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The Eighth International Conference on Agro-Geoinformatics

Program at a Glance

Day 1: July 16, 2019 (Tuesday)			
08:00-09:00	**Badge Pickup and On-site Registration** Location: Suleyman Demirel Cultural Center, Priene Terrace Istanbul Technical University (ITU)		
09:00-09:30	**Opening Ceremony**		
09:30-09:40	**Announcement of the Agro-Geoinformatics 2020 Conference**		
09:40-10:50	**Keynote Speech**		
10:50-11:10	Coffee Break		
11:10-12:55	**Keynote Speech**		
12:55-14:00	Lunch		
14:00-15:20	GS 01	GS 03	GS 07
15:20-15:40	Coffee Break		
15:40-17:00	GS 01	GS 12 *	GS 07
Day 2: July 17, 2019 (Wednesday)			
09:00-11:00	Plenary Session		
11:00-11:20	Coffee Break		
11:20-12:40	GS 06	GS 08	GS 11
12:40-14:00	Lunch		
14:00-15:20	GS 06	GS 08	GS 10 / GS14
15:20-15:40	Coffee Break		
15:40-17:00	GS 06	GS 08	GS 10
18:30-20:30	Conference Reception Diner (Departure from Venue)		
Day 3: July 18, 2019 (Thursday)			
09:00-11:00	Plenary Session		
11:00-11:20	Coffee Break		
11:20-12:40	GS 06	GS 04	GS 09
12:4 0-14:00	Lunch		
14:00-15:20	GS 05	GS 02	GS 09
15:20-15:40	Coffee Break		
15:40-17:00		GS 15	GS 09
Day 4: July 19, 2019 (Friday)			
09:00-12:00	Field trip (TBD)		

Table of Sessions

K	Keynote
P	Plenary
GS01	Acquisition, Processing, and Information Extraction of Remotely Sensed Data
GS02	Agriculture Decision Support Systems
GS03	Ecosystem, Ecology, Energy, Weather and Climate Analysis for Agriculture and Agriculture Sustainability
GS04	Water Resource Planning and Management
GS05	Crop yield Modeling and estimation
GS06	Cropland Mapping and Land Use / Landcover Change Monitoring
GS07	Cropland Evapotranspiration, Soil Moisture, and Soil Monitoring
GS08	Agriculture Diseases Disaster and Damage Monitoring
GS09	Cropland and Crop Condition Monitoring
GS10	Data integration, Data Fusion, Interoperability, Computing and Web Application
GS11	Cropland suitability analysis and cropland monitoring
GS12	**Special Session:** Remote Sensing of Coastal Zone
GS13	Multi-disciplinary Session
GS14	Poster Session
GS15	Corporate Sponsor Presentation Session

Agro-Geoinformatics 2019 Conference Program

July 16-19, 2019

Opening Session and Keynote Session Schedule

Check in time: 08:00am – 09:00am Suleyman Demirel Cultural Center Priene Terrace

Tuesday, July 16	09:00 – 12:55
Opening Ceremony **Chair: Liping Di, Alper Unal, Berk Ustundag**	**Location: Main Conference Hall**
Time	Events
09:00-09:30	Opening ceremony & welcome addresses
09:30-09:40	Announcement of the Agro-Geoinformatics 2020 Conference Prof. Liping Di, CSISS/George Mason University
Keynote Speeches **Chair: Jenny Du, Berk Ustundag**	**Location: Main Conference Hall**
Time	Invited Speaker & Title
09:40-10:15	John P. Verboncoeur (Remote) *SmartAg: Smart Technologies and Innovations Applied to the Agrofood Supply Chain*
10:15-10:50	Mutlu Ozdogan *Bridging the field-level agricultural information gap with remote sensing: opportunities and challenges*
10:50-11:10	Coffee Break
10:10-11:45	Zhongxin Chen *Geospatial IT applications for digital innovation at FAO*
11:45-12:20	Ingo Simonis *Interoperability as a key driver for multi-disciplinary research*
12:20-12:55	Liping Di *Applications of machine learning in crop monitoring, prediction and decision making*

Plenary Sessions Schedule

Wednesday, July 17	09:00 – 11:00
Plenary Session **Chair: Yun Chen, D Turgay ALTILAR**	**Location: Main Conference Hall**
Time	Speaker & Title
09:00-09:30	*The bonus and challenge to China agriculture from the ongoing change of its bioclimatic environment* Tingbao Xu
09:30-10:00	*Data revolution in agricultural insurance* Vladimir Crnojevic
10:00-10:30	*Connecting images from space to decisions on earth* Daniel Sayag - Airbus
10:30-11:00	*Agricultural planting service based on PIE-LANDSCAPE Platform* Linlin Guo – PIESAT
11:00-11:20	Coffee Break

Thursday, July 18	09:00 – 11:00
Plenary Session **Chair: Zhe Guo, Ece Olcay Gunes**	**Location: Main Conference Hall**
Time	Speaker & Title
09:00-09:30	*Geoinformatics and Environmental Modelling – Australian Cases* Yun Chen
09:30-10:00	*Data Fusion in Agricultural Information Systems* Berk Ustundag
10:00-10:30	*Integration of time series Sentinel-1 and Sentinel-2 data for crop mapping in heterogeneous agricultural areas of Xinjiang, China* Jinsong Chen
10:30-11:00	*Exploring the spatial characteristics of typhoon-induced vegetation damages in southeast costal area of China during 2000-2018* Lizhen Lu
11:00-11:20	Coffee Break

Breakout Sessions Schedule, July 16

Tuesday, July 16			14:00 - 15:20
GS 01: Acquisition, Processing, and Information Extraction of Remote Sensing Data **Chair: Murvet Kirci**			**Location: Cappadocia**
Time	ID	Title & Authors	
14:00-14:20	18	*Study on Extraction Methods of Winter Wheat Area Based on GF-1 Satellite Images* Jie Shan, Zhiming Wang, Ling Sun, Lin Qiu, Jingjing Wang, Kun Yu and Liangjun Mao	
14:20-14:40	20	*A Phenology-Based Cropping Pattern Mapping Method Based on Remotely Sensed Time-Series Vegetation Index Data* Jianhong Liu	
14:40-15:00	36	*Research on Cotton Information Extraction Based on Sentinel-2 Time Series Analysis* Baiyang Ren, Huizhen Zhou and Hua Shen	
15:00-15:20	39	*Extraction of paddy field cropping patterns in Guangdong Province based on multi-temporal remote sensing data* Wendong Zhu and Hongzhong Li	
Coffee Break			

Tuesday, July 16			14:00 - 15:20
GS 03: Ecosystem, Ecology, Energy, Weather and Climate Analysis for Agriculture and Agriculture Sustainability **Chair: Ugur Alganci**			**Location: Ephesus**
Time	ID	Title & Authors	
14:00-14:20	5	*The impact of climate change on rice production in Thailand* Jainta Chomtoranin, Eric Strobl, Robert Elliott and Elodie Blanc	
14:20-14:40	55	*Study on the Land Use Transformation and Spatial-Temporal Variation of Ecosystem Service in Maoming City, Guangdong Province* Zhiyu Ma, Shiyin Chen and Caixue Ma	
14:40-15:00	141	*Farming on the edge: Architectural Goals* Anderson Carvalho, Niall O' Mahony, Lenka Krpalkova, Sean Campbell, Joseph Walsh and Pat Doody	
15:00-15:20	69	*Tracking the magnitude of climate change and variability with remote sensing data to improve targeting of climate smart agricultural technologies* Francis Kamau Muthoni	
Coffee Break			

Tuesday, July 16			14:00 - 15:20
GS 07: Cropland Evapotranspiration, Soil Moisture, and Soil Monitoring **Chair: Bilgi Gorkem Yazgac**			**Location: Lycia**
Time	ID	Title & Authors	
14:00-14:20	52	*Downscaling of FY3B Soil Moisture Based on Land Surface Temperature and Vegetation Data* Jiahui Sheng, Peng Rao and Hongliang Ma	
14:20-14:40	179	*Comparison of NDVI and RVI Vegetation Indices Using Satellite Images* Abdurrahman Gonenc, Emrullah Acar and Mehmet Sirac Ozerdem	
14:40-15:00	61	*Fine Prediction Mapping of Soil Nutrient Content Supported by High Resolution Remote Sensing Image* Wen Dong, Yingwei Sun, Jiancheng Luo and Yunrui Hai	
15:00-15:20	82	*Machine Learning based Regression Model for Prediction of Soil Surface Humidity using Polarimetric SAR Features* Emrullah Acar, Mehmet Sirac Ozerdem and Berk Ustundag	
Coffee Break			

Tuesday, July 16			15:40 - 17:20
GS 01: Acquisition, Processing, and Information Extraction of Remote Sensing Data **Chair: Li Lin**			**Location: Cappadocia**
Time	ID	Title & Authors	
15:40-16:00	130	*Building Drought-Resistant Soil Map by Using GIS* Yusuf Kurucu, Mustafa Tolga Esetlili, Gizem Cicek and Ozge Demirtas	
16:00-16:20	176	*Building Near-Real-Time MODIS Data Fusion Workflow to Support Agricultural Decision-making Applications* Li Lin, Liping Di, Chen Zhang, Liying Guo, Junmei Tang, Eugene Yu, Md. Shahinoor Rahman, Haoteng Zhao, Zhiqi Yu, Ziheng Sun and Juozas Gaigalas	
16:20-16:40	173	*Utilizing Cloud Computing to Facilitate the Dissemination of Cropland Data Layer* Chen Zhang, Liping Di, Zhengwei Yang, Li Lin, Md. Shahinoor Rahman, Zhiqi Yu and Eugene G. Yu	
16:40-17:00	143	*VCI-based Analysis of Spatio-temporal Variations of Spring Drought in China from 1981 to 2015* Liang Liang	
17:00-17:20	134	*The choices of corn and soybean for planting in the Contiguous U.S.* Liying Guo and Liping Di	

Tuesday, July 16			15:40 - 17:00
GS 12: Special Session (Remote Sensing of Coastal Zone) **Chair: Delu Pan, Xiaoyu Zhang**			**Location: Ephesus**
Time	ID	Title & Authors	
15:40-16:00	27	*3D Suspended Sediment Concentration Mapping through Kriging-based Optimal Shipping Path Planning* Jiang Di, Zhang Xiaoyu, Hu Haoji and Xu Wen	
16:00-16:20	43	*Observation of Suspended Sediment in the Surrounding Sea Waters of Dajin Island Based on CASI Hyperspectral Data* Huang Guorong, Zhang Xiaoyu, Han Yachao, Chen Jiaxing and Zhang Yongjun	
16:20-16:40	167	*Remote Sensing Monitoring and Environmental Pollution Load Assessment of Coastal Aquaculture Area Based on GF-2* Wang Tinggang, Zhang Xiaoyu, Xiong Yixuan, Huang Guorong and Chen Jiaxing	
16:40-17:00	170	*Diffuse Attenuation Coefficient Inversion for the Yangtze Estuary and Its Adjacent Sea Areas on the GOCI Images and Application in the Pre-evaluation of Airborne Laser Bathymetry* Jiaxing Chen, Xiaoyu Zhang and Guorong Huang	

Tuesday, July 16		15:40 - 17:00
GS 07: Cropland Evapotranspiration, Soil Moisture, and Soil Monitoring **Chair: Hulya Yalcin**		**Location: Lycia**
Time	ID	Title & Authors
15:40-16:00	89	*Effect of Soil Property Changes on Soil Moisture Profile Estimation using Cascaded Wavelet Pre-processed Neural Networks* Ajla Kulaglic and Berk Ustundag
16:00-16:20	112	*Crop Mapping Improvement by Combination of Optical and SAR Datasets* Rouhollah Nasirzadehdizaji, Fusun Balik Sanli, Ziyadin Cakir and Elif Sertel
16:20-16:40	54	*Spatial Downscaling of the FY3B Soil Moisture Using Random Forest Regression* Jiahui Sheng, Peng Rao and Hongliang Ma
16:40-17:00	116	*Evapotranspiration Mapping through Convolutional Neural Networks* Meric Yucel, Hikmet Altintas and Burak Berk Ustundag
17:00-17:20	110	*Monitoring land cover changes during different growth stages of semi-arid cropping systems of wheat and sunflower by NDVI and LAI* Melis Ozge Pinar and Gunay Erpul

Breakout Sessions Schedule, July 17

Wednesday, July 17			11:20 - 12:40
GS 06: Cropland Mapping and Landuse / Landcover Change Monitoring **Chair: Yuanzheng Shao**			**Location: Cappadocia**
Time	ID	Title & Authors	
11:20-11:40	11	*Wetland Environmental Protection and Spatial Distribution of Plant Communities in Arid and Semi-arid Areas of Northwest China* Zhenfei Zhang	
11:40-12:00	23	*Automatic Segmentation of Agricultural Areas from Orthophoto and Sentinel-2 Images Using Deep Learning in Google Earth Engine + Colab: A Case Study of Tea Gardens* Salih Bozkurt and Esra Erten	
12:00-12:20	32	*Comparing the Impact of Mapping Error on the Representation of Landscape Pattern on Upscaled Agricultural Maps* Peijun Sun and Russell Congalton	
12:20-12:40	33	*Gobal Forest Cover Mapping using Landsat and Google Earth Engine Cloud Computing* Xiaomei Zhang	
Lunch			

Wednesday, July 17			11:20 - 12:40
GS 08: Agriculture Disaster and Damage Monitoring (Drought, Flood, Disease) **Chair: Ayda Aktas**			**Location: Ephesus**
Time	ID	Title & Authors	
11:20-11:40	6	*Determination of the Flooded Agricultural Lands with Spot 6 High Resolution Satellite Images: A case study of Menderes Plain, Turkey* Ugur Alganci, Elif Sertel and Sinasi Kaya	
11:40-12:00	159	*Air Temprature Threshold of 10 °C by Vegetation End Days in Turkey* Kadir Aytac Ozaydin, Ayzin B. Kuden, Ali Kuden and Yuksel Nadaroglu	
12:00-12:20	47	*Analysis of Temporal and Spatial Variation of Growing Season Drought in Jiling Province based on Standardized Precipitation Evapotranspiration Index* Weidan Wang and Li Sun	
12:20-12:40	56	*Near Real Time Crop Loss Estimation using Remote Sensing Observations* Suryakant Sawant, Jayantrao Mohite, Mariappan Sakkan and Srinivasu Pappula	
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Wednesday, July 17			11:20 - 12:40
GS 11: Cropland Suitability Analysis and Cropland Monitoring **Chair: Elif Sertel**			**Location: Lycia**
Time	ID	Title & Authors	
11:20-11:40	09	*Evaluation of Farmland availability and Space for Large-scale Mining activities at village scale* Abdul-Wadood Moomen and Ibrahim Yussif	
11:40-12:00	16	*Exploring Spatial Symbiosis of Agriculture and Mining for Sustainable Development in Northwest Ghana* Abdul-Wadood Moomen, Michela Bertolotto, Pierre Lacroix and David Jensen	
12:00-12:20	7	*Prediction Of Evapotranspiration Rates Of Agricultural Crops Using Remotely Sensed Thermal Radiometric Data* Ahmet Nejat Evsahibioglu	
12:20-12:40	146	*Yield Estimation with Remote Sensing and Geographic Information Systems: Case Study of Wheat and Maize in Cukurova* Mehmet Akif Erdogan, Fizyon Sonmez Erdogan, Suha Berberoglu and Nazim Aksaker	
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Wednesday, July 17			14:00 - 15:20
GS 06: Cropland Mapping and Landuse / Landcover Change Monitoring **Chair: Jinsong Chen**			**Location: Cappadocia**
Time	ID	Title & Authors	
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14:20-14:40	35	*Estimating Tea Plantation Area Based on Multi-source Satellite Data* Yanhong Huang, Shirui Li, Lingbo Yang, Jiefeng Cheng, Wenjie Li, Yan Chen and Jingfeng Huang	
14:40-15:00	44	*A Booster Analysis of Extreme Gradient Boosting for Crop Classification Using PolSAR Imagery* Mustafa Ustuner, Fusun Balik Sanli, Saygin Abdikan, Gokhan Bilgin and Cigdem Goksel	
15:00-15:20	63	*Geo-parcel based Crops Classification with Sentinel-1 Time Series Data via Recurrent Neural Network* Sun Yingwei, Luo Jiancheng, Wu Tianjun, Yang Yingpin, Dong Wen, Liu Hao, Gao Lijing and Hu Xiaodong	
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Wednesday, July 17			14:00 - 15:20
GS 08: Agriculture disaster and damage monitoring (Drought, Flood, Disease) **Chair: Meric Yucel**			**Location: Ephesus**
Time	ID	Title & Authors	
14:00-14:20	57	*Monitoring Locusta Migratoria Manilensis Damage using Ground Level Hyperspectral Data* Xiaomei Zheng, Peilin Song, Yingying Li, Kangyu Zhang, Huijuan Zhang, Li Liu and Jingfeng Huang	
14:20-14:40	142	*GIS Based Resource Management and Optimization for Agricultural Production* Gursel Kusek	
14:40-15:00	83	*Application of Sentinel 2 data for drought monitoring in Texas, America* Yuanyuan Chen, Li Sun, Weidan Wang and Zhiyuan Pei	
15:00-15:20	158	*Air Temprature Threshold of 10 °C in Turkey by Vegetation Start Days* Kadir Aytac Ozaydin, Yuksel Nadaroglu, Ali Kuden and Ayzin Kuden	
Coffee Break			

Wednesday, July 17			14:00 - 15:20
GS 10: Data Integration, Data Fusion, Interoperability, Computing and Web Application Chair: Tingbao Xu			Location: Lycia
Time	ID	Title & Authors	
14:00-14:20	31	*Application and Research Progress of Geographic Information System (GIS) in Agriculture* Fei Zhang and Nengxiu Cao	
14:20-14:40	29	*Fractional Order Calculus Based Fruit Detection* Bilgi Gorkem Yazgac and Murvet Kirci	
14:40-15:00	156	*Deep Neural Network Architecture and Hyperparameters for Crop Yield Prediction: A Case Study of Wheat Yield in Sanliurfa, Turkey* Anil Suat Terliksiz and D Turgay Altilar	
15:00-15:20	157	*Use Of Deep Neural Networks for Crop Yield Prediction: A Case Study of Soybean Yield in Lauderdale County, Alabama, USA* Anil Suat Terliksiz and D Turgay Altilar	
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Wednesday, July 17			15:40 - 17:20
GS 06: Cropland Mapping and Landuse / Landcover Change Monitoring **Chair: Ece Olcay Gunes**			**Location: Cappadocia**
Time	ID	Title & Authors	
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17:00-17:20	145	*Spatial Water Budget Calculation in the case of Cool-Season Cereals, Warm-Season Cereals, and Pome Fruits in Seyhan River Basin* Fizyon Sonmez Erdogan, Suha Berberoglu and Mehmet Akif Erdogan	

Wednesday, July 17			15:40 - 17:20
GS 08: Agriculture Disaster and Damage Monitoring (Drought, Flood, Disease) **Chair: Di Wang**			**Location: Ephesus**
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16:00-16:20	117	*Impacts of El Nino Southern Oscillation (ENSO) and North Atlantic Oscillation(NAO) on the Olive (Olea europaea) Yield in Mediterranean Region, Turkey* Asli Uzun and Beyza Ustaoglu	
16:20-16:40	70	*Integration and Importance of Soil Mapping Results in the Precision Agriculture* Mehmet Cullu, Mustafa Teke, Nusret Mutlu, Ufuk Turker, Fatih Bozgeyik and Ali Volkan Bilgili	
16:40-17:00	106	*Greenhouse Mapping using Object Based Classification and Sentinel-2 Satellite Imagery* Filiz Bektas Balcik, Gizem Senel and Cigdem Goksel	
17:00-17:20	17	*Advanced Cyberinfrastructure for Agricultural Drought Monitoring* Ziheng Sun	

Wednesday, July 17			15:40 - 17:00
GS 10: Data integration, Data Fusion, Interoperability, Computing and Web Application Chair: Ajla Kulaglic			Location: Lycia
Time	ID	Title & Authors	
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16:00-16:20	75	*Agro-meteorological Data Processing and Nowcasting Using Deep Learning on the Edge* Halil Durmus, Bilgi Gorkem Yazgac, Inis Buzi, Ece Olcay Gunes, Murvet Kirci and Burak Berk Ustundag	
16:20-16:40	147	*Simulating Second Crop Maize Growth under Different Irrigation Regimes in Lower Seyhan Plain using CropSyst Model* Ahmet Cilek, Suha Berberoglu and Cenk Donmez	
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Breakout Sessions Schedule, July 18

Thursday, July 18			11:20 - 12:40
GS 06: Cropland Mapping and Landuse / Landcover Change Monitoring **Chair: Zhe Guo**			**Location: Cappadocia**
Time	ID	Title & Authors	
11:20-11:40	118	*Wavelet Preprocessed Neural Network Model for Leaf Wetness Prediction* Meric Yucel, Alper Akoguz, Selim Eren Eryilmaz and Halil Ozgur	
11:40-12:00	101	*Landscape pattern change of Shengjin Lake Wetland from 1993 to 2016 and its response to Human disturbance* Ying Zhang, Di Wang and Qingbo Zhou	
12:00-12:20	102	*Advances in crop fine classification based on Hyperspectral Remote Sensing* Ying Zhang, Di Wang and Qingbo Zhou	
12:20-12:40	123	*Impacts of Land Cover Changes to Nutrient Delivery in Bangladesh: A Spatially Explicit Ecosystem Service Assessment using InVEST Model* Zhe Guo	
Lunch			

Thursday, July 18			11:20 - 12:40
GS 04: Water Resource Planning and Management, Irrigation and Water Usage **Chair: Lizhen Lu**			**Location: Ephesus**
Time	ID	Title & Authors	
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11:40-12:00	53	*Identifying Groundwater Change and Drought Monitoring in Songliao Plain by GRACE* Xinmin Rui, Yonghua Sun, Xiaojuan Li, Youquan Zhang, Tao Wang and Yanbing Wang	
12:00-12:20	137	*Comparing Groundwater Storage Changes of Two Main Grain Producing Areas in China: Implications for Sustainable Agricultural Water Resources Management* Longqun Zheng, Yun Pan, Huili Gong and Xiaojuan Li	
12:20-12:40	119	*Object-based Random Forest Classification of Plastic Greenhouse Landcover from Remote Sensing Imagery* Lizhen Lu	
Lunch			

Thursday, July 18			11:20 - 12:40
GS 09: Cropland and Crop Condition Monitoring **Chair: B. Berk Ustundag**			**Location: Lycia**
Time	ID	Title & Authors	
11:20-11:40	21	*Evaluating crop phenology retrieving accuracies based on ground observations* Jianhong Liu and Xin Huang	
11:40-12:00	24	*Multi-objective Optimizations for Internal Parameters of Deep Learning Models For Detecting Plant Disease* Lida Kouhalvandi, Ece Olcay Gunes and Serdar Ozoguz	
12:00-12:20	26	*Estimation of Rice Phenology Date using GF-1 Vegetation Index Time-series Images* Jing Wang, Kun Yu, Miao Tian and Zhiming Wang	
12:20-12:40	38	*Sugarcane Monitoring Based on Time-series of Radarsat-2 Data* Hongzhoong Li, Jinsong Chen and Yu Han	
Lunch			

Thursday, July 18			14:00 - 15:20
GS 05: Crop Yield Modeling and Estimation **Chair: Lida Kouhalvandi**			**Location: Cappadocia**
Time	ID	Title & Authors	
14:00-14:20	58	*Assessing Effects of Cotton-Rice Rotation on Rice Yield Using Different Remote Sensing Vegetation Indices* Ling Sun and Zesheng Zhu	
14:20-14:40	59	*Using Spectral Vegetation Index to Estimate Continuous Cotton and Rice-Cotton Rotation Effects on Cotton Yield* Ling Sun and Zesheng Zhu	
14:40-15:00	108	*Optimization of Spatial Sampling Methods for Crop Acreage Estimation Using Kriging Intepolation* Geji Zhong, Di Wang and Qingbo Zhou	
15:00-15:20	111	*Regional Yield forecasting of Winter Wheat Using Remote Sensing Data in Southeastern Turkey* Omer Vanli	
Coffee Break			

Thursday, July 18			14:00 - 15:20
GS 02: Agriculture Decision Support System **Chair: Boyi Shangguan**			**Location: Ephesus**
Time	ID	Title & Authors	
14:00-14:20	28	*Petri Nets based Procedure of Hardware/Software Codesign of an Urban Agriculture Monitoring System* Bilgi Gorkem Yazgac, Halil Durmus, Murvet Kirci, Hakan Burak Karli and Ece Olcay Gunes	
14:20-14:40	60	*Sensor Fusion for IoT-based Intelligent Agriculture System* Sercan Aygun, Ece Olcay Gunes, Mehmet Ali Subasi and Selim Alkan	
14:40-15:00	90	*Towards a Geospatial Big Data Platform for Geospatial Information Services* Boyi Shangguan and Peng Yue	
15:00-15:20	161	*Development of a Novel Deep Learning Based Classification Approach for Detecting Crop Type and Phenology Through Field Images* Ulug Bayazit and D Turgay Altilar	
Coffee Break			

Thursday, July 18			14:00 - 15:20
GS 09: Cropland and Crop Condition Monitoring **Chair: Jingfeng Huang**			**Location: Lycia**
Time	ID	Title & Authors	
14:00-14:20	48	*Spatialization of Rice Crop Yield using Sentinel-1 SAR and Oryza Crop Growth Simulation Model* Jayantrao Mohite, Suryakant Sawant, Mariappan Sakkan, Praveen Shivalli, Krishnaiah Kodimela and Srinivasu Pappula	
14:20-14:40	64	*Improved Sugarcane LAI Estimation using Radiative Transfer Models with Spatial Constraint* Yingpin Yang, Qiting Huang, Jiancheng Luo, Wei Wu and Yingwei Sun	
14:40-15:00	72	*Multi Output Regressions for Estimating Canola Biophysical Parameters from Polsar Data* Zehra Meltem Sahin, Esra Erten and Gulsen Taskin Kaya	
15:00-15:20	104	*Contour-oriented Cropland Extraction from High Resolution Remote Sensing Imagery Using Richer Convolution Features Network* Hao Liu, Yingwei Sun, Jiancheng Luo, Liegang Xia, Wei Wu, Haiping Yang, Xiaodong Hu and Lijing Gao	
Coffee Break			

Thursday, July 18		15:40 - 17:00
GS 15: Corporate Sponsor Presentation		**Location: Cappadocia**
Time	ID	Title & Authors
15:40-16:00		PIESAT

Thursday, July 18		15:40 - 17:00
GS 09: Cropland and Crop Condition Monitoring **Chair: D Turgay Altilar**		**Location: Lycia**
Time	ID	Title & Authors
15:40-16:00	50	*Characterizing the spatial variability of soil salinity in Lake Urmia Basin by applying geo-statistical approaches* Taha Gorji, Aylin Yildirim, Nikou Hamzehpour, Elif Sertel and Aysegul Tanik
16:00-16:20	114	*Contextual investigation of NDVI with respect to large scale cereal harvest monitoring data* Ayda Aktas and Berk Ustundag
16:20-16:40	65	*Drought Monitoring using MODIS derived indices and Google Earth Engine Platform* Samet Aksoy, Ozge Gorucu and Elif Sertel
16:40-17:00	121	*Phenology Recognition using Deep Learning: DeepPheno* Hulya Yalcin

Poster Sessions Schedule

Wednesday	14:00 - 16:00
GS 14 Poster Session **Chair: D Turgay Altilar**	**Location: Pergamon** **(Second Floor Indoors Terrace)**

ID	Title & Authors
1	*Archiving System of Rural Land Contractual Management Right Data using Multithreading and Distributed Storage Technology* Jiajun Xu, Zhiyuan Pei, Lin Guo, Chunmei Zhao, Yin Zhang, Yuhang Liu, Fei Wang, Hualang Hu, Xuegang Zhang and Yanpeng Huang
4	*Active-Active model of Contract Farmer and Contracted Land for Rural Land Contractual Management Data* Lin Guo, Zhiyuan Pei, Yin Zhang, Chunmei Zhao and Xiaochen Li
10	*Multi-scale rasterization of contracted land vector data based on grid purity index* Wei Wei, Lin Guo, Xue Xing and Zhiyuan Pei
73	*Global vegetative drought trend and variability analysis from remotely sensed data* Shaobo Zhong, Zhanya Xu, Ziheng Sun, Eugene Yu, Liying Guo and Liping Di
78	*Influence of Vegetation Index under Different Bandwidths on LAI Inversion Accuracy* Ting Huang, Liang Liang and Jiahui Wang
85	*Estimation of NPP in Xuzhou Based on Improved CASA Model and Remote Sensing Data* Di Geng, Jiahui Wang and Liang Liang
97	*Spatial and Temporal Adaptability of Crop Classification Models* Zhanya Xu, Shuling Meng, Shaobo Zhong, Chao Yang, Ziheng Sun, Eugene Yu and Liping Di
105	*Research on Winter Wheat Leaf Chlorophyll Content based on Red-edge Bands from Aerial Hyperspectral Data* Bei Cui, Wenjiang Huang, Xiaoyu Song and Huichun Ye
128	*Mapping Agricultural Tillage Practices Using Extreme Learning Machine* Dennis Lee
135	*Monitoring and forecasting for disease and pest in crop based on WebGIS system* Yingying Dong, Fang Xu, Linyi Liu, Xiaoping Du, Huichun Ye, Wenjiang Huang and Yining Zhu
144	*Interpretation of the Report on Temporal Dynamics and Spatial Distribution of Global Carbon Source and Sink* Liang Liang and Wang Jiahui
174	*Full Stack Web Development of a Geospatial Information Service System for Intelligently Irrigated Agriculture* Eugene Yu, Liping Di, Li Lin, Haoteng Zhao, Md. Shahinoor Rahman, Chen Zhang and Junmei Tang
175	*Smart Agriculture in the Era of Big Data: A Review* Eugene Yu, Liping Di, Li Lin, Md. Shahinoor Rahman, Chen Zhang, Haoteng Zhao and Junmei Tang
177	*Selection of Landsat 8 OLI Band Combinations for Land Use and Land Cover Classification* Zhiqi Yu, Liping Di, Ruixing Yang, Junmei Tang, Li Lin, Chen Zhang, Md. Shahinoor Rahman, Juozas Gaigalas, Eugene Yu and Ziheng Sun
178	*Crop Field Boundary Delineation using Historical Crop Rotation* Md. Shahinoor Rahman, Liping Di, Zhiqi Yu,Eugene Yu, Li Lin, Junmei Tang, Chen Zhang and Juozas Gaigalas

Conference Presenting Author and Breakout Session Chair Index

Presenting authors' (first author) names are followed by the paper number

Author Index is indexed based on authors' last name

Section number = Day. time slot. Location. Session number

Day: T = Tuesday; W = Wednesday; TR = Thursday

Time slot: 0: keynote or Plenary, 1: morning break-out session; 2: 14:00-15:20; 3: 15:40-17:00

Location: M = Main Conference Hall; C = Cappadocia; E = Ephesus; L = Lycia

Session number: see Table of Sessions (on page - 8 -)

Example:

T.0.M.P = this is a plenary session which scheduled on Tuesday Morning in Main Conference Hall

T.2.C.01 = this is a session topic 1 which scheduled at 14:00-15:20 on Tuesday in Room Cappadocia

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A

Emrullah Acar   (T.2.L.07)
Haydar Akcay   (W.3.L.10)
Samet Aksoy   (TR.3.L.09)
Ayda Aktas   (TR.3.L.09)
Ugur Alganci   (W.1.E.08)
Sercan Aygun   (TR.2.E.02)

B

Filiz Bektas Balcik   (W.3.E.08)

Ulug Bayazit   (TR.2.E.02)
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Zhe Guo   (TR.1.C.06)
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Ting Huang   (T.2.P.14)

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D Turgay Altilar   (T.2.P.14)

D Turgay Altilar   (TR.3.L.09)

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Delu Pan   (T.3.E.12)

Elif Sertel   (W.1.L.11)

Boyi Shangguan   (TR.2.E.02)

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Berk Ustundag   (TR.1.L.09)

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Bilgi Gorkem Yazgac   (T.2.L.07)

Meric Yucel   (W.2.E.08)

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Poster Session Chair Index

D Turgay Altilar (Wednesday)

Conference Campus (Ayazaga Campus)

### ITU in Brief

ITU Taskisla Campus Main Entrance

Istanbul Technical University (ITU) was founded in 1773 with the name "Muhendishane-i Bahr-i Humayun" (Imperial School of Naval Engineering) during the reign of Mustafa III, Istanbul Technical University is a prominent and pioneering university of engineering and architecture with many innovative studies in science, technology, research and development. ITU, as a university mainly composed of graduate engineering schools and research laboratories, works closely in collaboration with enterprises and other economic and social partners. Our university facilitates the knowledge and technology transfer to industries, management centers, briefly to all society. ITU has created many Techno-Science parks, incubation centers, entrepreneurship and innovation center and technology transfer office to offer a favorable environment for students to build a successful career in their professions, to improve themselves, to seek internship opportunities and to conduct research projects.

Ayazaga campus is the main campus located in the Maslak area, nearby Istanbul's new work and trade center. This campus houses the rectorate building and management offices in addition to 8 of the 13 faculties and 4 of the 5 Institutes on 1.600.000 m2 of land. The Mustafa Inan Central Library, Central Lecture Hall buildings, Cultural and Art Association and 75. Yil Student Social Center are the most intense living space found on this campus. The dormitories on campus provides comfortable environment some 3000 students. Additionally, there is a Mediko medical center, a 5100 capacity stadium, various cafes and an artificial lake. Ari Techno parks which spread across 9 dedicated building, an Ari Motor Vehicle Center and ITU KOSGEB established for entrepreneurship and innovation studies.

Apart from this main campus at Ayazaga there are four more campuses located in Istanbul:t Taskisla, Macka, Gumussuyu, and Tuzla.

The Eighth International Conference on Agro-Geoinformatics (Agro-Geoinformatics 2019) will be held in Ayazaga Campus. Ayazaga Campus is located at a point that offers easy access from any point in Istanbul. Moreover, ITU metro stop is located in front of the main entrance of Ayazaga Campus. The maps of ITU Ayazaga Campus are included in this program booklet.

Map of Istanbul Technical University (Ayazaga Campus)
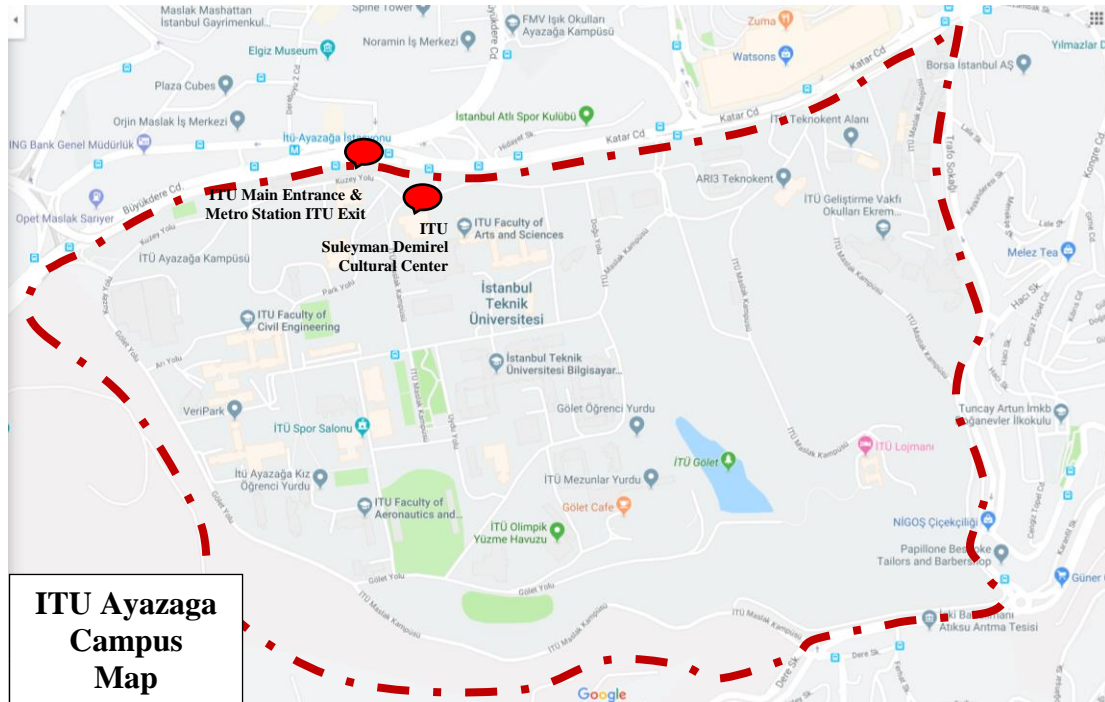
The map above is depicting the main entrance which is on Katar (Buyukdere) Caddesi. Yenikapi-Haciosman Metro Line ITU Station exit is in front of the main entrance.
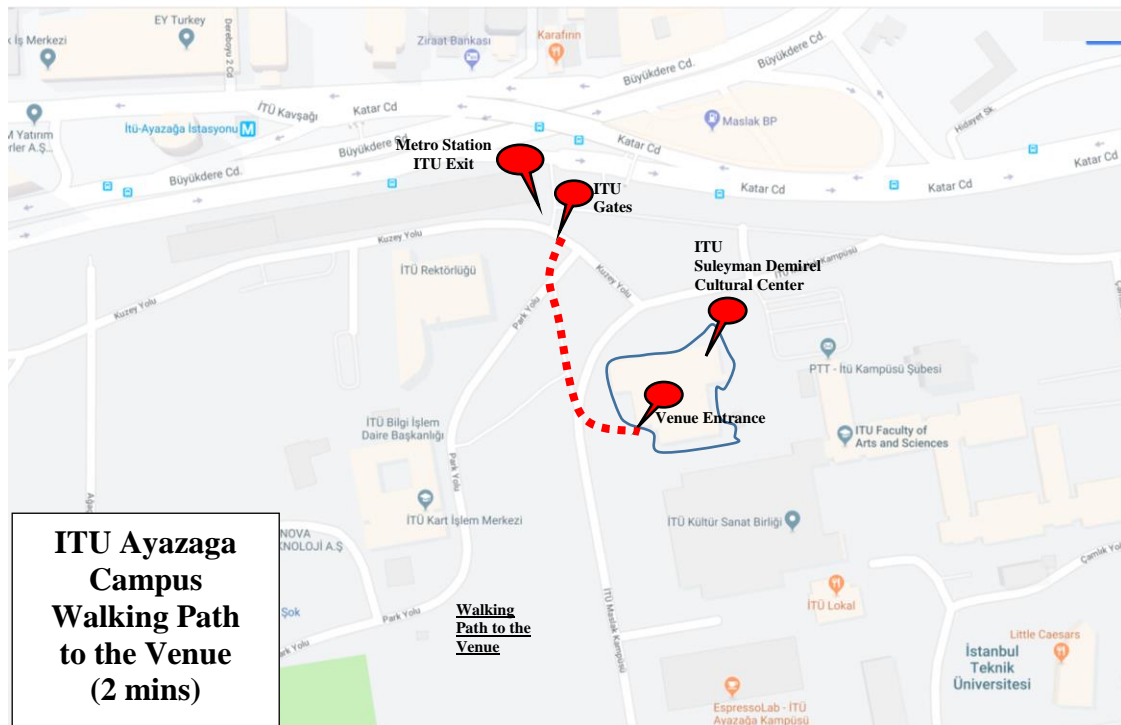
The map above is depicting 2 mins walking path from the main entrance to the conference venue, i.e., Suleyman Demirel Cultural Center.

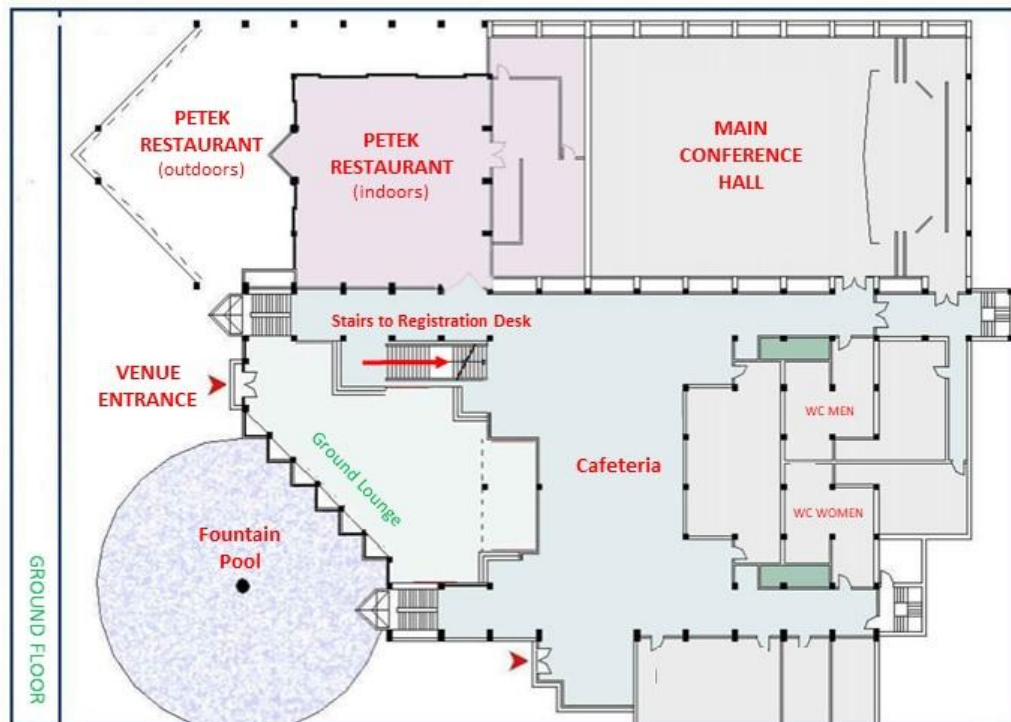## Conference Venue (Suleyman Demirel Cultural Center)
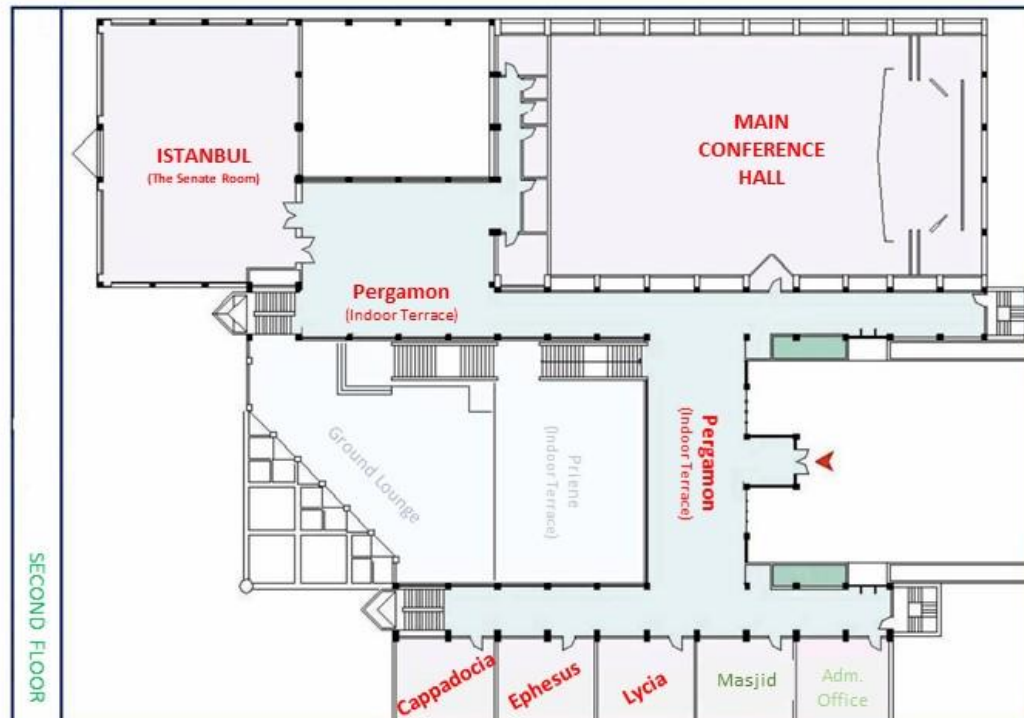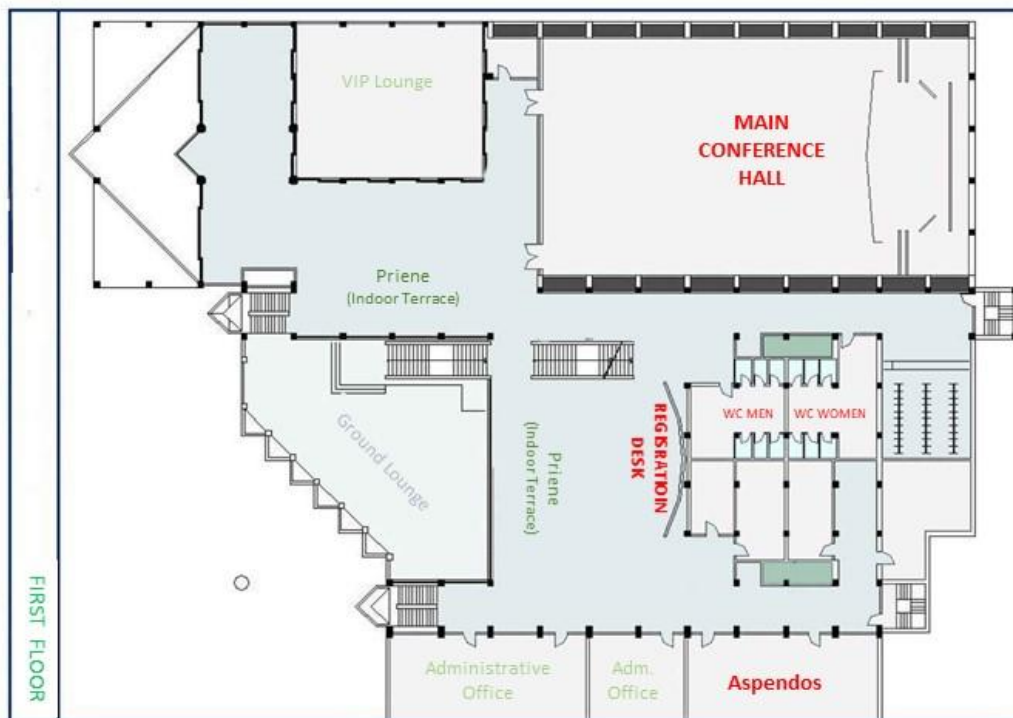### **SDKM in Brief**

ITU has been focusing on providing infrastructure, high quality buildings, and an environment to host reputable conferences, symposia and other academic activities to promote science and technology and to provide a mean for broader acquaintance and networking among scientist, engineers, and entrepreneurs. The Suleyman Demirel Cultural Center was designed and built to fulfil this commitment. It has been hosting not only academic but also cultural activities at both national and international scale. It is located in Ayazaga Campus and considered as a landmark as well as a representative building of ITU since it was erected in 1998.
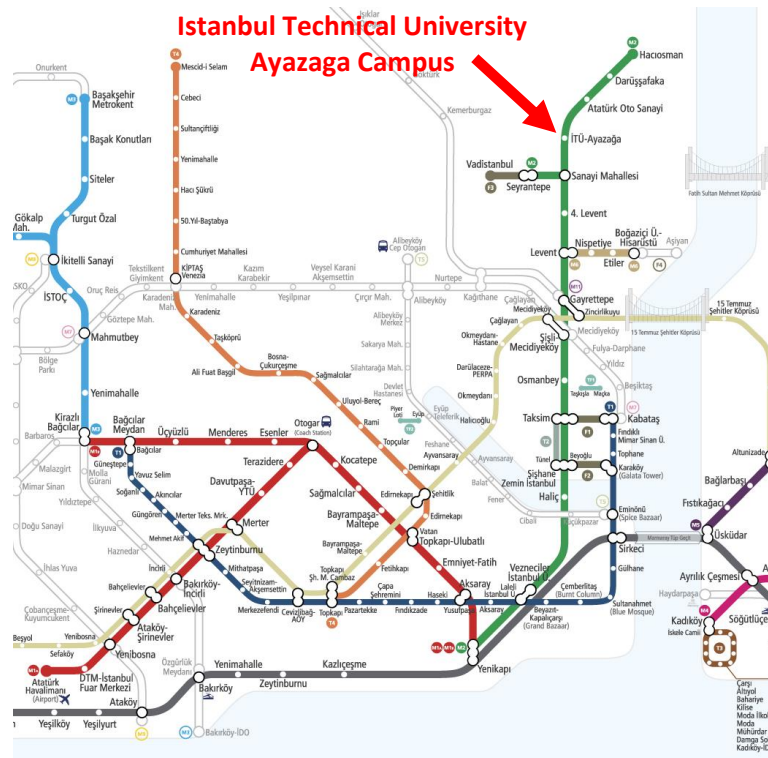
Floor Plans of the Suleyman Demirel Cultural Center

Suleyman Demirel Cultural Center is a three story building. The following floor plans are designed and labeled to help participants of Agro-geoinformatics 2019 to navigate. Red labels indicate primary locations, rooms and places that are expected to be visited by the participants.

FIRST FLOOR

VIP Lounge

MAIN CONFERENCE HALL

Priene (Indoor Terrace)

Ground Lounge

Priene (Indoor Terrace)

REGISRATOIN DESK

WC MEN   WC WOMEN

Administrative Office

Adm. Office

Aspendos

SECOND FLOOR

ISTANBUL (The Senate Room)

MAIN CONFERENCE HALL

Pergamon (Indoor Terrace)

Ground Lounge

Priene (Indoor Terrace)

Pergamon (Indoor Terrace)

Cappadocia

Ephesus

Lycia

Masjid

Adm. Office

Access to Campus and Venue

ITU Ayazaga Campus on the Metro map and Green Line (Yenikapi-Haciosman Line)

By Metro

Metro is the most convenient and the fastest public transportation to access Agro-Geoinformatics 2019 venue. ITU Ayazaga Campus is on Green Line (Yenikapi-Haciosman Line). Metro services depart every 4-6 minutes between 6am and midnight. If you take the green line and get off the train at ITU Ayazaga Station. Follow ITU Ayazaga Exit signs that will lead you to the main entrance. It is two minutes walk from the entrance to the venue.

By Bus

There is a bus stop in front of the main entrance of ITU Ayazaga Campus. Almost all buses qre equipped with digital displays. Follow the displays and get off the bus at ITU Ayazaga bus stop. It is three minutes walk from the bus stop to the venue. Please not that there are lots of buses stopping by ITU Ayazaga bus stop. Simply ask the bus driver whether it stops by the ITU-Ayazaga before getting on.

The fare to take public transportation is about 2.60 TL per person per ride with an Istanbul Kart. Istanbul card costs 6TL and you may fill and refill cards by using vending machines available in stations.

By Taxi

Istanbul is full of yellow taxis alonq with some turquoise taxis. All taxis have digital meters and must run them. Note that turquoise taxis cost 15% more than the yellow taxis. Taxi fares are the same during both day and night. Ask driver to ride to ITU Ayazaga Campus. Taxis are not charged for 15 minutes in the campus for although a ticket will be issue at the entrance to check their duration of stay. You may get off the taxi at the entrance of conference venue.

Guest Internet Access

eduroam access:

eduroam allows students, researchers and staff from participating (member) institutions to obtain Internet connectivity across campuses when visiting other member institutions by simply connecting their mobile devices to WiFi networks labelled "eduroam".

With eduroam installed on your laptop, mobile phone or other wireless devices, just activate your device to get online. Your device will identify a valid eduroam access point and log-in automatically. Your password for your online identity is provided to you by your "home" institution, where you are enrolled in study or are employed.

private guest access:

As a courtesy of Istanbul Technical University a <u>user name and password</u> couple is prepared for all the Agro-geoinformatics 2019 participants to get to connect their mobile devices to WiFi networks labelled "**ITU/NET Misafir**" personally. For the registered users the user names and passwords will be available at during the course of badge pick up. On-site registrees may ask for a user name and password for WiFi access which will be produced in a short time.

When "**ITU/NET Misafir**" is selected for WiFi access a page on your browser will automatically appear asking for a username password couple. You are expected to enter the couple you are provided with. No further operation is expected.

Please note that each username and password couple is created per participant for personal use. Do not share this information with others. Should you experience any difficulties, you may get help from registration desk. There is no charge for this service.