Gökhan Halimoğlu

EDUCATION

2018 -	Istanbul University, CERN, <u>Ph.D Candidate</u> Major: High Energy and Plasma Physics Advisor: Prof. Dr. Harald Appelshaeuser, Prof. Dr. Sehban Kartal Thesis: Improving Particle Identification Capabilities of ALICE TPC Detector by using Machine Learning Techniques
2015 - 2018	Istanbul University, <u>M.Sc.</u> Major: High Energy and Plasma Physics Advisor: Prof. Dr. Sehban Kartal Thesis: Measurement of Lepton plus Jets at 100 TeV at Future Circular Collider (FCC)
2011 - 2015	Istanbul University, <u>Bachelor</u> Major: Physics

HONORS

2020-	European Organization for Nuclear Research (CERN) PhD Candide, ALICE Experiment, "ALICE-TPC Readout Electronics & Noise Analysis ", Geneva, Switzerland
2017-2019	Gran Sasso National Laboratory (LNGS-INFN) Invitation as a Researcher to Gran Sasso National Laboratory, Cuore Experiment, "Maintenance of Cuore Inner Vacuum Chamber and Cryostat at Clean Room", L'aqulia, Italy
2015-2016	Gran Sasso National Laboratory (LNGS-INFN) Invitation as a Student to Gran Sasso National Laboratory, Cuore Experiment, "Setting up Fast Coling System and Analyzing first run data", L'aqulia, Italy
2008	Eckert Schulen (Munich) Invitation as an Erasmus Student to Eckert Schulen, Computer Lab.-Assistant student, "Maintenance of Computer Lab." Munich, Germany

PUBLICATIONS

1- Ildiz, G., Bayari, S., Aksoy, U.M., Yorguner, N., Bulut, H., Yilmaz, S., **Halimoglu, G**., Kabuk, H.N., Yavuz, G,, and Fausto, R.

"Auxiliary Differential Diagnosis of Schizophrenia and Phases of Bipolar Disorder Based on the Blood Serum Raman Spectra"

2- Ildız, G.O., Kabak, H.N., **Halimoglu, G**., Kaplan, E.S., Fausto., R.
"A comparative Study of the Yellow Dent and Purple Flint Maize Kernel Components by Raman Spectroscopy and Chemometrics"

3- Gülce Öğrüç Ildız, Sevgi Bayari, Umut Mert Aksoy, Neşe Yorguner, Hüseyin Bulut, Sultan S Yılmaz, Hayrunnisa Nur Kabuk, Gizem Yavuz, **Halimoğlu, G**., Ahmet Karadağ, Ersin Kaygısız, Rui Fausto,
"Vibrational Spectroscopy as a Tool to Diagnose Psychiatric and Neurodevelopmental Disorders, Through Chemometrics Analysis of Spectral Data of Blood Plasma Samples"

4- Kozak, E.D., **Halimoglu, G**., Kavakci, O
"Using improv as an intervention for Obssesive Compulsive Disorder"

CERN, ALICE PUBLICATIONS

There are currently more than 40 with ALICE group which can be reached via Google Sch.

Google Scholar: Gokhan Halimoglu, Citations: **1431**, h-index:**21**, i10-index: **24**

MANUSCRIPTS

Halimoglu, G., Kartal, S.
"Improving Particle Identification Capabilities of ALICE TPC Detector by using Machine Learning Techniques" (This manuscript is currently in review)

Halimoglu, G., Kartal. S.,
"Measurement of Lepton plus Jets at 100 TeV at Future Circular Collider"

E-BOOK

Javascript handbook for beginners (2009) – Gökhan Halimoğlu

PROJECTS

"Discrimination of Attention Deficit and Hyperactivity Disorder in adults using Raman Spectroscopy"
        Situation: Scholarship and researcher
        Budget: 45.000 Turkish Lira. (2020-)

"The Effect of Atmospheric Pressure Cold Plasma on the Quality of Sea Bass (Dicentrarchus labrax, Linnaeus, 1758)"
        Situation: Scholarship (6 Months)
        Budget: 347.000 Turkish Lira.

"Finding biomarkers in order to classify and discriminate Schziophrenia and Bipolar disorders and their subgroups using chemometrics and vibrational spectroscopy"
        Situation: Scholarship and researcher. (2017-2020)
        Budget: 500.000 Turkish Lira.

"Making the RTI Dome for Examining Historical Objects", "Dome designed and build with electronic components and software"
        Situation: Researcher (1 year)

"TURCRON – Turkish Cosmic Ray Observation Network", "in project scope, a portable muon detector made with Geiger tubes and some electronic cards"
        Situation: Researcher (2015-2018)

CONFERENCE PRESENTATIONS
TALKS

Halimoglu, G. "TPC; Pedestal and Threshold Flactuations", 2022, TPC Weekly Meeting, CERN

Halimoglu, G. Wieschula, J. "TPC Noise Studies: Update", 2022, TPC D Processing Meeting, CERN, Geneva, Switzerland

Halimoglu, G. Wieschula, J. "TPC Noise Studies", 2021, TPC Weekly Meeting, CERN, Geneva, Switzerland

Halimoglu, G. (2019) "Research BSM at FCC: New Physics", 2019 Istanbul University, Turkey

Halimoglu, G., Ildız, G., (2019) "Attention Deficit / Hyperactivity Disorder in Adults: A Biomarker Study", Talk presented at Molecular Spectroscopy and Biological Applications, Istanbul / Turkey

Kartal, S., Ozdemir, K., **Halimoglu, G**., Yalcinkaya, B.O., & Sultansoy, S. , 2017. "Underline events and background studies in pp collisions at 100 TeV at FCC", Talk presented at Turkish International Physics Congress, Bodrum/Turkey

Pagliarone, C., Capelli, L., Uttaro. S., **Halimoglu. G.,** 2015 "Situation of Cuore Fast Cooling System", Talk presented at Cuore meeting, Gran Sasso National Laboratory, Italy

POSTERS

Halimoglu, G., Yilmaz, A., Kartal S., 2019 Study of W+jets cross-section at Future Circular Collider, FCC Workshop 2019 Antalya, Turkey

Halimoglu, G. Kartal, S., 2018 "Geiger Muller Kit Based Cosmic Muon Detector", Detector and Accelerator Workshop, Istanbul, Turkey

Halimoglu, G. 2018 "Observation Muons via Cloud Chamber", Istanbul University, Turkey.

EXPERIENCE

ACADEMIC

(2024 –)	Lecturer, Dynamic Physics Mimar Sinan GSÜ
(10/2022-)	Lecturer, Mathematics I-II, Machine Learning, Big Data Analysis Istanbul Kultur University
(2020-2022)	Laboratory Assistant, Modern Physics for Everyone, Istanbul Kultur University
(2018-2020)	Lecturer, Physics I-II, Istanbul Kultur University
Spring 2017	Teaching Arduino, Electronics and Robotics to the high school students.
Spring 2015-2018	Computing in Anthropology I – Istanbul University (Microsoft Office, Advanced Excel)
Fall 2015-2018	Computing in Anthropology II – Istanbul University (Statistics-SPSS)

BUSINESS

(2023-1/2023-9)	Clinical Development Assistant, Johnson & Johnson – Biosense Webster Inc., Turkey

COMPUTING

Programming	C++, Python3, Bash Script, HTML, JavaScript
MC Generators	Pythia 6 & 8, MadGraph, CalcHEP
Detector Sim.	Delphes, PGS, Geant4 (Beginner)
DB Programming	MySQL, MS Access
Electronics	Proteus, LabVIEW (Beginner), Arduino, VHDL for FPGA
Statistics	ROOT, SPSS, PCA, PLS-DA