

Tülin (Varol) Mete, Ph.D.

EXPERIMENTAL PARTICLE PHYSICIST · DATA SCIENTIST

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Skills and Work Experience

- **Data Analysis:** Conducted big data analyses as a member of one of the largest global scientific collaborations
 - Worked as a data scientist and physicist at the ATLAS experiment at CERN (since 2010)
 - Processed and analysed petabyte-scale data to infer meaningful insights for new physics searches
 - Presented results of data analyses effectively through visual displays of quantitative information on a regular basis
- **Programming:** Built and maintained statistics-based tools and software that are needed to analyse data
 - Expertise in C++ (7 years), Python (4 years), and \LaTeX (6 years), working knowledge in Bash scripting (3 years) and R (1 year)
 - Experience with Pandas, Numpy, Scikit-learn, Keras, NLTK, SQL
 - Familiarity with machine learning algorithms; boosted decision trees, neural networks
 - Designed, implemented, and maintained large-scale software projects using revision control software (svn, git)
 - Extensively utilised cloud computing platforms within CERN's world-wide distributed framework
 - Modelled new physics processes with Monte Carlo simulations
- **Statistical Analysis:** Implemented statistical models for scientific data analysis
 - Developed a deep understanding of statistics including hypothesis testing, regressions, classical and Bayesian inference
 - Performed statistical calculations for likelihood, chi-squared test, 95% confidence level limit, significance and p-value
- **Leadership:** Took leadership roles in various physics analyses as well as in detector operations
 - Served as the coordinator of the ATLAS detector's Liquid Argon calorimeter operation team
 - Led a team of experts (5-15 people) during active proton-proton collision data-taking
 - Continuously took time-critical decisions in a high stress environment
 - Organised and chaired regular meetings as well as giving reports to the collaboration through numerous talks/reports
 - Worked voluntarily as a manager of the national scientist group at CERN to organize events and outreach programs
- **Communication:** Developed excellent verbal and written skills in English
 - Gave talks and seminars at a number of prestigious international conferences
 - Interacted and worked with cross-functional teams with a wide variety of people on a daily basis
 - Worked as an editor for several reports, conference proposals and scientific papers
 - Developed a strong ability to convey complex insights to non-technical audiences
- **Teaching:** Mentored students to take on more responsibilities and gain independence in their scientific research
 - Served as a teaching assistant for undergraduate physics laboratory courses and as a grader for graduate courses
 - Directly supervised a Ph.D. student and guided a number of other students at different levels on various subjects
- **Languages:** Turkish (Native), English (Full Professional Proficiency), French (Intermediate Proficiency)

Positions Held

Southern Methodist University
European Organization for Nuclear Research (CERN)

POSTDOCTORAL RESEARCH SCHOLAR

Dallas, TX, USA
Geneva, Switzerland

Nov. 2014 - June 2018

University of Massachusetts, Amherst
European Organization for Nuclear Research (CERN)

RESEARCH ASSISTANT

Amherst, MA, USA
Geneva, Switzerland

Apr. 2011 - Nov. 2014

University of Massachusetts, Amherst

TEACHING ASSISTANT

Amherst, MA, USA

Aug. 2008 - Apr. 2011

Education

University of Massachusetts, Amherst

PH.D. IN HIGH ENERGY PHYSICS

Amherst, MA, USA

Aug. 2008 - Nov. 2014

Boğaziçi University

B.S. IN PHYSICS

Istanbul, Turkey

Sep. 2003 - Jun. 2008