

## Assoc. Prof. Ayşe ULUBAY

### Personal Information

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### International Researcher IDs

ORCID: 0000-0002-4112-8030

Publons / Web Of Science ResearcherID: AAF-1236-2020

Yoksis Researcher ID: 144196

### Education Information

Doctorate, Ludwig-Maximilians-Universität München, Faculty Of Physics, Physics/Astronomy, Germany 2005 - 2009

Postgraduate, Universität Stuttgart, Faculty Of Mathematics And Physics, Department Of Physics, Germany 2001 - 2004

Undergraduate, Ege University, Faculty Of Science, Astronomi Ve Uzay Bilimleri Bölümü, Turkey 1995 - 1999

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Self-Gravitating Warped Disks Around Supermassive Black Holes in Galactic Nuclei, Ludwig-Maximilians-Universität München, 2009

Postgraduate, Monte Carlo Simulations for the Radiative Transfer in the Magnetospheres of Strongly Magnetized Compact Cosmic X-and Gamma-Ray Sources, Die Universität Stuttgart, 2004

### Research Areas

Physics, Astronomy and Astrophysics, Astronomy and Astrophysics: Instrumentation Techniques and Observations, Natural Sciences

### Academic Titles / Tasks

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2018 - Continues

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2010 - 2018

Researcher, Harvard University, Center For Astrophysics, Astronomy, 2010 - 2010

Other, Ludwig-Maximilians-Universität München, Faculty Of Physics, Physics Department, 2006 - 2009

### Academic and Administrative Experience

Deputy Head of Department, Istanbul University, Faculty Of Science, Department Of Physics, 2021 - 2023

## Courses

Acoustic Physics, Undergraduate, 2023 - 2024  
Calculus II, Undergraduate, 2022 - 2023, 2021 - 2022  
Fluid Mechanics, Undergraduate, 2022 - 2023  
Calculus I, Undergraduate, 2022 - 2023, 2021 - 2022  
Algoritma ve Bilgisayar Programlamaya Giriş , Undergraduate, 2022 - 2023, 2021 - 2022  
Seminer, Doctorate, 2021 - 2022  
Undergraduate, 2020 - 2021  
Physics II, Undergraduate, 2019 - 2020  
Reading and Translation in Science, Undergraduate, 2020 - 2021, 2019 - 2020  
İleri Fizik Uygulamaları II, Undergraduate, 2019 - 2020  
Calculus I, Undergraduate, 2020 - 2021  
Undergraduate, 2020 - 2021, 2019 - 2020  
Physics I, Undergraduate, 2019 - 2020  
Physics 1, Undergraduate, 2019 - 2020, 2018 - 2019  
Dynamics of Astrophysical Discs, Doctorate, 2017 - 2018  
Diferansiyel Denklemler, Undergraduate, 2017 - 2018, 2016 - 2017  
Matematik 2, Undergraduate, 2017 - 2018, 2016 - 2017  
İleri Fizik uygulamaları, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2012 - 2013  
Galaxy II, Doctorate, 2016 - 2017  
Numerical Methods In Physics & Applications II, Doctorate, 2016 - 2017  
Galaxy I, Doctorate, 2016 - 2017  
Galaxy III, Doctorate, 2016 - 2017  
Matematik 1, Undergraduate, 2016 - 2017  
Genel Fizik 2, Undergraduate, 2015 - 2016  
Num. Meth. In Physics & Applications I, Doctorate, 2016 - 2017  
Fizik 1, Undergraduate, 2016 - 2017  
Bilgisayar Programlama II, Undergraduate, 2012 - 2013  
Bilgisayar Programlama I, Undergraduate, 2012 - 2013, 2011 - 2012

## Advising Theses

ULUBAY A., Gökada Merkezi'ndeki Nükleer Gaz Disk ve Genç Yıldız Disklerinin Modellenmesi, Postgraduate, B.Ekinci(Student), 2014

## Jury Memberships

Doctoral Examination, Doctoral Examination, Sabancı Üniversitesi, February, 2021  
Doctorate, Doctorate, Mimar Sinan Güzel Sanatlar Üniversitesi, February, 2021  
Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, July, 2020  
Post Graduate, Post Graduate, Ege Üniversitesi, August, 2019  
Doctorate, Doktora tez savunma jürisi, Ege Üniversitesi, June, 2017  
Post Graduate, Yüksek lisans tez savunma jürisi, Trakya Üniversitesi, November, 2015  
Post Graduate, Yüksek lisans tez savunma jürisi, Trakya Üniversitesi, November, 2015

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **On the lack of X-ray pulsation in most neutron star low-mass X-ray binaries**  
Niang N., Ertan Ü., Gençali A., Toyran O., ULUBAY A., Devlen E., Alpar M., Gügercinoğlu E.  
Monthly Notices of the Royal Astronomical Society, vol.532, no.2, pp.2133-2142, 2024 (SCI-Expanded)
- II. **On counter-rotating, self-gravitating warped discs in galactic nuclei**  
Ulubay A.  
ASTROPHYSICS AND SPACE SCIENCE, vol.367, no.5, 2022 (SCI-Expanded)
- III. **The torque reversals of 4U 1626-67**  
Gençali A. A., Niang N., Toyran O., Ertan U., Ulubay A., Sasmaz S., Devlen E., Vahdat A., Ozcan S., Alpar M. A.  
ASTRONOMY & ASTROPHYSICS, vol.658, 2022 (SCI-Expanded)
- IV. **Time evolution simulations for the galactic centre circumnuclear disc**  
Ekinci B., ULUBAY A.  
Astrophysics and Space Science, vol.366, no.1, 2021 (SCI-Expanded)
- V. **Magnetorotational instability in diamagnetic, misaligned protostellar discs**  
DEVLEN E., Ulubay A., PEKÜNLÜ E.  
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.491, no.4, pp.5481-5488, 2020 (SCI-Expanded)
- VI. **On the possibility of a warped disc origin of the inclined stellar discs at the Galactic Centre**  
Ulubay-Siddiki A., Bartko H., Gerhard O.  
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.428, no.3, pp.1986-2000, 2013 (SCI-Expanded)
- VII. **Self-gravitating warped discs around supermassive black holes**  
Ulubay-Siddiki A., Gerhard O., Arnaboldi M.  
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.398, no.2, pp.535-547, 2009 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Determination of Equilibrium Warp Profiles of Maser Discs in Galactic Nuclei**  
Ulubay A.  
Süleyman Demirel Üniversitesi Fen Edebiyat Fakültesi Fen Dergisi, vol.17, no.2, pp.551-558, 2022 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Gökada merkezindeki yüksek kütleli eğri disklerin evrimi**  
Ulubay A.  
4. Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı, 1 - 02 February 2021
- II. **Aktif Gökada Çekirdeklerindeki Yüksek Kütleli ve Eğrilikli Maser Disklerin Evrimi için Simülasyonlar**  
ULUBAY A., Greenhill L.  
19. Ulusal Astronomi Kongresi, 8. Ulusal Astronomi Öğrenci Kongresi, Ankara, Turkey, 2 - 06 February 2016, vol.1, pp.315
- III. **Gökada Merkezi'ndeki Nükleer Gaz Disk ve Genç Yıldız Disklerinin Modellenmesi**  
Ekinci B., Ulubay A.  
19. Ulusal Astronomi Kongresi, 8. Ulusal Astronomi Öğrenci Kongresi, Ankara, Turkey, 2 - 06 February 2016, vol.1, pp.251-253
- IV. **Counter-rotating, Self-gravitating Warped Discs in Galactic Nuclei**  
Ulubay A.  
5. Uluslararası Akdeniz Bilim ve Mühendislik Kongresi , Antalya, Turkey, 21 - 23 October 2020, pp.449-453
- V. **Diyamanyetik Gezegen Oluşum Disklerinde Manyetik Dönme Kararsızlığı**  
DEVLEN E., ULUBAY A., PEKÜNLÜ E. R.

YEFAK-2019, Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı, İstanbul, Turkey, 30 - 31 January 2019

- VI. **Magnetorotational Instability In Diamagnetic Disks**  
Devlen E., Ulubay A., Pekünlü E. R.  
YEFAK-2018, Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı, İstanbul, Turkey, 8 - 09 February 2018, pp.36
- VII. **Simulations of warped megamaser disks in Galactic Nuclei**  
Ulubay A., Greenhill L.  
Gas Dynamics and Star Formation in the Extreme Environment of Galactic Nuclei, Munich, Germany, 18 - 22 March 2013
- VIII. **On the Possibility of a Warped Disk Origin of the Inclined Stellar Disks at the Galactic Center**  
ULUBAY SİDDİKİ A., Hendrik B.  
The Central Kiloparsec in Galactic Nuclei Astronomy at High Angular Resolution 2011, Germany, 1 - 04 July 2012, vol.372, pp.12017
- IX. **Yakın Aktif Gökada Çekirdekleri ve Samanyolu Merkezinde Eğrilikli Diskler**  
ULUBAY A.  
Astrofizikte Manyetik ve Hidrodinamik Süreçler I. Çalıştayı, İzmir, Turkey, 1 - 03 February 2010, pp.64-74
- X. **Gökada Merkezindeki Genç Yıldız Diskleri için Eğrilikli Disk Oluşum Senaryosu**  
ULUBAY A., Gerhard O., Arnaboldi M.  
XVI. Ulusal Astronomi Kongresi ve V. Ulusal Öğrenci Astronomi Kongresi, Çanakkale, Turkey, 8 - 12 September 2008, pp.21-29
- XI. **Self-Gravitating Warped Disks Around Black Holes**  
Ulubay Sıddiki A., Arnaboldi M., Gerhard O.  
Microquasars and Beyond, İzmir, Turkey, 1 - 04 December 2008, pp.84
- XII. **Self-gravitating warped disks around nuclear black holes**  
ULUBAY SİDDİKİ A., Gerhard O., Arnaboldi M.  
Black Holes from Stars to Galaxies -- Across the Range of Masses - IAU Symposium #238, Czech Republic, 1 - 04 April 2007, vol.238, pp.467-468
- XIII. **Süper Kütleli Karadelikler Etrafında Eğrilikli Diskler**  
ULUBAY A., Gerhard O., Arnaboldi M.  
XV. Ulusal Astronomi Kongresi ve IV. Ulusal Öğrenci Astronomi Kongresi, İstanbul, Turkey, 25 August - 01 September 2006, pp.699-708

## Other Publications

- I. **Astronomi-Bir Bakışta Evren/Astronomy the Universe at a Glance (yazarlar: E. Chaisson, S. McMillan) kitap çevirisi**  
Yıldız M., İnam S. Ç., ULUBAY A.  
Other, pp.310, 2016

## Supported Projects

- Ulubay A., Devlen E., TÜBİTAK Project, Yıldız ve Gezegen Oluşum Disklerinde Ohmik ve Hall Difüzyonunun Manyetik Dönme Kararsızlığına Katkısı, 2024 - 2026
- Ulubay A., Ertan Ü., Devlen E., TÜBİTAK Project, Kütle Aktaran Nötron Yıldızlarının Dönme Fazları Üzerine, 2021 - 2023
- Ulubay A., Devlen E., Zengin Çamurdan D., TÜBİTAK Project, Güneş Tacının Isıtılması Ve Güneş Rüzgarının İvmelendirilmesinde Mhd Dalgalarının Rolü, 2019 - 2022
- ULUBAY A., TÜBİTAK Project, Gökada Merkezi'ndeki Merkezi Gaz Disk Ve Genç Yıldız Disklerinin Modellenmesi, 2013 - 2015
- ULUBAY A., Project Supported by Higher Education Institutions, Simulations of Warped Megamaser Disks in Galactic Nuclei, 2013 - 2013

ULUBAY A., Project Supported by Higher Education Institutions, Circinus Gökadasındaki Maser Disk İçin Öz Çekimsel Eğrilikli Disk Modeli, 2011 - 2013

ULUBAY A., Project Supported by Higher Education Institutions, On the Possibility of a Warped Disk Origin of the Inclined Stellar Disks at the Galactic Center, 2011 - 2011

## Memberships / Tasks in Scientific Organizations

Uluslararası Astronomi Birliği, Member, 2015 - Continues

Avrupa Astronomi Derneği, Member, 2015 - Continues

Türk Astronomi Derneği, Member, 2012 - Continues

## Scientific Refereeing

Project Supported by Higher Education Institutions, June 2017

TUBITAK Project, June 2012

## Tasks In Event Organizations

Ulubay A., Ertan Ü., Devlen E., Ekşi K. Y., Şaşmaz S., Işık E., Hakkı Ögelman Yaz Okulu II - Astrofizikte Modelleme: Güneş'ten Gökada Merkezlerine , Science / Art Camp or Summer School Organization, İstanbul, Turkey, Ağustos 2019

Aydiner E., Ulubay A., Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı, Workshop Organization, Turkey, Ocak 2019

Ulubay A., Çalışkan Ş., Devlen E., Erkut M. H., Ertan Ü., Şaşmaz S., Feza Gürsey Yaz Okulları 2017: Astrofiziksel Diskler, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Ağustos 2017

Ulubay A., Devlen E., Pekünlü E. R., Astrofizikte Manyetik ve Hidrodinamik Süreçler I. Çalıştayı, Workshop Organization, İzmir, Turkey, Şubat 2010

## Metrics

Publication: 22

Citation (WoS): 35

Citation (Scopus): 38

H-Index (WoS): 3

H-Index (Scopus): 3

## Congress and Symposium Activities

23. Ulusal Astronomi Kongresi, Session Moderator, İstanbul, Turkey, 2024

II. Beyazıt High Energy meeting, Audience, İstanbul, Turkey, 2024

22. Akademik Bilişim Konferansı, Audience, İstanbul, Turkey, 2024

Gezegenlerin İç Yapısı ve Evrimi (GİYE) Çalıştayı, Session Moderator, İzmir, Turkey, 2023

Ege Üniversitesi Gözlemevi Çalıştayı Serisi #8- Toplanma Disklerinin Doğası, Invited Speaker, İzmir, Turkey, 2021

Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı – 2021, Invited Speaker, İstanbul, Turkey, 2021

Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı – 2018, Attendee, Turkey, 2018

European Week of Astronomy and Space Science, Attendee, Santa Cruz De Tenerife, Spain, 2015

19.Ulusal Astronomi Kongresi ve 8. Ulusal Öğrenci Astronomi Kongresi, Attendee, Ankara, Turkey, 2015

Gas Dynamics and Star Formation in the Extreme Environment of Galactic Nuclei, Attendee, Tegernsee, Germany, 2013

XVIII. ULUSAL ASTRONOMİ ve UZAY BİLİMLERİ KONGRESİ VII. ULUSAL ÖĞRENCİ ASTRONOMİ ve UZAY BİLİMLERİ

KONGRESİ, Attendee, Malatya, Turkey, 2012

Black Holes by the Black Sea, Attendee, İstanbul, Turkey, 2012

Astronomy at High Angular Resolution, Attendee, Bad Honnef, Germany, 2011

Dynamics from the Galactic Center to the Milky Way Halo, Audience, Massachusetts, United States Of America, 2010

Physics of Galactic Nuclei, Attendee, Tegernsee, Germany, 2009

Active Galactic Nuclei at the highest angular resolution: theory and observations, Attendee, Torun, Poland, 2007

N-Body Dynamics in Near Keplerian Potentials, Attendee, Leiden, Netherlands, 2007

Galactic Center Workshop, Attendee, Tegernsee, Germany, 2007

IAU Sempozyumu/238: Black Holes - From Stars to Galaxies, Attendee, Prag, Czech Republic, 2006

## **Invited Talks**

GÖKADA MERKEZLERİNDEKİ YÜKSEK KÜTLELİ EĞRİ DİSKLERİN EVRİMİ, Workshop, İstanbul Üniversitesi, Turkey, February 2021

## **Scholarships**

Doktora Araştırma Bursu, Other International Organizations, 2006 - 2009

Doktora Araştırma Bursu, Other International Organizations, 2005 - 2005

Doktora Bursu, Official Institutions of Foreign Countries, 2004 - 2005