

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. *Nudging the Particle Filter*, Ö. D. Akyıldız, J. Miguez, [arXiv:1708.07801](#)
2. *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.
3. *Matrix Factorisation with Linear Filters*, Ö. D. Akyıldız, Preprint, [arXiv:1509.02088](#), 2015.
4. *Online Matrix Factorization via Broyden Updates*, Ö. D. Akyıldız, Preprint, [arXiv:1506.04389](#), 2015.
5. *Primal-Dual Algorithms for Audio Decomposition Using Mixed Norms*, İ. Bayram, Ö. D. Akyıldız, Journal of Signal, Image and Video Processing, 2014.
6. *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) × 3 2013 – 2015
Instructor: A. Taylan Cemgil, Dept. of Computer Engineering.

Bayesian statistics and machine learning (graduate course) × 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>.