22/6 - 26/6 2015

Barcelona, Spain.

## HONORS

- Protel A.Ş. Graduate Fellowship 2010 – 2012
- Istanbul Metropolitan Municipality Undergraduate Fellowship 2005 – 2008
- Premiership Undergraduate Fellowship 2005 – 2010

## TALKS

*Talks that I gave.*

- A Filtering Approach to Stochastic Optimisation, at UC3M June 6, 2017
- Filtering in high-dimensional spaces, at UC3M November 14, 2016
- Matrix Factorisation with Linear Filters, at UC3M October 22, 2015
- Particle methods for parameter estimation, at Bogazici March 31, 2015
- An online EM algorithm and applications, at Bogazici November 26, 2013
- Stochastic approximations, at Bogazici March 26, 2013
- Learning in Linear Dynamical Systems, at Bogazici January 21, 2013

## OTHER

I maintain a research blog:

<http://www.almoststochastic.com>.