



## CALL FOR PAPERS

# International UNMANNED VEHICLES

## Workshop UVW2010

10-12 June 2010, İstanbul, TÜRKİYE

[www.hho.edu.tr/uvw2010](http://www.hho.edu.tr/uvw2010)



### Organized by:

Aeronautics and Space Technologies Institute (ASTIN), Turkish Air Force Academy, Türkiye  
Istanbul Technical University, Türkiye  
Boğaziçi University, Türkiye  
Bahçeşehir University, Türkiye  
Yıldız Technical University, Türkiye  
Istanbul Commerce University, Türkiye  
Yeditepe University, Türkiye  
Okan University, Türkiye

### Sponsored by:

TÜBİTAK (Scientific&Tech.Res. Council of Türkiye)

### Honorary Chair:

Major General İsmail Taş  
(Commander, TuAF Academy)

### General Chair:

Col. Sefer Kurnaz (ASTIN)

### Technical Program Co-chairs:

Fuat Ince (ASTIN)  
M. Fevzi Ünal (ASTIN and ITU)

### Advisory Committee:

Özer Arnas (USMA)  
Oktay Baysal (ODU)  
Mitat Birkan (AFOSR)  
Arsev Eraslan (Boğaziçi Univ.)  
Temel Kotil (THY)  
Tuncer Alpata (Alp Aviation)  
Mark Maurice (AFOSR)  
Cengiz Ulltav (VESTEL)

### Invited Speakers (tentative):

Alberto Broggi (Univ. of Parma)  
Robert C. Michelson (Georgia Tech.)  
Ümit Özgüner (Ohio State Univ.)  
Rustam Rustamov (AZ)  
Chuck Thorpe (Carnegie Mellon Univ.)  
Kimon P. Valavanis (Univ. of Denver)

### International Relations Co-chairs:

Tayfun Günel (ASTIN and ITU)  
Okyay Kaynak (ASTIN and Boğaziçi Univ.)

### Publications Co-Chairs:

Lt.Col. Ali Başaran (ASTIN)  
1<sup>st</sup> Lt. Ömer Çetin (ASTIN)

### Publicity Co-Chairs:

Hakan Temeltaş (ASTIN and ITU)  
Capt. Orhan Gözaydın (ASTIN)

### Organization Committee:

Col. Ahmet Cural (TuAFA)  
Capt. Hakkı Aktaş (ASTIN)  
Maj. Süleyman Baştürk (ASTIN)  
Semra Birgün (ASTIN and Istanbul Comm. Univ.)  
Sami Ercan (ASTIN and Haliç Univ.)  
Col. Mustafa İlarıslan (TuAFA)  
Ali Okatan (ASTIN and Haliç Univ.)  
Maj. Özden Kaplankıran (ASTIN)  
Oya Kalıpsız (Yıldız Tech. Univ.)  
Taşkın Koçak (Bahçeşehir Univ.)  
Seyhan Onbaşıoğlu (ASTIN and ITU)  
Coşkun Sönmez (Yıldız Tech. Univ.)  
Capt. Şamil Temel (ASTIN)  
Cengiz Toklu (Yeditepe University)  
Nejat Tuncay (Okan Univ.)  
M. Adil Yükselen (ASTIN and ITU)

**Preamble:** This workshop intends to bring under one forum a discussion of the developments in the area of unmanned vehicles, in whichever medium they operate. The most widely known of such vehicles are perhaps the unmanned **aerial** vehicles, or UAVs, due to its extensive development and deployment, to the point where they are in the process of being integrated into the air traffic system along with piloted aircraft. However there is a whole industry emerging in this area, along with much research in academia and industry, centered around all kinds of unmanned vehicles, aerial, ground, maritime, including underwater, and naturally space, where manned flights constitute only a very small fraction of all space flights. While each medium has its own characteristics which dictate upon the vehicle, there is a certain underlying knowledge base including theory and technology, which is common to all. Developments in robotics, intelligent systems, sensors, materials and computational power, continue to provide the basis for the development of novel and more capable systems and vehicles. Applications are moving from defense to civil and commercial areas.

**Objective:** The objective of the workshop is to bring together representatives from academia, industry and government, to exchange information, discuss the current state and anticipated future developments in the theory and applications of unmanned vehicles and systems. The participants are expected to come both from the military and civilian sectors. The workshop will be structured to promote interaction between the user community, and the research and development community. Contributions are expected from all sides, on the one hand indicating the needs and priorities and on the other hand forthcoming developments and research expectations.

**Topics:** Topics of interest include, but are not limited to the following;

- unmanned ground, aerial and maritime vehicle developments,
- autonomous operation,
- intelligent control and operation,
- long term needs and a roadmap to their fulfillment,
- risk analysis,
- safety analysis,
- sensor developments,
- robotics in unmanned vehicles,
- computer vision and understanding,
- parallel computation and algorithms,
- Geospatial data for UAVs.

**Intended Audience:** Technical managers, research and development engineers, technical managers and planners from the defense industry, academicians, government officials in the defense, air and maritime sectors are the intended audience.

**Contributions:** Prospective attendees are encouraged to make contributions by submitting the summary (Min. 500 words) of their proposed papers electronically through the web site.

### Important Dates:

Submission of extended summaries (Min. 500 Words)  
Notification of acceptance  
Camera-ready submission of full papers

**22 February 2010**  
**15 March 2010**  
**19 April 2010**

The organizers will leave ample time for discussions after each presentation. There will be sessions devoted to specific topics but no parallel ones. **The proceedings are planned to be made available to the attendees on CD during the workshop.**

### International Program Committee (others TBD, pending confirmation)

Mohammad A. Al-Jarrah (UA)	Ali Güngör (TR)	Anibal Ollero (ES)
Emin Anarım (TR)	Özgür Gürtna (CA)	Tamer Ozalp (TR)
Ömer Anlağan (TR)	Çingiz Hacıyev (AZ)	Leslie A. Piegl (US)
A-Nasser Al Ansari (QT)	Tarek Hamel (FR)	Rustam Rustamov (AZ)
Shahram Ariaifar (NO)	Mubassar Hussein (PK)	Vladislav Rutkovsky (RU)
A. Rustem Aslan (TR)	Masashi Hayakawa (JP)	Rainer Sandau (D)
İlhami Aygün (FR)	Jonathan How (US)	Hamit Serbest (TR)
M. Ünal Azaklıoğulları (TR)	Fei-Bin Hsiao (TW)	Roland Siegwart (CH)
Khalid Bashir (PK)	Shim Hyunchul (KR)	Salah Sukkarieh (AU)
Randal Beard (US)	Beycan İbrahimoğlu (AZ)	İbrahim Tansel (US)
Jon Benediktsson (IC)	Ram Jakhu (CA)	İsmail Hakkı Tuncer (TR)
Nezih Bilge (TR)	David Jeffcoat (US)	Osman N. Uçan (TR)
Fahir Borak (TR)	Osman Kalden (D)	Tanay Sıtkı Uyar (TR)
Samir Bouabdallah (CH)	Victor Khoroshilov (UA)	Stephen Wilkerson (US)
R. Murat Demirel (TR)	Anton Lazarov (BG)	Peter Willett (US)
Murat Efe (TR)	Derya Maktav (TR)	George Vachtsevanos (US)
Alptekin Erkollar (AU)	Hiroshi Matsumoto (JP)	Nejat Veziroğlu (US)
Dario Floreano (CH)	Bernard Mettler (US)	Şenay Yalçın (TR)
Richard D. Garcia (US)	Giovanni Muscato (IT)	Stanislav Zemlyakov (RU)
Süleyman Gököğlu (US)	Atsuhiko Nishida (JP)	Jean-Christophe Zufferey (CH)
Ali Haydar Goktogan (AU)	Ali Okatan (TR)	

### Correspondence: UVW2010 Secretariat

Turkish Air Force Academy (Hava Harp Okulu), 34149 Yeşilyurt,  
İstanbul, Türkiye

Ph.: +90-212-6632490 Ext. 4365, Fax: +90-212-6628551

E- mail: [uvw2010@hho.edu.tr](mailto:uvw2010@hho.edu.tr)