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Introduction

I am a Doctor of physics with 5 years experience in experimental particle physics, with focus on the following areas: particle detectors(commissioning, installation, hardware maintenance, data acquisition, performance tests and analysis), physics analysis, acquisition/monitoring/control systems and vacuum systems. During my experience at CERN, I have succesfully finished all my projects/task and developed efficient solutions for problems and tasks that were encountered. I highly value collaborative spirit. I am skilled in working in collaborative environment efficiently and possess organizational and communicational skills that large scale projects/experiments demand.

Professional Experience

Feb, 2014 - ... , *CERN - Beam Line for Schools*, Project Associate
Currently working at BL4S competition with following responsibilities:
- Detector Responsible: Main responsible of the detectors that will be used in the beam line, such as Delay Wire Chambers, Lead Glass Calorimeters, Scintillators, Cherenkov Counters. The responsibility consists of performance tests, calibration, installation and analysis of detectors.
- DAQ: Implemented a modular acquisition and monitoring software using NIM and VME systems on hardware, and ATLAS TDAQ Framework on the software side.
- Physics Analysis: Developed a C++ based analysis software using modern programming techniques.
- Optimization of the experiment: Did the feasibility study of winning experiment and suggested improvements to the setup for the best result.
- Organization: Organized meetings with experts, handled the gas installation, radioactive source loans and mechanical/electrical work.

2009 - 2014 , *CERN - CERN Axion Solar Telescope*, Doctoral Researcher
As part of my doctoral studies, I worked in the CAST experiment, spending most of my time in CERN. Responsibilities consisted of:
- Micromegas detectors: Took responsibility of 2 micromegas detectors for installation and maintenance, data analysis, data acquisition system, upgrades and vacuum system.
- CAST Slow Control System: Been the main responsible of the Labview based acquisition system for hardware maintenance, installation of new sensors and software upgrades.
- CFD Simulations: Run CFD simulations together with CERN EN-CV group, analysed and interpreted the results.
- Physics Analysis: Developed new methods for interpreting CAST data using results of the CFD simulations.
- Magnet movement system: Organized and analysed Grid/Survey measurements which assure the CAST magnets solar tracking accuracy, developed new analysis methods, assisted the Solar Filming.

- Shift/Run Coordination: Did the shift coordination during 2012, and run coordination during several periods of data taking as the on-call responsible of the experiment.
- Contact person: Trained official CERN guides at CAST, maintained the visitor area, updated CAST posters, maintained the CAST official website.

2009 - 2012, *Bogazici University,* Teaching Assistant, Part-time
Taught laboratory courses on introductory physics and electronics.

2003 - 2005 , *Koc University,* Laboratory Research Assistant
Assisted laboratory experiments in the electronics laboratory.

2003 , *Koc University,* Laboratory Assistant
Assisted laboratory courses on introductory physics.

Education and Qualifications

2009 - 2013 , *PhD. in Physics, Bogazici University & CERN Axion Solar Telescope*
Thesis Title: Search for Axions with Micromegas Detectors in the CERN CAST Experiment
Supervisor: Prof. Metin Arık

2005 - 2008, *M.S. in Physics, Bogazici University*
Thesis Title: Unitary Matrix Hopf Algebras and Theta-Deformed Fermion Algebra
Supervisor: Prof. Metin Arık

2000 - 2005 , *B.S. in Physics, Koc University* Graduated as top ranking student.

Technical Skills

Programming : *C++, Python, ROOT, php, Html, LaTeX, Bash*

Data Acquisition : *NIM, VME, National Instruments hardware, Labview, ATLAS TDAQ Framework*

Vacumm Systems : *General vacuum knowledge, turbo Pumps, membrane pumps*

Operating Systems: *Linux, Windows, Android*

Office Software : *MS. Office, Libreoffice, Openoffice*

Trainings and Courses

2013 June, tCSC - Thematic CERN School of Computing on High Performance Computing, Split
2012 August, Euroscipy - European Conference for Scientists Using Python - Advanced Tutorial, Brussels
2011 January , ISTAPP - International School of Theory and Analysis in Particle Physics, Istanbul
2010 July , Euroscipy - European Conference for Scientists Using Python - Basic Tutorial, Paris
2010 January , ISOTDAQ - International School on Trigger and Data Acquisition, Ankara
2009 September, LabVIEW Basics I-II Course, CERN, Geneva

Selected Publications

Probing the eV-Mass Range for Solar Axions with CAST
The CAST Collaboration, IEEE Nucl.Sci.Symp.Conf.Rec, 342-346, 2010.

Search for Sub-eV Mass Solar Axions by the CERN Axion Solar Telescope with 3He Buffer Gas
The CAST Collaboration, Phys. Rev. Lett., 107, 261302, 2011.

The New Micromegas X-ray Detectors in CAST
Tomás, A., *et al.*, X-Ray Spectrometry, 40, 240-246, 2011.

New Micromegas for Axion Searches in CAST
Irastorza, I., *et al.*, J. Phys.: Conf. Ser., 309, 012001, 2011.

Performance of Micromegas Detectors in the CAST Experiment
Yildiz, C., *et al.*, J. Phys.: Conf. Ser., 347, 012029, 2012.

The Discrimination Capabilities of Micromegas Detectors at Low Energy
Iguaz, F.,*et al.*, Proceedings of TIPP2011, 37, 1079-1086, 2012.

CAST Microbulk Micromegas in the Canfranc Underground Laboratory
Tomas, A., *et al.*, Proceedings of TIPP2011, 37, 478-482, 2012.

Future Axion Searches with the International Axion Observatory (IAXO)
Irastorza, I., *et al.*, J. Phys.: Conf. Ser., 460, 012002, 2013.

Low-background X-ray Detection with Micromegas for Axion Research
Garcia, J., *et al.*, J. Phys.: Conf. Ser., 460, 012003, 2013.

CAST Solar Axion Search with ^{3}He buffer gas: Closing the hot dark matter gap
The CAST Collaboration, Phys.Rev.Lett., 112, 091302, 2014.

Talks/Posters

X-Ray Detectors of the CAST Experiment
13th Topical Seminar on Innovative Particle and Radiation Detectors, Siena, 2013

Performance of micromegas detectors in the CAST Experiment
2nd International Conference on Particle Physics, Istanbul, 2011

Language Skills

Turkish, *Native*

English, *Fluent*

French, *Intermediate*

Spanish, *Intermediate*

Awards and Honors

2012,	Berkol Doğan Award - Bogazici University Physics Department
2005-2007,	TUBITAK Domestic Scholarship for Masters
2005,	Top Ranking Student Award - Koc University Physics Department
2000-2005,	Vehbi Koc Scholarship - Koc University

Personal

Born on March 23, 1983.

Citizen of Republic of Turkey.

Other

2011 - ... *CERN,* Official CERN Guide

References

References are available upon request