

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

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. *Adaptive noisy importance sampling for stochastic optimization*, Ö. D. Akyıldız, I. P. Marino, J. Míguez, IEEE CAMSAP 2017.
 2. *Nudging the Particle Filter*, Ö. D. Akyıldız, J. Míguez, [arXiv:1708.07801](https://arxiv.org/abs/1708.07801).
 3. *On the Relationship between Online Optimizers and Recursive Filters*, Ö. D. Akyıldız, V. Elvira, J. Fernandez-Bes, J. Míguez, NIPS Workshop on Optimizing the Optimizers, Barcelona, Spain, 2016.
 4. *Matrix Factorisation with Linear Filters*, Ö. D. Akyıldız, Preprint, [arXiv:1509.02088](https://arxiv.org/abs/1509.02088), 2015.
 5. *Online Matrix Factorization via Broyden Updates*, Ö. D. Akyıldız, Preprint, [arXiv:1506.04389](https://arxiv.org/abs/1506.04389), 2015.
 6. *Primal-Dual Algorithms for Audio Decomposition Using Mixed Norms*, İ. Bayram, Ö. D. Akyıldız, Journal of Signal, Image and Video Processing, 2014.
 7. *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 August – 1 September 2017

NIPS Conference, Barcelona, Spain. 5-10 December 2016

	European Workshop on Reinforcement Learning, Barcelona.	3-4 December 2016
	IEEE Workshop on Statistical Signal Processing, Palma, Spain.	26-29 June 2016
	School of Mathematical Sciences, Queen Mary University of London, UK. • 14-24 Dec. 2015 — 1-5 Feb. 2016 — 16-20 May 2016	
	Sequential Monte Carlo Workshop, Imperial College London, UK.	21-23 Dec. 2015
TEACHING EXPERIENCE	<i>Teaching Assistant</i> (Voluntarily), Boğaziçi University, Istanbul, Turkey. Monte Carlo methods (graduate course) \times 3 Instructor: A. Taylan Cemgil, Dept. of Computer Engineering.	2013 – 2015
	Bayesian statistics and machine learning (graduate course) \times 2 Instructor: A. Taylan Cemgil, Dept. of Computer Engineering.	2013 – 2014
SKILLS	MATLAB, C, Python, LaTeX.	
GRADUATE SCHOOLS	<i>Dobbiaco Summer School on Probabilistic Numerics</i> Dobbiaco, Italy.	19-23 June 2017
	<i>Spring School and Workshop on Volatility Dynamics</i> Bernoulli Center, EPFL, Lausanne, Switzerland.	10-13 March 2017
	<i>Summer School on Uncertainty Quantification for Applied Problems</i> Basque Center for Applied Mathematics, Bilbao, Spain.	4-8 July 2016
	<i>Machine Learning Summer School</i> Max Planck Institute of Intelligent Systems, Tübingen, Germany. (accepted with extremely competitive full financial support.)	13-24 July 2015
	<i>Foundations and Advances in Stochastic Filtering</i> Barcelona, Spain.	22-26 June 2015
HONORS	• Protel A.Ş. Graduate Fellowship • Istanbul Metropolitan Municipality Undergraduate Fellowship • Premiership Undergraduate Fellowship	2010 – 2012 2005 – 2008 2005 – 2010
TALKS	• Adaptive noisy importance sampling, at UC3M • A filtering approach to stochastic optimisation, at UC3M • Filtering in high-dimensional spaces, at UC3M • Matrix Factorisation with Linear Filters, at UC3M • Particle methods for parameter estimation, at Bogazici • An online EM algorithm and applications, at Bogazici • Stochastic approximations, at Bogazici • Learning Linear Dynamical Systems, at Bogazici	June 6, 2017 June 6, 2017 November 14, 2016 October 22, 2015 March 31, 2015 November 26, 2013 March 26, 2013 January 21, 2013