



- 1. Adı Soyadı** : M. Fatih BAY  
**2. Doğum Tarihi** : 18.01.1979  
**3. Unvanı** : Prof. Dr.  
**4. Öğrenim Durumu** : Doktora  
**5. Çalıştığı Kurum** : Antalya Bilim Üniversitesi

#### Öğrenim Bilgisi

Derece	Üniversite	Alan	Yıl
Doktora	University of Bern (İsviçre)	FİZİK	2012
Y. Lisans	Orta Doğu Teknik Üniversitesi	FİZİK	2008
Lisans	Kocaeli Üniversitesi	FİZİK	2004

**Doçentlik Tarihi:** 2015 Eylül

**Profesörlük Tarihi:** 2021 Şubat

#### **Yüksek Lisans Tez Başlığı ve Tez Danışmanı :**

STUDY OF ELECTRON IDENTIFICATION IN THE OPERA DETECTOR

Tez Yöneticisi: Prof. Dr. Ali Murat Güler - ORTA DOĞU TEKNİK ÜNİVERSİTESİ

#### **Doktora Tezi Danışmanı :**

EXPERIMENTAL STUDY OF THE LOW-ENERGY NEUTRINO BEAM FOR THE T2K EXPERIMENT

Tez Yöneticisi: Prof. Dr. Antonio Ereditato – UNIVERSITY OF BERN

#### **5 .İdari Görevler**

- Bölüm Başkan V., Makine Mühendisliği Bölümü, Antalya Bilim Üniversitesi (2020 - 2021)
- Bölüm Başkan Yardımcısı, Makine Mühendisliği Bölümü, Antalya Bilim Üniversitesi (2021 - halen)
- Enstitü Kurul Üyesi (IB), DUNE Deneyi, Fermilab, ABD (2015 - Halen)
- Bütçe Kurul Üyesi (CRB), DUNE Deneyi, Fermilab, ABD (2015 - 2019)
- Enstitü Kurul Üyesi (IB), MicroBooNE Deneyi, Fermilab, ABD (2015 - 2019)

## 6. Akademik Unvanlar

Görev Unvanı	Görev Yeri	Yıl
Ders Asistanı	Orta Doğu Teknik Üniversitesi Kuzey Kıbrıs Kampüsü, Fizik Grubu, Kuzey Kıbrıs	2007 - 2008
Araştırma Görevlisi	the INFN Laboratori Nazionale del Gran Sasso (LNGS), İtalya	2007 - 2008
Araştırma Görevlisi, Doktora öğrencisi	University of Bern, Albert Einstein Center for Fundamental Physics, Laboratory for High Energy Physics, İsviçre	2008 - 2012
Post-doc	Swiss Federal Institute of Technology in Zurich (ETH Zurich), Particle Physics Institute, İsviçre	2013 - 2014
Post-doc (Asosiy Üye)	The European Organization for Nuclear Research (CERN), İsviçre	2013 - 2014
Ziyaretçi Araştırmacı	Orta Doğu Teknik Üniversitesi, Fizik Bölümü	2015 - 2016
Başuzman Araştırmacı	TÜBİTAK UZAY Teknolojileri Araştırma Enstitüsü	2015 - 2019
Yarı zamanlı Öğretim Üyesi (Doç. Dr.)	Orta Doğu Teknik Üniversitesi, Mühendislik Bilimleri Bölümü	2016 - 2017
Post-doc	University of Amsterdam ve National Institute for Subatomic Physics (Nikhef), Hollanda	2019 - 2020
Öğretim Üyesi (Doç. Dr.)	Antalya Bilim Üniversitesi, Makine Mühendisliği Bölümü	2020 - 2021
Öğretim Üyesi (Prof. Dr.)	Antalya Bilim Üniversitesi, Makine Mühendisliği Bölümü	2021 - halen

## 7. Yönetilen Yüksek Lisans ve Doktora Tezleri

### 7.1. Yüksek Lisans Tezleri

### 7.2. Doktora Tezleri

## 8. Yayınlar

### 8.1. Uluslararası hakemli dergilerde yayınlanan makaleler

\*Toplam Makale Sayısı: 63

Toplam Atıf sayısı: 7459

h-index: 37

\*Atıf bilgileri *Deneyisel Yüksek Enerji Fiziği ile ilgili bilimsel yayınların toplandığı inspire'dan alınmıştır.*  
(<https://inspirehep.net/authors/1077395?ui-citation-summary=true>) (15.12.2020)

1. B. Abi *et al.* [DUNE Collaboration], "First results on ProtoDUNE-SP liquid argon time projection chamber performance from a beam test at the CERN neutrino platform"  
**JINST 15 (2020) P12004, (Atıf sayısı: 11)**
2. B. Abi *et al.* [DUNE Collaboration], "Neutrino interaction classification with a convolutional neural network in the DUNE far detector"  
**Phys.Rev.D 102 (2020) 9, 092003, (Atıf sayısı: 6)**
3. B. Abi *et al.* [DUNE Collaboration], "Long-baseline neutrino oscillation physics potential of the DUNE experiment"  
**Eur.Phys.J.C 80 (2020) 10, 978, (Atıf sayısı: 8)**
4. Babak Abi *et al.* [DUNE Collaboration], "Volume I. Introduction to DUNE"  
**JINST 15 (2020) 08, T08008, (Atıf sayısı: 53)**
5. Babak Abi *et al.* [DUNE Collaboration], "Volume III. DUNE far detector technical coordination"  
**JINST 15 (2020) 08, T08009, (Atıf sayısı: 10)**
6. Babak Abi *et al.* [DUNE Collaboration], "Volume IV. The DUNE far detector single-phase technology"  
**JINST 15 (2020) 08, T08010 (Atıf sayısı: 24)**
7. C. Adams *et al.* [MicroBooNE Collaboration], "Reconstruction and Measurement of  $O(100)$  MeV Energy Electromagnetic Activity from  $\pi^0 \rightarrow \gamma\gamma$  Decays in the MicroBooNE LArTPC"  
**JINST 15 (2020) 02, P02007, (Atıf sayısı: 4)**
8. C. Adams *et al.* [MicroBooNE Collaboration], "A method to determine the electric field of liquid argon time projection chambers using a UV laser system and its application in MicroBooNE"  
**JINST 15 (2020) no.07, P07010, (Atıf sayısı: 12)**
9. C. Adams *et al.* [MicroBooNE Collaboration], "Calibration of the charge and energy loss per unit length of the MicroBooNE liquid argon time projection chamber using muons and protons"  
**JINST 15 (2020) no.03, P03022, (Atıf sayısı: 17)**
10. P. Abratenko *et al.* [MicroBooNE Collaboration], "First Measurement of Inclusive Muon Neutrino Charged Current Differential Cross Sections on Argon at  $E_\nu \sim 0.8$  GeV with the MicroBooNE Detector,"  
**Phys.Rev.Lett. 123 (2019) no.13, 131801, doi:110.1103/PhysRevLett.123.131801 (Atıf sayısı: 20)**
11. C.Adams *et al.* [MicroBooNE Collaboration], "Design and construction of the MicroBooNE Cosmic Ray Tagger system,"  
**JINST 14 (2019) no.04, P04004, doi:10.1088/1748-0221/14/04/P04004 (Atıf sayısı: 12)**
12. C.Adams *et al.* [MicroBooNE Collaboration], "Rejecting cosmic background for exclusive charged current quasi elastic neutrino interaction studies with Liquid Argon TPCs; a case study with the MicroBooNE detector,"  
**Eur.Phys.J. C79 (2019) no.8, 673, doi: 10.1140/epjc/s10052-019-7184-7 (Atıf sayısı: 6)**

13. C.Adams *et al.* [MicroBooNE Collaboration], “*First measurement of  $\nu\mu$  charged-current  $\pi^0$  production on argon with the MicroBooNE detector;*”  
**Phys.Rev. D99 (2019) no.9, 091102**, doi: 10.1103/PhysRevD.99.091102 (Atif sayısı: 11)
14. C.Adams *et al.* [MicroBooNE Collaboration], “*Deep neural network for pixel-level electromagnetic particle identification in the MicroBooNE liquid argon time projection chamber;*”  
**Phys.Rev. D99 (2019) no.9, 092001**,doi: 10.1103/PhysRevD.99.091102 (Atif sayısı: 18)
15. C.Adams *et al.* [MicroBooNE Collaboration], “*Comparison of  $\nu\mu$ -Ar multiplicity distributions observed by MicroBooNE to GENIE model predictions,*”  
**Eur.Phys.J. C79 (2019) no.3, 248**, doi:10.1140/epjc/s10052-019-6742-3 (Atif sayısı: 8)
16. C.Adams *et al.* [MicroBooNE Collaboration], “*Ionization electron signal processing in single phase LArTPCs. Part II. Data/simulation comparison and performance in MicroBooNE,*”  
**JINST 13 (2018) no.07, P07007**, doi:10.1088/1748-0221/13/07/P07007 (Atif sayısı: 24)
17. C.Adams *et al.* [MicroBooNE Collaboration], “*Ionization electron signal processing in single phase LArTPCs. Part I. Algorithm Description and quantitative evaluation with MicroBooNE simulation,*” **JINST 13 (2018) no.07, P07006**, doi:10.1088/1748-0221/13/07/P07006 (Atif sayısı: 29)
18. R. Acciarri *et al.* [MicroBooNE Collaboration], “*The Pandora multi-algorithm approach to automated pattern recognition of cosmic-ray muon and neutrino events in the MicroBooNE detector;*” **Eur.Phys.J. C78 (2018) no.1, 82**, doi:10.1140/epjc/s10052-017-5481-6 (Atif sayısı: 39)
19. R. Acciarri *et al.* [MicroBooNE Collaboration], “*Measurement of cosmic-ray reconstruction efficiencies in the MicroBooNE LArTPC using a small external cosmic-ray counter;*” **JINST 12 (2017) no.12, P12030**, doi:10.1088/1748-0221/12/12/P12030 (Atif sayısı: 14)
20. R. Acciarri *et al.* [MicroBooNE Collaboration], “*Noise Characterization and Filtering in the MicroBooNE Liquid Argon TPC;*” **JINST 12 (2017) no.08, P08003**, doi:10.1088/1748-0221/12/08/P08003 (Atif sayısı: 46)
21. R. Acciarri *et al.* [MicroBooNE Collaboration], “*Michel Electron Reconstruction Using Cosmic-Ray Data from the MicroBooNE LArTPC;*”  
**JINST 12 (2017) no.09, P09014**, doi:10.1088/1748-0221/12/09/P09014 (Atif sayısı: 36)
22. P. Abratenko *et al.* [MicroBooNE Collaboration], “*Determination of muon momentum in the MicroBooNE LArTPC using an improved model of multiple Coulomb scattering;*”  
**JINST 12 (2017) no.10, P10010**, doi:10.1088/1748-0221/12/10/P10010 (Atif sayısı: 15)
23. R. Acciarri *et al.* [MicroBooNE Collaboration], “*Design and Construction of the MicroBooNE Detector;*” **JINST 12 (2017) no.02, P02017**, doi:10.1088/1748-0221/12/02/P02017 (Atif sayısı: 132)
24. R. Acciarri *et al.* [MicroBooNE Collaboration], “*Convolutional Neural Networks Applied to Neutrino Events in a Liquid Argon Time Projection Chamber;*”  
**JINST 12 (2017) no.03, P03011**, doi:10.1088/1748-0221/12/03/P03011 (Atif sayısı: 48)
25. A.Aduszkiewicz *et al.* [NA61/SHINE Collaboration], “*Two-particle correlations in azimuthal angle and pseudorapidity in inelastic  $p + p$  interactions at the CERN Super Proton Synchrotron;*”  
**Eur.Phys.J. C77 (2017) no.2, 59**, doi:10.1140/epjc/s10052-017-4599-x (Atif sayısı: 8)
26. K.Abe *et al.* [T2K Collaboration], “*First measurement of the muon neutrino charged current single pion production cross section on water with the T2K near detector;*”  
**Phys.Rev. D95 (2017) no.1, 012010**, doi:10.1103/PhysRevD.95.012010 (Atif sayısı: 34)
27. K.Abe *et al.* [T2K Collaboration], “*Measurement of Coherent  $\pi(+)$  Production in Low Energy Neutrino-Carbon Scattering;*”  
**Phys. Rev. Lett. 117, no. 19, 192501 (2016)** doi:10.1103/PhysRevLett.117.192501 (Atif sayısı: 20)
28. N. Abgrall, *et al.* [NA61/SHINE Collaboration], “*Measurements of pion (+/-) differential yields from the surface of the T2K replica target for incoming 31 GeV/c protons with the NA61/SHINE*”

- spectrometer at the CERN SPS,*  
**Eur. Phys. J. C76, no. 11, 617 (2016)** doi:10.1140/epjc/s10052-016-4440-y (Atif sayısı: 25)
29. K. Abe *et al.* [T2K Collaboration], “*Measurement of Muon Antineutrino Oscillations with an Accelerator-Produced Off-Axis Beam,*”  
**Phys.Rev.Lett. 116 (2016) no.18, 181801** doi:10.1140/epjc/s10052-016-4440-y (Atif sayısı: 54)
30. A. Aduszkiewicz, *et al.* [NA61/SHINE Collaboration], “*Production of  $\Lambda$ -hyperons in inelastic  $p+p$  interactions at 158 GeV/c,*”  
**Eur. Phys. J. C76, no. 4, 198 (2016)**, doi:10.1140/epjc/s10052-016-4003-2 (Atif sayısı: 14)
31. N. Abgrall, *et al.* [NA61/SHINE Collaboration], “*Measurements of  $\pi$  (+-),  $K$  (+-),  $\Lambda$  and proton production in proton-carbon interactions at 31 GeV/c with the NA61/SHINE spectrometer at the CERN SPS,*”  
**Eur. Phys. J. C76, no. 2, 84 (2016)** doi:10.1140/epjc/s10052-016-3898-y (Atif sayısı: 75)
32. A. Aduszkiewicz *et al.* [NA61/SHINE Collaboration], “*Multiplicity and transverse momentum fluctuations in inelastic proton-proton interactions at the CERN Super Proton Synchrotron,*”  
**Eur. Phys. J. C76, no. 11, 635 (2016)** doi:10.1140/epjc/s10052-016-4450-9 (Atif sayısı: 49)
33. K. Abe *et al.* [T2K Collaboration], “*Measurement of the muon neutrino inclusive charged-current cross section in the energy range of 1–3 GeV with the T2K INGRID detector,*”  
**Phys. Rev. D93, no. 7, 072002 (2016)** doi:10.1103/PhysRevD.93.072002 (Atif sayısı: 20)
34. K. Abe *et al.* [T2K Collaboration], “*Measurement of the electron neutrino charged-current interaction rate on water with the T2K ND280  $\pi^0$  detector,*”  
**Phys. Rev. D91, 112010 (2015)** doi:10.1103/PhysRevD.91.112010 (Atif sayısı: 14)
35. K. Abe *et al.* [T2K Collaboration], “*Measurement of the  $\nu_\mu$  charged current quasielastic cross section on carbon with the T2K on-axis neutrino beam,*”  
**Phys. Rev. D91, no. 11, 112002 (2015)** doi:10.1103/PhysRevD.91.112002 (Atif sayısı: 46)
36. K. Abe *et al.* [T2K Collaboration], “*Upper bound on neutrino mass based on T2K neutrino timing measurements,*”  
**Phys. Rev. D93, no. 1, 012006 (2016)** doi:10.1103/PhysRevD.93.012006 (Atif sayısı: 6)
37. K. Abe *et al.* [Hyper-Kamiokande Proto- Collaboration], “*Physics potential of a long-baseline neutrino oscillation experiment using a J-PARC neutrino beam and Hyper-Kamiokande,*”  
**PTEP 2015, 053C02 (2015)** doi:10.1093/ptep/ptv061 (Atif sayısı: 240)
38. K. Abe *et al.* [T2K Collaboration], “*Measurements of neutrino oscillation in appearance and disappearance channels by the T2K experiment with  $6.6 \times 10^{20}$  protons on target,*”  
**Phys. Rev. D91, no. 7, 072010 (2015)** doi:10.1103/PhysRevD.91.072010 (Atif sayısı: 327)
39. K. Suzuki *et al.* [T2K Collaboration], “*Measurement of the muon beam direction and muon flux for the T2K neutrino experiment,*”  
**PTEP 2015, no. 5, 053C01 (2015)** doi:10.1093/ptep/ptv054 (Atif sayısı: 13)
40. K. Abe *et al.* [T2K Collaboration], “*Measurement of the  $\nu_\mu$  charged-current quasielastic cross section on carbon with the ND280 detector at T2K,*”  
**Phys. Rev. D92, no. 11, 112003 (2015)** doi:10.1103/PhysRevD.92.112003 (Atif sayısı: 43)
41. K. Abe *et al.* [T2K Collaboration], “*Search for short baseline  $\nu_e$  disappearance with the T2K near detector,*”  
**Phys. Rev. D91, 051102 (2015)** doi:10.1103/PhysRevD.91.051102 (Atif sayısı: 26)
42. K. Abe *et al.* [T2K Collaboration], “*Neutrino oscillation physics potential of the T2K experiment,*”  
**PTEP 2015, no. 4, 043C01 (2015)** doi:10.1093/ptep/ptv031 (Atif sayısı: 107)
43. K. Abe *et al.* [T2K Collaboration], “*Measurement of the Inclusive Electron Neutrino Charged Current Cross Section on Carbon with the T2K Near Detector,*”  
**Phys. Rev. Lett. 113, no. 24, 241803 (2014)** doi:10.1103/PhysRevLett.113.241803 (Atif sayısı: 75)

44. K. Abe *et al.* [T2K Collaboration], “Measurement of the inclusive  $\nu_{\mu}$  charged current cross section on iron and hydrocarbon in the T2K on-axis neutrino beam,”  
**Phys. Rev. D** **90**, no. 5, 052010 (2014) doi:10.1103/PhysRevD.90.052010 (Atif sayısı: 61)
45. K. Abe *et al.* [T2K Collaboration], “Measurement of the neutrino-oxygen neutral-current interaction cross section by observing nuclear deexcitation gamma rays,”  
**Phys. Rev. D** **90**, no. 7, 072012 (2014) doi:10.1103/PhysRevD.90.072012 (Atif sayısı: 31)
46. K. Abe *et al.* [T2K Collaboration], “Measurement of the intrinsic electron neutrino component in the T2K neutrino beam with the ND280 detector,”  
**Phys. Rev. D** **89**, 092003 (2014) [**Phys. Rev. D** **89**, 099902 (2014)]  
doi:10.1103/PhysRevD.89.099902, 10.1103/PhysRevD.89.092003 (Atif sayısı: 41)
47. K. Abe *et al.* [T2K Collaboration], “Precise Measurement of the Neutrino Mixing Parameter  $\theta_{23}$  from Muon Neutrino Disappearance in an Off-Axis Beam,”  
**Phys. Rev. Lett.** **112**, no. 18, 181801 (2014) doi:10.1103/PhysRevLett.112.181801 (Atif sayısı: 280)
48. N. Abgrall *et al.* [NA61 Collaboration], “NA61/SHINE facility at the CERN SPS: beams and detector system,”  
**JINST** **9**, P06005 (2014) doi:10.1088/1748-0221/9/06/P06005 (Atif sayısı: 181)
49. S. K. Agarwalla *et al.* [LAGUNA-LBNO Collaboration], “The mass-hierarchy and CP-violation discovery reach of the LBNO long-baseline neutrino experiment,”  
**JHEP** **1405**, 094 (2014) doi:10.1007/JHEP05(2014)094 (Atif sayısı: 95)
50. K. Abe *et al.* [T2K Collaboration], “Observation of Electron Neutrino Appearance in a Muon Neutrino Beam,”  
**Phys. Rev. Lett.** **112**, 061802 (2014) doi:10.1103/PhysRevLett.112.061802 (Atif sayısı: 559)
51. N. Abgrall *et al.* [NA61/SHINE Collaboration], “Measurement of negatively charged pion spectra in inelastic  $p+p$  interactions at  $p_{\text{lab}} = 20, 31, 40, 80$  and  $158$  GeV/c,”  
**Eur. Phys. J. C** **74**, no. 3, 2794 (2014) doi:10.1140/epjc/s10052-014-2794-6 (Atif sayısı: 82)
52. A. Badertscher *et al.*, “ArDM: first results from underground commissioning,”  
**JINST** **8**, C09005 (2013) doi:10.1088/1748-0221/8/09/C09005 (Atif sayısı: 31)
53. K. Abe *et al.* [T2K Collaboration], “Measurement of Neutrino Oscillation Parameters from Muon Neutrino Disappearance with an Off-axis Beam,”  
**Phys. Rev. Lett.** **111**, no. 21, 211803 (2013) doi:10.1103/PhysRevLett.111.211803 (Atif sayısı: 150)
54. K. Abe *et al.* [T2K Collaboration], “Evidence of Electron Neutrino Appearance in a Muon Neutrino Beam,”  
**Phys. Rev. D** **88**, no. 3, 032002 (2013) doi:10.1103/PhysRevD.88.032002 (Atif sayısı: 220)
55. K. Abe *et al.* [T2K Collaboration], “Measurement of the inclusive  $\nu_{\mu}$  charged current cross section on carbon in the near detector of the T2K experiment,”  
**Phys. Rev. D** **87**, no. 9, 092003 (2013) doi:10.1103/PhysRevD.87.092003 (Atif sayısı: 140)
56. K. Abe *et al.* [T2K Collaboration], “T2K neutrino flux prediction,”  
**Phys. Rev. D** **87**, no. 1, 012001 (2013) Addendum: [Phys. Rev. D **87**, no. 1, 019902 (2013)]  
doi:10.1103/PhysRevD.87.012001, 10.1103/PhysRevD.87.019902 (Atif sayısı: 241)
57. E. Frank *et al.*, “A dedicated device for measuring the magnetic field of the ND280 magnet in the T2K experiment,”  
**JINST** **7**, P01018 (2012) doi:10.1088/1748-0221/7/01/P01018 (Atif sayısı: 3)
58. K. Abe *et al.* [T2K Collaboration], “First Muon-Neutrino Disappearance Study with an Off-Axis Beam,”  
Phys. Rev. **D85**, 031103 (2012) doi:10.1103/PhysRevD.85.031103 (Atif sayısı: 180)
59. K. Abe *et al.*, “Measurements of the T2K neutrino beam properties using the INGRID on-axis near detector,”  
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60. K. Abe *et al.* [T2K Collaboration], “*Indication of Electron Neutrino Appearance from an Accelerator-produced Off-axis Muon Neutrino Beam,*”  
**Phys. Rev. Lett.** **107**, 041801 (2011) doi:10.1103/PhysRevLett.107.041801 (Atif sayısı: 1522)
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62. A. Anokhina *et al.* [OPERA Collaboration], “*Study of the effects induced by lead on the emulsion films of the OPERA experiment,*”  
**JINST** **3**, P07002 (2008) doi:10.1088/1748-0221/3/07/P07002 (Atif sayısı: 29)
63. A. Anokhina *et al.* [OPERA Collaboration], “*Emulsion sheet doublets as interface trackers for the OPERA experiment,*”  
**JINST** **3**, P07005 (2008) doi:10.1088/1748-0221/3/07/P07005 (Atif sayısı: 68)

## 8.2. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (Proceeding) basılan bildiriler.

1. S. Tufanli, **F. Bay**, V. Cuha, M. Guler, U. Kose, “*OPERA Experiment and CS Facility*” TFD 24<sup>th</sup> International Physics Congresses, **p.611**, Malatya, Türkiye, Ağustos 2007
2. **F. Bay**, A. Ereditato, M. Messina, I. Kreslo, M. Weber, V. Magalotti, A. Ariga, T. Ariga, E. Frank, B. Rossi, “*Low Energy Neutrino Monitor.*” Joint Annual Meeting of the Swiss Physical Society, ÖPG, SGAA and ÖGAA, **ID.347**, Lozan, İsviçre, Haziran 2011
3. K. Abe, N. Abgrall, H. Aihara, T. Akiri, C. Andreopoulos, S. Aoki, A. Ariga, S. Assylbekov, D. Autiero, M. Barbi, G. Barr, M. Bass, M. Batkiewicz, **F. Bay**, *et al.* [T2K Collaboration], “Recent Results from the T2K Experiment.”, Proceedings of the 9<sup>th</sup> International Symposium on Cosmology and Particle Astrophysics (CosPA 2012) NUCLEAR PHYSICS B – PROCEEDINGS SUPPLEMENTS (2014), Volumes 246-247, **Pages: 23-28**  
Taipei & Hsinchu, Tayvan, Kasım 2012
4. **F. Bay**, C. Cantini, S. Murphy, F. Resnati, A. Rubbia, F. Sergiampietri, and S. Wu “*Evidence of electric breakdown induced by bubbles in liquid argon*”, High Voltage in Noble Liquids (HVNL13) Workshop, Fermi National Accelerator Laboratory (FNAL), Batavia, USA, Kasım 2013

## 8.3. Yazılan Uluslararası kitaplar veya kitaplarda bölümler.

## 8.4. Ulusal hakemli dergilerde yayınlanan makaleler

## 8.5. Ulusal bilimsel toplantılarda sunulan bildiri kitabında basılan bildiriler

## 8.6 Diğer Yayınlar Diğer Yayınlar (Popüler yayın, Niyet Mektubu, Dizayn Çalışması ve Deney Önerisi)

1. **F. Bay**, “Yeraltında Karanlık Madde Avı”, Bilim ve Teknik, TÜBİTAK, Ocak (2015)
2. M. Auger *et al.* [ArgonCube Collaboration], “ArgonCube: a Modular Approach for Liquid Argon TPC Neutrino Detectors for Near Detector Environments,” CERN-SPSC-2017-025/SPSC-I-246 (<https://cds.cern.ch/record/2268439?ln=en>)
3. B. Abi *et al.* [DUNE Collaboration], “The Single-Phase ProtoDUNE Technical Design Report,” arXiv:1706.07081 [physics.ins-det].
4. C. Amsler *et al.* [ArgonCube Collaboration], “ArgonCube: a novel, fully-modular approach for the realization of large-mass liquid argon TPC neutrino detectors,” CERN-SPSC-2015-009/SPSC-I-243 (<https://cds.cern.ch/record/1993255/files/SPSC-I-243.pdf>)
5. R. Acciarri *et al.* [DUNE Collaboration], “*Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE) Conceptual Design Report Volume 1: The LBNF and DUNE Projects,*”

6. R. Acciarri et al. [DUNE Collaboration], "Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE) Conceptual Design Report, Volume 4 The DUNE Detectors at LBNF,"
7. R. Acciarri et al. [DUNE Collaboration], "*Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE) Conceptual Design Report Volume 2: The Physics Program for DUNE at LBNF*,"
8. K. Abe et al. [Hyper-Kamiokande Working Group Collaboration], "*A Long Baseline Neutrino Oscillation Experiment Using J-PARC Neutrino Beam and Hyper-Kamiokande*,"
9. "*LBNO-DEMO: Large-scale neutrino detector demonstrators for phased performance assessment in view of a long-baseline oscillation experiment*", [LBNO-DEMO (CERN WA105) Collaboration], September (2014)
10. "*A detector to measure low energy muon-neutrino flux in the on-axis beam direction at the T2K 280m hall*", [The LEM Collaboration], December 10 (2010)
11. "*A detector to monitor the neutrino beam asymmetry at the T2K 280m hall*", [The Left-Right Monitor Collaboration], September 8 (2008)

## 9.Projeler

1. OPERA detektöründe elektron tanımlanması; The Oscillation Project with Emulsion-tRacking Apparatus (OPERA Deneyi); Orta Doğu Teknik Üniversitesi; Araştırmacı (2007-2008)
2. T2K deneyi için düşük enerjili nötrino demetinin deneysel çalışması; Low Energy neutrino Monitor (LEM); University of Bern; Doktora Öğrencisi (2008 - 2012)
3. T2K deneyinde müon nötrinolarının salınımlarının kaybolma tekniği ile analizi T2K deneyi; Swiss Federal Institute of Technology in Zurich (ETH Zurich); Dr.Araştırmacı (2012- 2014)
4. Argon Karanlık Madde deneyinde karanlık madde verisi analizi için yazılım geliştirme (ArDM deneyi); Swiss Federal Institute of Technology in Zurich (ETH Zurich); Dr.Araştırmacı (2013 - 2014 )
5. Uzun taban hatlı nötrino salınım deneylerinin Fizik hassaslık çalışmaları (LBNE, LBNO ve Hyper-K projeleri); Swiss Federal Institute of Technology in Zurich (ETH Zurich); Dr.Araştırmacı (2012 - 2014)
6. 2232 BİDEB Yurda Dönüş Bursu; Sıvı Argon Zaman İzdüşümü Odası Dedektör Teknolojisi içerisinde Pion-zero - Elektron Ayrımı - MicroBooNE Deneyi (ABD); TÜBİTAK UZAY, Başuzman Araştırmacı (2015 - 2017)

## 11.Bilimsel Kuruluşlara/Deneylere Üyelikleri

1. The European Organization for Nuclear Research (CERN), İsviçre (2007- Halen)
2. Laboratori Nazionali del Gran Sasso (LNGS), İtalya (2007-2008)
3. High Energy Accelerator Research Organization (KEK), Japonya (2008-2014)
4. Japan Proton Accelerator Research Complex (J-PARC), Japonya (2008-2014)
5. Laboratorio Subterráneo de Canfranc (LSC), İspanya (2012-2013)
6. Fermi Ulusal Laboratuvarı, Fermilab, ABD, (2015 - halen)
7. DUNE Deneyi, Fermilab, USA (2015-halen)
8. MicroBooNE Deneyi, Fermilab, USA (2015-2019)
9. ArgonCUBE Deneyi, CERN (2015-2019)
10. Argon Dark Matter (ArDM) Deneyi, Canfranc, Spain (2013-2014)
11. NA61 Deneyi, CERN, Switzerland (2013-2014)
12. The Long-Baseline Neutrino Oscillation (LAGUNA-LBNO) Deneyi, CERN, Switzerland (2013-2014)
13. The Hyper-Kamiokande Deneyi, J-PARC, Japan (2014)
14. The LEM (Low Energy neutrino Monitor Detector) Deneyi, J-PARC, Japan (2008-2012)
15. The T2K (Tokai-to-Kamioka) Deneyi, J-PARC, Japan (2008-2014)
16. The OPERA (Oscillation Project with Emulsion-tRacking Apparatus) Experiment in Gran Sasso, LNGS, Italy (2007-2008)



## 12.Ödüller

1. “*Breakthrough Prize in Fundamental Physics*” ödülü, (shared - Daya Bay, KamLAND, SNO, T2K, K2K and SuperK Collaborations), ABD, 2016
2. TÜBİTAK 2232 BİDEB Yurda Dönüş Bursu, 2015, Bütçe: 108.000 TL
3. “*Le Prix La Recherche*” ödülü (shared - T2K Collaboration), Fransa, 2011

## 13.Son iki yılda verdiği lisans ve lisansüstü düzeyindeki dersler

Akademik Yıl	Dönem	Dersin Adı	Haftalık Saati		Öğrenci Sayısı
			Teorik	Uygulama	
2020-2021	Güz	PHYS 101 Physics I (Antalya Bilim Üniversitesi)	3		101
2020-2021	Güz	ME 201 Fundamentals of Electrical and Electronics Engineering (Antalya Bilim Üniversitesi)	3		10
2020-2021	Güz	FTR 107 Fizik 1 (Antalya Bilim Üniversitesi)	2		34
2016-2017	Güz	ES202 Mathematics for Engineers (ODTÜ Mühendislik Bilimleri)	3		58
2016-2017	Bahar	ES202 Mathematics for Engineers (ODTÜ Mühendislik Bilimleri)	3		64