

Prof. MUTLU YILDIZ

Personal Information

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Education Information

Doctorate, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 1989 - 1996

Post Graduate, Orta Doğu Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 1987 - 1989

Under Graduate, Orta Doğu Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 1980 - 1986

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Evolution and Structure of the Sun and Low Mass Stars-Influence of EOS by Minimization of Free Energy, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), 1996

Post Graduate, A Computation of Equation of State for a Fermi Gas for the StellarMateria, Orta Doğu Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 1989

Research Areas

Stars, Natural Sciences

Academic Titles / Tasks

Professor, Ege Üniversitesi, Fen Fakültesi, Astronomi Ve Uzay Bilimleri Bölümü, 2006 - Continues

Associate Professor, Ege Üniversitesi, Fen Fakültesi, Astronomi Ve Uzay Bilimleri Bölümü, 2001 - 2006

Assistant Professor, Ege Üniversitesi, Fen Fakültesi, Astronomi Ve Uzay Bilimleri Bölümü, 1998 - 2001

Research Assistant, Ege Üniversitesi, Fen Fakültesi, Astronomi Ve Uzay Bilimleri Bölümü, 1996 - 1998

Research Assistant, Orta Doğu Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 1986 - 1996

Courses

KAYNAK TARAMA TEKNİKLERİ, Under Graduate, 2019 - 2020

SOLAR PHYSICS, Under Graduate, 2019 - 2020

Tek Yıldızların Evrimi, Doctorate, 2019 - 2020

Advising Theses

YILDIZ M., Güneş benzeri titreşim yapan yıldızların yapısı ve evrimi, Doctorate, Z.ÇELİK(Student), 2017

YILDIZ M., Gezegenli yıldızların asterosismik incelenmesi, Doctorate, C.KAYHAN(Student), 2017

- YILDIZ M., Yakın çift yıldızlarda evrimsel süreçler üzerine, Doctorate, T.DOĞAN(Student), 2016
- YILDIZ M., Yıldızlarda açısal momentum problemleri üzerine, Post Graduate, M.ÖZDİL(Student), 2015
- YILDIZ M., Güneş benzeri titreşim yapan yıldızlarda kimyasal bolluğun ölçek ilişkilerine etkisi, Post Graduate, Ç.AKSOY(Student), 2014
- YILDIZ M., Öte gezegenler ve yıldızlarının incelenmesi, Post Graduate, S.OK(Student), 2013
- YILDIZ M., Gezegenli yıldızların yapısal ve evrimsel özellikleri, Post Graduate, Z.ÇELİK(Student), 2011
- YILDIZ M., DAV GD 154 beyaz cücesi'nin sismolojik incelenmesi ve zz ceti kararsızlık kuşağı'nın kırmızı kenarının özellikleri, Doctorate, D.ÖZLEM(Student), 2008
- YILDIZ M., Kimyasal tuhaf yıldızların metal bolluklarının gözlemsel özellikler üzerine etkisi ve yayılma mekanizmasının verimliliği üzerine, Post Graduate, S.DOĞAN(Student), 2008
- YILDIZ M., Biri evrimleşmiş yakın çift yıldızlar ile ilgili kurumsal bir çalışma, Post Graduate, T.DOĞAN(Student), 2005

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Age dating of an early Milky Way merger via asteroseismology of the naked-eye star nu Indi**
Chaplin W. J. , Serenelli A. M. , Miglio A., Morel T., Mackereth J. T. , Vincenzo F., Kjeldsen H., Basu S., Ball W. H. , Stockholm A., et al.
NATURE ASTRONOMY, 2020 (Journal Indexed in SCI)
- **Asteroseismic investigation of 20 planet and planet-candidate host stars**
Kayhan C., YILDIZ M., Orhan Z.
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.490, pp.1509-1517, 2019 (Journal Indexed in SCI)
- **TESS Asteroseismology of the Known Red-giant Host Stars HD 212771 and HD 203949**
Campante T. L. , Corsaro E., Lund M. N. , Mosser B., Serenelli A., Veras D., Adibekyan V., Antia H. M. , Ball W., Basu S., et al.
ASTROPHYSICAL JOURNAL, vol.885, 2019 (Journal Indexed in SCI)
- **Fundamental properties of Kepler and CoRoT targets - IV. Masses and radii from frequencies of minimum Delta nu and their implications**
YILDIZ M., Orhan Z., Kayhan C.
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.489, pp.1753-1769, 2019 (Journal Indexed in SCI)
- **A Hot Saturn Orbiting an Oscillating Late Subgiant Discovered by TESS**
Huber D., Chaplin W. J. , Chontos A., Kjeldsen H., Christensen-Dalsgaard J., Bedding T. R. , Ball W., Brahm R., Espinoza N., Henning T., et al.
ASTRONOMICAL JOURNAL, vol.157, 2019 (Journal Indexed in SCI)
- **Comparison of Gaia and asteroseismic distances**
Yıldiz M., Orhan Z. C. , Ortel S., ROTH M.
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.470, 2017 (Journal Indexed in SCI)
- **Fundamental properties of Kepler and CoRoT targets - III. Tuning scaling relations using the first adiabatic exponent**
Yıldiz M., Orhan Z. C. , Kayhan C.
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.462, pp.1577-1590, 2016 (Journal Indexed in SCI)
- **Grids of stellar models including second harmonic and colors: solar composition (Z=0.0172, X=0.7024)**
Yıldiz M.
RESEARCH IN ASTRONOMY AND ASTROPHYSICS, vol.15, pp.2244-2262, 2015 (Journal Indexed in SCI)
- **Fundamental properties of solar-like oscillating stars from frequencies of minimum Delta nu - II. Model computations for different chemical compositions and mass**
YILDIZ M., Orhan Z., KAYHAN C.
MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.448, pp.3689-3696, 2015 (Journal Indexed in SCI)
- **On the structure and evolution of planets and their host stars - effects of various heating mechanisms on the size of giant gas planets**

YILDIZ M., Orhan Z., KAYHAN C., Turkoglu G. E.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.445, pp.4395-4405, 2014 (Journal Indexed in SCI)

- **PROPERTIES OF 42 SOLAR-TYPE KEPLER TARGETS FROM THE ASTEROSEISMIC MODELING PORTAL**

METCALFE T. S. , CREEVEY O. L. , Dogan G., MATHUR S., XU H., Bedding T. R. , Chaplin W. J. , Christensen-Dalsgaard J., Karoff C., Trampedach R., et al.

ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES, vol.214, 2014 (Journal Indexed in SCI)

- **Fundamental properties of solar-like oscillating stars from frequencies of minimum $\Delta\nu$ - I. Model computations for solar composition**

Yildiz M., Orhan Z. C. , Aksoy C., Ok S.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.441, pp.2148-2158, 2014 (Journal Indexed in SCI)

- **Origin of W UMa-type contact binaries - age and orbital evolution**

Yildiz M.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.437, pp.185-194, 2014 (Journal Indexed in SCI)

- **On the origin of W UMa type contact binaries - a new method for computation of initial masses**

Yildiz M., Dogan T.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.430, pp.2029-2038, 2013 (Journal Indexed in SCI)

- **ASTEROSEISMOLOGY OF THE SOLAR ANALOGS 16 Cyg A AND B FROM KEPLER OBSERVATIONS**

METCALFE T. S. , CHAPLIN W. J. , APPOURCHAUX T., GARCIA R. A. , Basu S., Brandao I., CREEVEY O. L. , DEHEUVELS S., DOGAN G., EGGENBERGER P., et al.

ASTROPHYSICAL JOURNAL LETTERS, vol.748, 2012 (Journal Indexed in SCI)

- **Solar and alpha Centauri A and B models improved by opacity enhancement - a possible explanation for oversize cool stars**

Yildiz M.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.412, pp.2571-2578, 2011 (Journal Indexed in SCI)

- **SOUNDING OPEN CLUSTERS: ASTEROSEISMIC CONSTRAINTS FROM KEPLER ON THE PROPERTIES OF NGC 6791 AND NGC 6819**

Basu S., Grundahl F., Stello D., Kallinger T., Hekker S., MOSSER B., GARCIA R. A. , MATHUR S., Brogaard K., Bruntt H., et al.

ASTROPHYSICAL JOURNAL LETTERS, vol.729, 2011 (Journal Indexed in SCI)

- **Modelling Early-type Stars in Eclipsing Binaries of Open Clusters: A New Method for Age Determination from the Ratio of Radii**

Yildiz M.

PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF AUSTRALIA, vol.28, pp.66-76, 2011 (Journal Indexed in SCI)

- **On the structure of the Sun and alpha Centauri A and B in the light of seismic and non-seismic constraints**

Yildiz M.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.388, pp.1143-1151, 2008 (Journal Indexed in SCI)

- **Models of alpha Centauri A and B with and without seismic constraints: time dependence of the mixing-length parameter**

Yildiz M.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.374, pp.1264-1270, 2007 (Journal Indexed in SCI)

- **Modelling the components of binaries in the Hyades: the dependence of the mixing-length parameter on stellar mass**

Yildiz M., YAKUT K., BAKIS H., NOELS A.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.368, pp.1941-1948, 2006 (Journal Indexed in SCI)

- **The eclipsing binary PV Cas: a case of strong differential rotation in depth**

Yıldız M.

MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol.363, pp.967-976, 2005 (Journal Indexed in SCI)

- **Modeling dissimilar components of the eclipsing binary EK Cep: Does the primary star have a rapidly rotating core?**

Yıldız M.

ASTRONOMY & ASTROPHYSICS, vol.409, pp.689-695, 2003 (Journal Indexed in SCI)

- **Solar models: influence of equation of state and opacity**

Yıldız M., KIZILOGLU N.

ASTRONOMY & ASTROPHYSICS, vol.326, pp.187-194, 1997 (Journal Indexed in SCI)

- **Two Simified methods to compute the ionization of heavy elements**

Gabriel M., YILDIZ M.

ASTRONOMY & ASTROPHYSICS, vol.299, pp.475-478, 1995 (Journal Indexed in SCI)

- **A COMPUTATION OF THE EQUATION OF STATE FOR A FERMI GAS**

YILDIZ M., ERYURTEZER D.

ASTROPHYSICS AND SPACE SCIENCE, vol.190, pp.233-242, 1992 (Journal Indexed in SCI)

Refereed Congress / Symposium Publications in Proceedings

- **Güneş benzeri titreşim yapan evrimleşmiş yıldızlar**

ÇELİK ORHAN Z., YILDIZ M.

20. Ulusal Astronomi Kongresi, Erzurum, Turkey, 22 Ağustos 2016, pp.15-19

- **Effects of the Hell ionization zones on oscillation frequencies Applications to Kepler and CoRoT stars**

Çelik Z., Kayhan C., Yıldız M.

The 3rd SOLARNET / 7th HELAS / SpaceInn International Conference "The Sun, the stars, and Solar-stellar relations", Freiburg, Germany, 31 Ağustos - 04 Eylül 2015, pp.1-2

- **Güneş Benzeri Titreşim Yapan Yıldızların Yapısı ve Evrimi**

ÇELİK ORHAN Z., YILDIZ M.

19. Ulusal Astronomi Kongresi, Ankara, Turkey, 02 Şubat 2015, pp.2-6

- **Öte gezegenli yıldızların yapısı ve özellikleri**

Çelik Orhan Z., Yıldız M.

16. Ulusal Astronomi kongresi, Adana, Turkey, 18 Ağustos 2014, pp.10-50

- **Planet Evolution and Host Stars**

Çelik Orhan Z., Yıldız M.

PUTTING OUR SOLAR SYSTEM IN CONTEXT, Innsbruck, Austria, 19 - 23 Nisan 2010, pp.15-16

- **Mixing-length parameter from binaries and clusters**

Yıldız M.

252nd Symposium of the International-Astronomical-Union, Sanya, PEOPLES R CHINA, 6 - 11 Nisan 2008, pp.183-187

- **Effective mass: A new concept in stellarastrophysics based on the internal rotation, and its place in the A- and B-star puzzle**

Yıldız M.

The A-Star Puzzle IAUS 224, Poprad, Slovakia, 8 - 13 Temmuz 2004, vol.224, pp.89

- **On the internal rotation of early-type stars: Do they have rapidly rotating core?**

Yıldız M.

3D Stellar Evolution Workshop, California, United States Of America, 22 - 26 Temmuz 2002, vol.293, pp.246-249

- **Binarıty as a tool for determining the physical properties and evolutionary aspects of A-stars**

Yıldız M.

The A-Star Puzzle IAUS 224, Poprad, Slovakia, 08 Temmuz 2004, vol.224, pp.81-88

- **What do models and helioseismology tell us about the solar evolution?**

Yıldız M.

SOHO 10/GONG 2000 Workshop on Helio- and Asteroseismology at the Dawn of the Millennium, SANTA CRUZ TENERI, Spain, 2 - 06 Ekim 2000, vol.464, pp.571-573

- **Eksen Dönmesi Gösteren Bazı Yıldızların Yeni Minimum Zamanları**

EVREN M. S. , IBANOGLU C., YILDIZ M., TAŞ G., DEVLEN A., ÇAKIRLI Ö., BOZKURT Z.

XII. Ulusal Astronomi Toplantısı, İzmir, Turkey, 04 Eylül 2000, pp.63

- **Apsidal motion studies for DI Her**

Yıldız M., Ibanoglu C., Devlen A., Tas G., Ulas B., Saygan S., Evren S., Cakirli O.

Conference of the NATO-Advanced-Study-Institute on Variable Stars as Essential Astrophysical Tools, CESME, Turkey, 31 Ağustos - 10 Eylül 1998, vol.544, pp.577-585

- **Solar models and helioseismology**

Yıldız M.

Conference of the NATO-Advanced-Study-Institute on Variable Stars as Essential Astrophysical Tools, CESME, Turkey, 31 Ağustos - 10 Eylül 1998, vol.544, pp.169-176

- **Comparison of Present Solar Models with Different EOS and Opacities**

YILDIZ M., Kızıloğlu N.

Stellar Evolution: What should be done, Belgium, pp.385

Supported Projects

Çelik Orhan Z., Yıldız M., TUBITAK Project, Evrimleşmiş Yıldızların Astrosismolojisi, 2019 - 2022

Yıldız M., Çelik Orhan Z., TUBITAK Project, Öte Gezegenli ve Zonklayan Yıldızların İç yapı modellenmesi (ÖZİM), 2013 - 2016

Yıldız M., TUBITAK Project, Çeşitli Dönme Özelliklerine Göre Yıldız İç Yapı Modelleri Hesaplanması ve Bu Modellere Dayalı Gözlenebilir Özellikler İçin Veri Tabanı Oluşturulması, 2005 - 2008

YILDIZ M., Project Supported by Higher Education Institutions, KÜRESEL KÜMELERİN YAŞLARI, 2000 - 2003

YILDIZ M., Project Supported by Higher Education Institutions, KONVEKTİF ZARFLI YILDIZLARIN MODELLEMESİ, 1999 - 2000

Scientific Research / Working Group Memberships

Maunakea Spectroscopic Explorer Science Team, United States Of America, <https://mse.cfht.hawaii.edu/>, 2018 - Continues

Tess Asteroseismic Science Consortium (Tasc): Working Group 7, Aarhus Universitet (University of Aarhus), Denmark, <https://tasoc.dk/wg7>, 2016 - Continues

Tess Asteroseismic Science Consortium (Tasc): Working Group 0, Aarhus Universitet (University of Aarhus), Denmark, <https://tasoc.dk>, 2016 - Continues

Tess Asteroseismic Science Consortium (Tasc): Working Group 2, Aarhus Universitet (University of Aarhus), Denmark, <https://tasoc.dk/wg2/Projects>, 2016 - Continues

Tess Asteroseismic Science Consortium (Tasc): Working Group 1, Aarhus Universitet (University of Aarhus), Denmark, <https://tasoc.dk/wg1/Projects>, 2016 - Continues

Tess Asteroseismic Science Consortium (Tasc): Working Group 3, Aarhus Universitet (University of Aarhus), Denmark, <https://tasoc.dk/wg3/Projects>, 2016 - Continues

Kepler Asteroseismic Science Consortium (Kasc), Aarhus Universitet (University of Aarhus), Denmark, <https://kasoc.dk/>, 2010 - Continues

Citations

Total Citations (WOS):551

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