



10th International Hybrid Symposium on Atmospheric Sciences

18-21 October 2022
Istanbul - Türkiye

Organizing Institution
Department of Meteorological Engineering

PROGRAM

TAV Conference Center
Faculty of Aeronautics and Astronautics
Istanbul Technical University
and
ONLINE - ZOOM

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Ahmet ÖZTOPAL, Ph.D., Istanbul Technical University, Türkiye

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SUPPORTED BY

The Scientific and Technical Council of Turkey (TÜBİTAK), Türkiye
Turkish Water Foundation, Türkiye
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Betek Boya Kimya ve Sanayi A.Ş., Türkiye

The Union of Chambers of Turkish Engineers and Architects (TMMOB), Chamber of Meteorological Engineers

Tuesday - 18 October 2022

09:30-10:30

REGISTRATION

OPENING CEREMONY

10:30-11:15 **Welcome Remarks** by

Ahmet ÖZTOPAL,

Symposium Chair, Istanbul Technical University

Firat ÇUKURÇAYIR

The Union of Chambers of Turkish Engineers and Architects (TMMOB)
Chamber of Meteorological Engineers

Mikdat KADIOĞLU

Head, Meteorological Engineering Department, Istanbul Technical University

Zahit MECİTOĞLU

Dean, Faculty of Aeronautics and Astronautics, Istanbul Technical University

Erol AYDIN

Vice Director General, Turkish State Meteorological Service

İsmail KOYUNCU

Rector, Istanbul Technical University

11:15-11:30

COFFEE BREAK

SESSION T2 – SEVERE AND HAZARDOUS WEATHER

Session Chair: Mikdat KADIOĞLU, İstanbul Technical University

11:30-12:15 **Invited Speaker**
An Analysis of the Synoptic Dynamic and Thermodynamic Character of Medistorm Falchion
Anthony LUPU, University of Missouri, USA

12:15-12:30 **Impacts of Climate Change on High-Impact Weather Events: 13-14 July 2021 Flash Floods over the Eastern Black Sea Region**
Meral Demirtaş

12:30-12:45 **Comparison Between Classical LFA and Statistically Weighted Lightning Prediction**
Kerim Atilla Korkmaz, Ahmet Duran Şahin

12:45-13:00 **Investigating Avalanche Hazards in Erzurum on 31 January 2020, Using Avalanche Triangles Analysis**
Ümit Yaşar Yılmaz, Burçin Budak, Ayten A. Göktaş, Mikdat Kadioğlu

13:00-14:00

LUNCH BREAK

SESSION T3 – AGRICULTURAL AND FOREST METEOROLOGY

Session Chair: M. Tolga ESETLİLİ, Ege University

- 14:00-14:15** **Solar Radiation Data to Compute Reference Evapotranspiration in Marmara Region and Reference Evaporation Frequency Analyze**
Ali Ünlükara, Ayşenur Baran
- 14:15-14:30** **Estimation of Solar Radiation Data Using Soft Computing Methods and Wavelet Transform**
Bilal Cemek, Emirhan Cemek, Erdem Küçüktopçu
- 14:30-14:45** **Assessment of Growing Degree Days (Gddgrown) Index with Climate Projections**
Hüdaverdi Gürkan, Osman Eskioğlu, Yusuf Çalık, Mithat Ekici, Serpil Yağan, Hikmet Eroğlu, Hakan Doğan
- 14:45-15:00** **Drought Assessment in Türkiye During 2020-2021 Agricultural Year**
Muhammed Cem Akçapınar, Necdet Dolay, Kerim Sarıgül, Gökhan Yücel
- 15:00-15:15** **Evaluation of Climatic Characteristics of Konya Closed Basin for Agricultural Irrigation and Production**
Hüseyin Bulut, Alper Tüfek, Hüdaverdi Gürkan
- 15:15-15:30** **Kurak Sahalarda İklim Değişikliğine Uyumlu Atmosferik Su Hasadı**
Şansel Bildiren, Murat Sargıncı

15:30-15:45

COFFEE BREAK

SESSION T4 – WEATHER ANALYSIS, PREDICTION AND MODELING

Session Chair: Ömer Lütfi ŞEN, Istanbul Technical University

- Invited Speaker**
- 15:45-16:30** **Recent Results from WRF Modeling of The Design of Sustainable Cities: Weather, Air Quality, And Climate Change, And Their Impacts of Human Health**
Robert D. BORNSTEIN, San Jose State University, USA
- 16:30-16:45** **Non-Stationary Investigation of Extreme Temperature with Respect to Soil Moisture as A Covariate**
Sedigheh Anvari, Mahnoosh Moghaddasi
- 16:45-17:00** **Estimation of Temperature Parameter Using Time Series Analysis of Wad Madani City in Sudan**
Mawadda. A. M. Abdallah, Bilal Cemek
- 17:00-17:15** **Predicting Lightning Detection Using Machine Learning (PLD-ML)**
Yalçın Gerek, Mustafa Sert
- 17:15-17:30** **Van Gölü ve Çevresi İçin WRF-Lake Modülünün Test Edilmesi**
Emirhan Cemek, Halil Karakaya, Duygu Aktaş Çubuk, Yezdan Yılmaz, Ahmet Öztopal

18:00-20:00

WELCOME RECEPTION

SESSION W1 - DATA ANALYSIS IN ATMOSPHERIC SCIENCES

Session Chair: Kasım KOÇAK, Istanbul Technical University

- 09:30-09:45** **Long-Term Annual Trends of Spectral Peak Energy and Wind Speed Over the Black Sea: An Application of Innovative Trend Analysis**
Emine Acar, Adem Akpınar, Murat Kankal, Khalid Amarouche
- 09:45-10:00** **Trends and Periodicities of Monthly and Seasonal Precipitation of Turkey for the 1975-2021 Period**
Ali Ümran Kömüşcü, Mehmet Aksoy
- 10:00-10:15** **Determination of the Critical Temperatures Between Snow and Rain: A Case Study of Marmara Region**
Evren Özgür, Kasım Koçak
- 10:15-10:30** **The Influence of The Horizontal Component of The Atmospheric Circulation on The Convection Over Poland**
Kamil Leziak
- 10:30-10:45** **Sea Surface Pressure Climatology of Cyclogenesis Patterns over the Black Sea**
Büşra Öztürk, Mikdat Kadioğlu
- 10:45-11:00** **Defining the Meteorological Drought Trends at Different Time Scales in the Aegean Region**
Ecem Tuncer Uysal, Ahmet Ali Kumanlıoğlu
- 11:00-11:15** **Wind Forecast Improvement of WRF Model by Utilizing Artificial Neural Networks (ANN) in Turkey**
Yiğitalp Kara, Ilgar Ataoğ Akalın, Nursima Gamze Deniz, Umur Dinç, Zeynep Feriha Ünal
- 11:15-11:30** **COFFEE BREAK**

SESSION W2 – ATMOSPHERIC ENVIRONMENT

Session Chair: Sema TOPÇU - Filiz T. KATIRCIOĞLU, Istanbul Technical University

- 11:30-11:45** **Estimating the Cooling Degree Days Evolution Under Climate Change**
Dimitrios Melas, Stavros Keppas, Serafim Kontos, Daphne Parliari, Francesca de'Donato, Stefania Argentini, Giampietro Casasanta
- 11:45-12:00** **A Case Study: Variation of VOCs Levels During the Lockdown Period of Covid-19 Pandemics in Turkey**
Sibel Menteşe, Müge Aydın
- 12:00-12:15** **Air Quality of Gallipoli, Turkey, Aftermath of COVID19 National Restrictions**
Müge Aydın, Sibel Menteşe
- 12:15-12:30** **Determination of Microplastics In Raindrops in The Urban Area of Ankara, Turkey**
Afsoun Nikravan, Parisa Babaeia, Arzu Meral, Batuhan Kibar, Gülen Güllü
- 12:30-12:45** **Characterization of Indoor Airborne Microplastics in a University Campus**
Mansoor Ahmad Bhat, Kadir Gedik, Eftade O. Gaga
- 12:45-13:00** **Characterizing Human Exposure, Dose, And Burden of Disease Linked to Particulate Matter: Lisbon Case Study**
Helder Relvas, Diogo Lopes, Joana Ferreira, Sandra Rafael, Susana Marta Almeida, Vânia Martins, Evangelia Diapouli, Otto Hänninen, Mihalıs Lazarıdis, Ana Isabel Miranda
- 13:00-14:00** **LUNCH BREAK**

SESSION W4 – CLIMATE MODELING

Session Chair: Barış ÖNOL, Istanbul Technical University

Invited Speaker

14:00-14:30 **Climate Change, Rangelands, and Sustainability of Pastoralism in the Eurasian Drylands**

Banzragch NANDINTSETSEG, Istanbul Technical University

14:30-14:45 **CMIP6 Multi-model Ensemble Development for Future Offshore Wind Resources of Turkey**

İrem Işık Çetin, İsmail Yücel

14:45-15:00 **Future Climate Change Projections for Greece Based on An Ensemble of High-Resolution Regional Climate Model Simulations**

Prodromos Zanis, Aristeidis K. Georgoulas, Dimitris Akritidis, Alkiviadis Kalisoras, Dimitris Melas

15:00-15:15 **Heating Cooling Degree Days Assesment**

Serpil Yağan, Yusuf Çalık, Erdoğan Bölük, Yılmaz Açar, Mithat Ekici, Osman Eskioğlu, Hüdaverdi Gürkan

15:15-15:30 **Evaluation of Historical CMIP6 Based Convection-Permitting Climate Simulation over the Black Sea Region**

Mehmet Barış Kelebek, Barış ÖnoI

15:30-15:45 **Changes Occuring in the Wind Farm During a Cyclone Transition in the Marmara Region**

Sena Gülübol, Tarık Kaytancı, Şükran Sibel Mentuş

15:45-16:00

COFFEE BREAK

SESSION WP – POSTER SESSION

15:45-17:40 **(The Program for this Session is available at the last two pages of this booklet)**

Thursday-20 October 2022

Session TH1 – REMOTE SENSING IN ATMOSPHERIC SCIENCES

Session Chair: Filiz BEKTAŞ BALÇIK, Istanbul Technical University

- 09:30-09:45** **TSMS Remote Sensing Web Tools for Forecastors and Researchers**
Kurtuluş Öztürk, Mehmet Zeybek
- 09:45-10:00** **Forecasting Pre-Fire Risk and Monitoring Active Fires with Next Generation Satellites: 2021 Mediterranean Fires (Muğla, Turkey) Case Study**
Sema Çil, Ozan Pirbudak
- 10:00-10:15** **Evaluation of Atmospheric Correction Processors Applied to the Sentinel-2 Image in the Gulf of Izmit**
Nur Yağmur, Adalet Dervişoğlu, Filiz Sunar
- 10:15-10:30** **Relationship Between H₂S And SO₂ Measurements Around Geothermal Power Plants**
Merve Dondu Aydın, Fulya Cingiroğlu, Burcak Kaynak
- 10:30-10:45** **HCHO/NO₂ Column Ratios Derived from TROPOMI for Understanding Ozone Formation Regime**
Merve Eke, Fulya Cingiroğlu, Burcak Kaynak
- 10:45-11:00** **Remote Sensing Using Meteorological Payloads in Nanosatellites: An Overview**
Hasan Şahin, Deniz Demirhan
- 11:00-11:15** **Assessment of Vegetated Areas and LST Using Landsat Satellite Imageries and Google Earth Engine in Burdur Lake**
Mohammed M. Y. Albarqouni, Filiz Bektaş Balçık
- 11:15-11:30** **COFFEE BREAK**

Session TH2 – HYDROLOGY and HYDROMETEOROLOGY

Session Chair: Sevinç ASİLHAN SİRDAŞ - Elçin TAN, Istanbul Technical University

- 11:30-11:45** **Spatial Clustering of Drought Intensity in Turkey Using K-Means Algorithm**
Hıdır Serkendiz, Hasan Tatlı, Ayşegül Kılıç, Mahmut Çetin, Ali Sungur
- 11:45-12:00** **Streamflow Prediction by Using Hydrometeorological Variables - Case Study Pazar Creek-Turkey**
Yağmur Güden, Hakan Aksu
- 12:00-12:15** **Regional Flood Frequency Analysis Around Seyhan Basin**
S. Utku Yılmaz, Efe Çiltaş, Hamza Bakar, Yasemin Eldayih Kanber, Müberra Öz, Ekrem Kesmez, Bihrat Önöz
- 12:15-12:30** **Meteorological and Hydrological Analysis of 14 July 2021 Rize Floods by Flash Flood Guidance System (FFGS)**
Ertan Turgu, Alaattin Uğurlu, Mehmet Aksoy, Emel Ünal, Ali Ümran Kömüşçü, Sercan Akıl
- 12:30-12:45** **The Comparison Between Measured Soil Moisture and Satellite Data, and the Effect of Soil Moisture Changes on Runoff**
Salih Babagiray, Cihat Adsız
- 12:45-13:00** **Determination of Flooded Areas in Meriç River Basin using Sentinel-1 Data**
Rabia Ezgi Tekin, Filiz Bektaş Balçık
- 13:00-13:15** **Comparison Between BOD/COD Ratio and Partition Octanol Water for Toxicity Evaluation in Wastewater**
Latifa Mirzatika Al-Rosyid, Sarwoko Mangkoedihardjo, Nanang Saiful Rizal, Himawan Ganjar Prabowo, Yuvita Dian Siswanti, Musarofa
- 13:15-14:15** **LUNCH BREAK**

**Session TH3 – ATMOSPHERIC BOUNDARY LAYER – URBAN
METEOROLOGY - SEVERE AND HAZARDOUS WEATHER (cont'd)**

Session Chair: Yurdanur S. ÜNAL, Istanbul Technical University

- 14:15-14:30 Thermal Performance Analysis of Urban Areas According to Climate Forecasts**
Berk Adali, Yigit Can Altan
- 14:30-14:45 Evaluating the Urban Impact on Temperature Records of Istanbul and Ankara: How Individual Metropolises May Differ in Their Response to Urbanization?**
Kutay Dönmez, Berkay Dönmez, Cemre Yürük Sonuç, Yurdanur S. Ünal
- 14:45-15:00 Determination of the Common Misconceptions of Eighth Grade Students About Atmosphere Events: A Scale Development and Implementation Study**
Basriye Öngel, Saadet Deniz Korkmaz
- 15:00-15:15 Modeling of the Indoor Air Quality Flow of the Turkish Science Base Located on Antarctica Horseshoe Island**
Erhan Arslan, Furkan Ali Küçük, Sevinç Asilhan Sırdaş
- 15:15-15:30 Investigation of Wind Slip Occurring at International Airports in the Balkans, Turkey and the Caucasus**
Nurdan Ekinci, Emrah Tuncay Özdemir
- 15:30-15:45 2018-2022 Yılları Arasında İstanbul Uluslararası Havalimanı'nda Meydana Gelen Sisli Günlerin Araştırılması**
Cansu Aktaş, Berfin Yılmaz, Ayşegül Biçer, Onur Kula, Emrah Tuncay Özdemir
- 15:45-16:00 İstanbul Uluslararası Havalimanı'nda Meydana Gelen Rüzgar Fırtınalarının Analizi**
Gizem Bakır, Rabia Bozdemir, Şükran Çelik, Betül Sena Kurt, Dilara Öz, Emrah Tuncay Özdemir
- 16:00-16:15 COFFEE BREAK**

Session TH4 – RENEWABLE ENERGY - MISCELLANEOUS

Session Chair: Bahtiyar EFE, Samsun University

- 16:15-16:30 Contribution to the Assessment of CSP Technologies for Electricity Generation in Algeria: The Case of 1MW Solar Tower Power Plant**
Yettou Fatiha, GAMA Amor
- 16:30-16:45 Simulation Study of Aerosol Effect on Optical Efficiency of Solar Tower Power Plant in Ghardaïa-Algeria Site**
GAMA Amor, Yettou Fatiha
- 16:45-17:00 Calibrating Multi-Model 2-Metre Temperature Forecasts by Using Bayesian Model Averaging (BMA) over Turkey**
Zeynep Feriha Ünal, Mehmet Fatih Büyükkasabaşı, Meral Sezer, Emine Say

Friday-21 October 2022

Session F1 – AIR POLLUTION MODELING

Session Chair: Selahattin INCECİK, IUAPPA

- 09:30-09:45** **Characterizing Inhalable Major Elemental Components of PM_{2.5} In Istanbul (Turkey) And Their Impact on Pathogens: A Case Study During COVID-19 Consecutive Lockdown and Unlockdown Days**
Aslı Baysal, Hasan Saygın, Sevilay Zora, Burcu Onat
- 09:45-10:00** **Investigation of Outdoor PM_{2.5} Oxidative Characteristics and Impact on Activity and Biofilm Production of Bacteria**
Aslı Baysal, Hasan Saygın, Sevilay Zora, Burcu Onat
- 10:00-10:15** **Airborne Nano-Particulate Matter Size Distribution and Sources in the World**
Ülkü Alver Şahin
- 10:15-10:30** **Particulate Matter Number Size Distribution in Subway Stations in Istanbul**
Dila Aydın-Aytekin, Ülkü Alver Şahin, Burcu Onat, Burcu Uzun, Coşkun Ayvaz
- 10:30-10:45** **Using Sensor Technologies to Measure Particulate Matter in Urban, Traffic, and Industrial Areas in Istanbul**
Barış Can Üstündağ, Ülkü Alver Şahin, Coşkun Ayvaz, Gülkan Güner, Orhun Hazneci, Ayşe Güleç
- 10:45-11:00** **Health Risk Associated with Particulate Matter in Subway Stations in Istanbul**
Burcu Onat, Burcu Uzun, Ülkü Alver Şahin, Coşkun Ayvaz, Dila Aydın, Muhammet Doğan
- 11:00-11:15** **Investigation of PM_{2.5} Levels in Different Indoor Environments of a University Campus**
Göneng Ozarlı, Gözde Gökbulut, Özlem Özden Üzmez

11:15-11:30

COFFEE BREAK

Session F2 – UPPER ATMOSPHERE

Session Chair: Z. Funda BOSTANCI GÜVER, Istanbul University

- 11:30-11:45** **Establishing and Commissioning of Meteorological and Astronomical Monitoring (MAM) Tower in Eastern Anatolia Observatory (DAG) Site**
Recep Balbay, Cihan Tuğrul Tezcan, Onur Şatır, Burak Bülent Güçsav
- 11:45-12:00** **Mapping of Astronomical Observation Types (AOT) over Türkiye and Analysis of AOT at Eastern Anatolia Observatory (DAG) Values from Remote Sensing Cloud Data**
Recep Balbay, Fatma Başak Yıldırım, Kazım Kaba, Cahit Yeşilyaprak
- 12:00-12:15** **Turkey's First Cosmic-Ray Muon Measurements in Antarctica**
Ahmet Polatoğlu, Cahit Yeşilyaprak, Onur Şatır, Mithat Kaya
- 12:15-12:30** **Analysis of Relations Between Solar Activity, Cosmic Rays and Earth Climate Using Machine Learning Techniques**
Bükem Belen, Uğur Murat Leloğlu, Melahat Bilge Demirköz
- 12:30-12:45** **Investigation of the Geomagnetic Storm-time Changes in the Thermospheric Neutral Wind Using an Empirical Model**
Nur Sena Tepedelen, Emine Ceren Kalafatoglu Eyiguler, Zerefsan Kaymaz

12:45-14:00

LUNCH BREAK

Session F3 – AIR POLLUTION MODELING

Session Chair: Hüseyin TOROS, Istanbul Technical University

- 14:00-14:15** **Meteorological Analysis of the Sand and Dust Storm in Konya on November 30, 2021**
Emel Ünal, A. Gökçen Işık, Derya Ergün, Barış Özgün, Cihan Dündar
- 14:15-14:30** **Global and Regional Analysis of Atmospheric Aerosols**
Cihan Dündar, M. Ali Pekin, İsameddin Omak, A. Gökçen Işık
- 14:30-14:45** **Investigation of Dispersion Models and Possible Health Effects of Air Pollutants Emitted from an Industrial Plant**
Ömer Mert Bayraktar, Atilla Mutlu
- 14:45-15:00** **Impact of the Pandemic on Air Quality: Urban and Rural Case Study**
Furkan Ali Küçük, Ceyhan Kahya
- 15:00-15:15** **Sensitivity of HYSPLIT Back Trajectory Clustering to Meteorological Inputs**
D. Deniz Genç Tokgöz, Firdevs Doğrusever
- 15:15-15:30** **Impact of Covid-19 Pandemic on The Air Quality in Turkey**
Samet Öztürk
- 15:30-15:45** **An Investigation of The Effects of Dust Transport and Dust Storms on PM₁₀ And PM_{2.5} At Airports in The Marmara Region of Turkey**
Enes Birinci, Emrah Tuncay Özdemir, Ali Deniz
- 15:45-16:00** **CLOSING CEREMONY**

SESSION WP – POSTER SESSION		
	Session Chair: Emrah Tuncay ÖZDEMİR Istanbul Technical University	Session Chair: Deniz DEMİRHAN Istanbul Technical University
15:45-15:50	The effect of climate change on floods in Iran, a case study of the Caspian Basin Mehdi Shafaghati, Sepideh Chobe	Effect of Climate Change on Heating and Cooling Requirement in Antalya Serhat Sensoy, Veli Çolak, Yalçın Şah, Osman Eskioğlu, Hüdaverdi Gürkan, Necla Türkoğlu, İhsan Cicek
15:50-15:55	Growing Degree Days for Various Crops in Somalia Mohamed Jibril Mohamed, Bilal Cemek, Erdem Küçüktopcu	An investigation of thunderstorm over Istanbul: 27 July 2017 event Enes Birinci, Ayhan Çağlıyan, Mikdat Kadioğlu
15:55-16:00	Towards a bioinformatics approach to assess the impact of salinity on root morphology Dahane Miloud, Belaledj Amel, Belkhdja Moulay	Effect of Hunga Tonga - Hunga Ha'apai Volcanic Eruptions on Atmospheric Pressure Muhammet Ali Pekin, Cihan Dünder, Barış Özgün, Ayşe Gökçen Işık, Mustafa Sert, Serap Armutlu
16:00-16:05	Machine Learning Prediction of Pyrolysis Yield Seyed Mohammad Razavi, Rahmat Sotudeh Gharebagh, Navid Mostoufi	The Impact and Control of Climate Change in European Coastal Cities: A brief summary of SCORE Project Neslihan Beden, Sema Arıman, Nazire Göksu Soydan Oksal, Şule Haliloğlu, Hayatullah Ahmadzai
16:05-16:10	Evaluation of Highest One Day Precipitation Amount (Rx1day) Index with Climate Projections Mithat Ekici, Hüdaverdi Gürkan, Yusuf Çalık, Osman Eskioğlu, Serpil Yağan, Hikmet Eroğlu, Hakan Doğan	A Case Study of Lake Effect Snow: 17-18th February 2015, Istanbul Bedirhan Kula, Bahtiyar Efe, Şule Haliloğlu, Görkem Şişman, Rumeysa Okumuş
16:10-16:15	Ataşehir Sustainable Energy Action Plan Ayten Bağdatlıoğlu Kartal, M. İpek Önder, Feyza Dişli, Esra Demir, Melda Karademir	Classification of Strong Wind Events Using Agglomerative Clustering in Turkey Umut Gül Başar Görgün, Şükran Sibel Menteş
16:15-16:20	Flood Risk Analysis in The Mediterrenian Region of Turkey by Using HADGEM2-ES Climate Projection Erdem Odabaşı	The Impact of Highway on Air Pollution and Climate Change and Examination of the Used Models Hande Emanet Beba, Zübeyde Öztürk
16:20-16:25	The Importance of the Education and Outreach: Meteorology, Climate Change, and Polar Regions Deniz Vural, Erhan Arslan, Furkan Ali Küçük, H. Hakan Yavaşoğlu, Burcu Özsoy	Meteorological Analysis of Flood in Rize and Hail Event in Artvin Edanur Gözet, Ebru Nur Gürbüz Aldanbaş, Cem Topal
16:25-16:30	Approach of an analysis of the impact of climate change on agriculture in Algeria Belkhdja Moulay, Aissat Amina	The Analysis and Structure of Storm Dennis Rozerin Koyuncu, Mikdat Kadioğlu
16:30-16:35	Trends of monthly temperatures of Sivas in Turkey Murat Ay	Evaluating Weather Forecasting Feature Implementation for Istanbul Technical University Campuses Umur Dinç, Zeynep Feriha Ünal, Yağızcan Ürkmez, Yiğitalp Kara, İpek Nur Hazar, Melike Bilgin, Hüseyin Toros
16:35-16:40	Analysis of NAO Effect on Precipitation for Istanbul, Türkiye F. Başak Saka, Mikdat Kadioğlu	Meteoroloji Radarları ile Nicel Yağış Tahmini Esin Oğuz, Nilgün Koç, Canberk Karadavut
16:40-16:45	Climate Change Impact on Contrail Cloudiness over Türkiye Sevinç Asilhan Sırdaş	Asi Havzası için Standart Yağış İndeksinin Zamansal Ve Mekansal Olarak Değişimi Ece Çay, Merve N. Çulha, Elçin Tan, Ahmed Faruk Öztürk, Ziyaattin Durmaz, Sevinç Asilhan Sırdaş

16:45-16:50	Analysis of Electromagnetic Wave Propagation in a Magnetized Plasma Slab by using Finite-Difference Time-Domain (FDTD) Method Deniz Öztarhan, Sebahattin Eker	Seyhan Havzasında Standart Yağış İndeksi Kullanılarak Kuraklık Hesaplanması Merve Nur Çulha, Bilge Çinkilinc, Ece Çay, Ahmed Faruk Öztürk, Elçin Tan, Ziyaattin Durmaz, Sevinç Asilhan Sırdaş
16:50-16:55	Investigation of Electrical Discharge Properties and Vertical Development of Thunderstorms in South Aegean Region of Türkiye Sevinç Asilhan Sırdaş	Günlük Akım Gözlem Zaman Serilerindeki Eksiklerin Tamamlanmasında Bir Makine Öğrenmesi Algoritmasının Uygulaması Musa Halit Kaya, Çağdaş Tarı, Elçin Tan ve Sevinç Asilhan Sırdaş
16:55-17:00	Coupled Wake and Blockage Modelling for a Wind Farm Janset Betül Çam, Ferhat Bingöl	Samsun Salıpazarı Barajının HEC-HMS ve HEC-RAS Modelleri Kullanılarak Taşkın Kontrol Amaçlı Analizi Melek Candan İpek, Emirhan Cemek, Elçin Tan
17:00-17:05	Dealing with Atmospheric Turbulence from the Perspective of Astronomy Cihan Tuğrul Tezcan, Recep Balbay, Onur Şatır, Sinan Aliş, Cahit Yeşilyaprak	Melen Çayı Havzası'nın HEC-HMS ile Hidrolojik Modellenmesi Emirhan Cemek, Melek Candan İpek, Açıl Ayça Özata, Bilge Nur Emre, Elçin Tan, Sevinç Asilhan Sırdaş
17:05-17:10	Eastern Anatolia Observatory (DAG) – Meteorological Service (MGM) Automatic Meteorology Observation Station Recep Balbay, Onur Şatır, Cahit Yeşilyaprak, Ahmet İlker Dokuyucu, Akif Mamur, Hüseyin Arabacı, İsmail Temir	İzmir Bergama Bölgesindeki Rüzgar Enerji Santralinin WASP Modelleme Verilerinin Ve Gerçek Verilerin Karşılaştırılması Begüm Arslan, Nazlı Doğan, Ruveyda Yimit, Şükriye Güllüçay, Elçin Tan
17:10-17:15	A MATLAB study for PV Panel Tilt Angle Calculations by Solar Radiation of Istanbul, Turkey Zuhal Er, Burak Can Kaymak	Pasif Mikrodalga Verileriyle Dolu Yağışı Tespiti Abdurrahman Durmaz, Ahmet Öztopal
17:15-17:20	Estimating Ionospheric Slab Thickness for the One Month Period of December 2021 in Horseshoe Island, western Antarctica Furkan Ali Küçük, M. Baran Ökten, Erhan Arslan, Göksu Uslular, Deniz Vural, Hasan Hakan Yavaşoğlu, M. Oğuz Selbesoğlu, Burcu Özsoy	Flash Flood and Forest Fire Early Warning by X-Band Weather Radar M. Emre Çiftçi, Yücel Özdemir, Ergenekon Hassoy, Murat Başaran, Aras Albayrak, Ferhat Köse
17:20-17:25	Agricultural Irrigation Management in Turkey against Increasing Drought Due to Climate Change Neşe Üzen	Amplification of Surface-based Temperature and Pressure Over the Latitudinal Bands of Arctic Cenk Eriç, Furkan Aysal, Deniz Demirhan
17:25-17:30	İstanbul Uluslararası Havalimanı'nda Meydana Gelen Kar Hadiselerinin Meteorolojik Analizi Buket Yoğun, Sinan Şahinoğlu, Hilal Çeltikci, Emrah Tuncay Özdemir	2015-2021 Yılları Arasında İstanbul İçin PM₁₀ Miktarı ve Sağlık Üzerine Etkisi Burçin Budak, Ceyhan Kahya
17:30-17:35	Konya Havalimanında 2012-2021 Yıllarında Meydana Gelen Gök Gürültülü Fırtınaların Araştırılması Ayten Ayar Göktaş, Emrah Tuncay Özdemir	Uydu Verileriyle Türkiye Bulutluluk Analizi Sena Çağla Apaydın, Ahmet Öztopal
17:35-17:40	Research of Pollutant Changes Caused by Transportation Effect for the Marmara Region Sedanur Süer, Ceyhan Kahya	

Wind

Drift

West Wind

Drift

West Wind

Drift



Permanent polar pack ice

CURRENTS

Warm current
 Cold current
 Drift per hour above shaft indicator
 Drift per hour below shaft indicator
 Seasonal drift during northern winter
 Each thick stroke indicates 1 nautical mile per hour (Each thin stroke below indicates 1/2 nautical mile drift during northern winter)

CURRENTS

Warm current
 Cold current
 Drift per hour above shaft indicator
 Drift per hour below shaft indicator
 Seasonal drift during northern winter
 Each thick stroke indicates 1 nautical mile per hour (Each thin stroke below indicates 1/2 nautical mile drift during northern winter)