Dr.-Ing. Metin VURAL

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CONTACT	Sachsenwaldstrasse 26, 12157 Berlin

PERSONAL INFORMATION

Date of Birth : 21.01.1988
Place of Birth : Erzurum/TURKEY
Website : web.itu.edu.tr/vuralmeti
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EDUCATION

Berlin Technical University, Berlin, Germany — 2015-2021
Ph.D. in Communication Engineering
- Thesis: Efficient Pareto Frontier Algorithms for Computing Structured Signal Representations, Supervised by Prof. Sławomir Stańczak

Istanbul Technical University (ITU), Istanbul, Turkey — 2012-2014
M.Sc. in Communication Engineering
- Thesis: Lognormal Mixture Shadowing,
Supervised by Assoc. Prof. Güneş Karabulut Kurt

Istanbul Technical University (ITU), Istanbul, Turkey — 2008-2012
B.Sc. in Electronics Engineering
- Thesis: Analysis of ZigBee in Smart Grid Applications
Supervised by Assoc. Prof. Güneş Karabulut Kurt

Braunschweig Technical University, Braunschweig, Germany — 2010-2010
B.Sc. in Electronics Engineering
- Erasmus Exchange Program

Istanbul Technical University (ITU), Istanbul, Turkey — 2006-2008
B.Sc. in Electical Engineering

İbrahim Hakkı Science High School, Erzurum, Turkey — 2005-2006

Nevzat Ayaz Science High School, Erzincan, Turkey — 2002-2005

RESEARCH INTERESTS

Mobile and Personal Communication, Statistical Signal Processing, Representation Theory, Compressed Sensing, Learning-Based Solutions for Inverse Problems in Communication, Signal Processing, and Imaging

PUBLICATIONS

[**Journal**] M. Vural, C. Yuan, N. Kleppmann, P. Jung and S. Stańczak, "Illinois-Type Methods for Noisy Euclidean Distance Realization," in IEEE Signal Processing Letters, vol. 29, pp. 2687-2691, 2022, doi: 10.1109/LSP.2022.3230371.

[**Journal**] M. Vural, A. Y. Aravkin and S. Stańczak, "ℓ_1-Norm Minimization With Regula Falsi Type Root Finding Methods," in IEEE Signal Processing Letters, vol. 28, pp. 2132-2136, 2021, doi: 10.1109/LSP.2021.3120327.

[**Conference**] M. Vural, C. Yuan, N. Kleppmann, P. Jung, "Robust Distance Matrix Completion for Localization using Frank-Wolfe Iterations," Asilomar Conference on Signals, Systems, and Computers (Asilomar), 2021

[**Conference**] M. Vural, C. Yuan, N. Kleppmann, P. Jung, "A Semidefinite Programming Approach for Obstacle Prediction and Localization," 25th International ITG Workshop on Smart Antennas (WSA), 2021 (invited paper)

[**Conference**] M. Vural, P. Jung and S. Stańczak, "Effect of anti-sparse prior on PAPR performance analysis," 2017 25th Signal Processing and Communications Applications Conference (SIU), 2017, pp. 1-4, doi: 10.1109/SIU.2017.7960517.

[**Conference**] M. Vural, P. Jung and S. Stańczak, "A new outlier detection method based on anti-sparse representations," 2017 25th Signal Processing and Communications Applications Conference (SIU), 2017, pp. 1-4, doi: 10.1109/SIU.2017.7960516.

[**Conference**] M. Vural, P. Jung and S. Stanczak, "On Some Physical Layer Design Aspects for Machine Type Communication," WSA 2016; 20th International ITG Workshop on Smart Antennas, 2016, pp. 1-8.

[**Conference**] Metin Vural, Güneş Karabulut Kurt, Christian Schneider, "The Effect of Shadow Fading Distributions on Outage Probability and Coverage Area," *IEEE Vehicular Technology Conference (VTC 2015-Spring),* Glasgow, Scotland 2015.

[**Journal**] Saliha Büyükçorak, **Metin Vural**, Güneş Karabulut Kurt, "Lognormal Mixture Shadowing," *IEEE Transactions on Vehicular Technology*, vol.64, no.10, pp.4386-4398, Oct. 2015.

[**Conference**] Metin Vural, Pamir Erdem, and Onur Ağın, "Regression Clustering With Lower Error via EM Algorithm," *IEEE Conference on Signal Processing, Communications, and their Applications (SIU 2014)*, Trabzon, April 2014.

[**Conference**] Metin Vural, and Güneş Karabulut Kurt, "Effect of cooperative communications on power consumption in smart grid," *IEEE Conference on Signal Processing, Communications, and their Applications (SIU 2013)*, Cyprus, April 2013.

[**Conference**] Zeynep Özdemir, **Metin Vural**, Özge Cepheli, and İbrahim Hökelek, "Performance Analysis of Wireless Sensor Networks by Using NS-2," *2013 European Conference of Technology and Society (EuroTecS-2013)*, Sarajevo, Bosnia, June 2013.

[**Conference**] N. Uçar, G. Karabulut, B. Yağcı, B. Görgün, O. Ceylan, **M. Vural**, B. Badur, B .Başkan, S.Cakın, C. Bozkurt, E. G. Akay, "Monitoring The Vital Signals: Smart Garment For Temperature Sensing Sensor Networks," *5th International Technical Textiles Congress*, İzmir, November 2012.

PUBLICATIONS (ABOUT TO BE SUBMITTED)	[**Journal**] M. Vural, P. Jung and S. Stańczak, "ℓ_p-norm Minimization with Simple Iterations," to be submitted to *IEEE Transactions on Signal Processing*
	[**Journal**] M. Vural et al. "Interference Management for mmWave Cell-less Networks," to be submitted to *IEEE Signal Processing Letters*

AWARDS AND ACHIEVEMENTS

BIDEB Graduate Priority Subject Areas Scholarship from TUBITAK
- For studying about priority subject areas and having inventive thesis subject, includes monthly stipend for 12 months.

Score 95.64/100 in Quantitative part at Academic Personal and Graduate Study Entrance Exam (ALES)   Nov. 20011
- Ranked 788th among 207.564 test takers (top 0.38%)

INTERN EXPERIENCE

TUBITAK-The Scientific and Technological Research Council of Turkey,
Gebze, Kocaeli   August-September 2010
- Designing, controlling and testing power conditioning units (DC-DC and DC-AC converters) of the fuel cells.

WCRL-ITU Wireless Communication Research Laboratory,
Istanbul Technical University, Istanbul   July 2011
- Designing and simulating of ZigBee by using MATLAB/Simulink

Group Arge Energy ve Control Sistems Company,
Istanbul   June-July 2012
- Creating ZigBee models for Smart meter applications and performance analysing

WORK EXPERIENCE

Fraunhofer Heinrich Hertz Institute HHI, Berlin, Germany   December 2021-Present
PostDoc Research Associate

Technical University of Berlin, Berlin, Germany   April 2019-October 2021
Research Assistant

Fraunhofer Heinrich Hertz Institute HHI, Berlin, Germany   2015-January 2022
Visiting Researcher

Yapı Kredi Bank (YKB), Gebze, Kocaeli   August 2013-February 2014
Part Time Engineer at R&D Department

- Team member of an R&D project funded by TUBITAK on forecasting and data analysing

RELATED
COURSEWORK

Graduate
- Statistical Signal Processing
- Telecommunication Network Planning and Management
- Satellite Communication Systems
- Detection & Estimation Theory
- Information Theory
- Mobile and Personal Communications
- Image Processing
- Probability Theory and Stochastic Processes

Undergraduate
- Signals and Systems
- Probability & Statistics
- Telecommunication Engineering Basics
- Theory of Complex Functions
- Linear Algebra and Applications
- Calculus
- Communication Electronic Circuits
- Digital Communications
- Data Communications

TECHNICAL
SKILLS

Programming
- Java (Beginner), C, C# (Beginner), Assembly (Beginner)

Development Environments
- MATLAB, Simulink, Python, Ms Visio, Ms Office, Latex, QlikView

EDA (Electronic Design Automation) Tools
- Pspice, Proteus, Xilinx

LANGUAGES

Turkish (Native), English (Advanced), German (Intermediate)

REFERENCES

Available upon request.

TRANSCRIPTS

Available upon request.

GOOGLE SCHOLAR https://scholar.google.de/citations?user=BV-Cv5EAAAAJ&hl=en

RESEARCHGATE https://www.researchgate.net/profile/Metin-Vural

LINKEDIN https://www.linkedin.com/in/metin-vural-10876439