



T.C. Atılım Üniversitesi Türkiye'nin 2023  
Vizyonu Dizi Konferansları:

**Mühendislik Eğitimi Uluslararası Konferansı**

4-6 Kasım 2010 Antalya

Prof.Dr. Gülhan Özbayođlu

T.C. Atılım Üniversitesi

Mühendislik Fakültesi Dekanı



# İçerik

## **Konferansın Amacı**

## **Konferans Hakkında Bilgilendirme**

## **Beklentiler**



# Konferansın Amacı

## Türkiye'nin 2023 yılı vizyonu dizi konferansları çerçevesinde

- Mühendislik Eğitimi sorunlarının çözümüne katkı ortamı yaratmak yoluyla uluslararası iletişim ve barışa katkıda bulunmak,
- Bu bağlamda, yeni çalışma ve işbirliklerinin yolunu açmak,
- Stratejik konumdaki karar vericilere, yükseköğretim yöneticilerine ve uygulamacılara yol gösterici olmak.



Ele Alınacak Konu Başlıkları

## Konferans Hakkında Bilgilendirme

- Mühendislik Eğitiminde Kullanılan Alt Yapılar
- Mühendislik Mesleğinde Uluslararası Örgütlenme ve İş Birliği
- Mühendislik Eğitimi Programlarının Yeniden Yapılandırılması
- Mühendislik Eğitiminde Öğretim Metotları
- Mühendislik Eğitiminde Eğitim Teknolojileri ve Uzaktan Eğitim Uygulamaları



Ele Alınacak Konu Başlıkları (devamı)

# Konferans Hakkında Bilgilendirme

- Mühendislikte Eğitimde Sürdürülebilirlik ve Çevre Bilinci
- 21.Yüzyılda Mühendislik Eğitimi Kurumlarının Yeni Rollerini
- Mühendislik Eğitimi, Teknoparklar ve Cazibe Merkezleri
- Mühendislik Eğitiminde Pedagojik Yaklaşımlar ve Değerlendirme Yöntemleri
- Mühendislik Eğitiminde Disiplinlerarası Yaklaşımlar



Ele Alınacak Konu Başlıkları (devam)

## Konferans Hakkında Bilgilendirme

- Mühendislik Eğitiminde Yeni Finansman Kaynakları
- Mühendislik Etiği Eğitimi, Aşırmaya Karşı Eğitim
- Yabancı Dille Mühendislik Eğitimi ve Etkileri
- Mühendislik Eğitiminde Yetkinliğin ve Bilginin Önemi
- Bologna Süreci ve Mühendislik Eğitimi



Ele Alınacak Konu Başlıkları (devam)

# Konferans Hakkında Bilgilendirme

- Geleceğin Mühendisleri Nasıl Olmalı?
- Mühendislik Eğitimi ve Sanayi İşbirliği,
- Mühendislik Eğitiminde Akreditasyon,
- Mühendislik Eğitimi ve Ar-Ge İlişkisi,
- Mühendislik Eğitimine İlişkin Diğer Konular



Kurullar / Davetli Konuşmacılar

# Konferans Hakkında Bilgilendirme

## Kurulların oluşturulma şekli

- Mühendislik Eğitimi konusunda uluslararası/ulusal ölçekte araştırma yapan Akademisyen ve Araştırmacılar
- Rektör veya mühendislik fakültesi dekanları
- Atılım Üniversitesi Mühendislik Fakültesi Dekanı ve Bölüm/Grup Başkanları





Kurullar / Davetli Konuşmacılar (devamı)

# Konferans Hakkında Bilgilendirme

## Davetli konuşmacı nitelikleri

- Mühendislik Eğitiminin kurumsallaşması/yönetimi konusunda uluslararası ölçekte tecrübe
- Mühendislik Eğitimi konusunda uluslararası ölçekte tecrübe sahibi yetkin ulusal araştırmacılık/eğitimcilik
- Eğitimi bilimi konusunda uluslararası ölçekte tecrübe sahibi yetkin ulusal araştırmacılık/eğitimcilik
- Mühendislik Eğitimi konusunda uluslararası düzeyde fiziksel altyapı/ortam sağlama konusunda endüstriyel birikim



Davetli Konuşmalar Hakkında Detaylar

# Konferans Hakkında Bilgilendirme

## The Imperative to Reform Engineering Education

Lueny Morell

Hewlett-Packard Laboratories, Program Manager,  
Strategy and Innovation Office, Palo Alto, CA 94304,  
USA

**Abstract:**

The evolution of the world economy, new business strategies and globalization are forcing countries and regions develop approaches to enhance their economies to better compete worldwide. Higher education, science, technology, engineering and innovation play a fundamental role in the creation of wealth, economic development and in the improvement of the quality of life for all citizens. This presentation will address the need to reform/innovate engineering education and capacity building as key foundations that enhance national/regional economic development strategies. It will discuss the skills and competencies needed in graduates as well as the various issues that engineering/technology education leaders need to address.



Davetli Konuşmalar Hakkında Detaylar

# Konferans Hakkında Bilgilendirme

**How should we educate “effective” professionals?**

Meral Aksu

Middle East Technical University, Faculty of Education,  
Ankara, TURKEY

**Abstract:**

The changes and developments in knowledge area, society, technology, and learner characteristics should be reflected in a well planned curriculum. The success of any curriculum is widely dependent on whom and how it is implemented. This talk will mainly concentrate on expectations, student characteristics and curriculum implementation.



# Davetli Konuşmalar Hakkında Detaylar

## Konferans Hakkında Bilgilendirme

### The Need for Simulation-Based Engineering and Science Emphasis in Engineering Education

Hasan U. Akay

Atılım University, Ankara, TURKEY

#### Abstract:

The scientists and engineers of this century will be expected to tackle problems of unprecedented complexities defining the natural phenomena, which can only be solved with computer simulations. While the analytical solutions of these problems will not be possible due to complexities of the equations defining them, it will also be very difficult, if not impossible, to conduct experiments for most of them. As indicated in the 2004 report of NAE (*National Academy of Engineers*), the engineers of 2020 will not only need much broader education to handle the complex world problems, they also have to possess stronger analytical skills to meet the demands of emerging complex systems encompassing life sciences, nanosciences, optical science, and materials science. Many will be simulation based. These simulations need algorithm complexities and computing powers of huge magnitudes in speed and memory. As an answer, *Simulation-Based Engineering and Science* (SBE&S) has emerged during the recent years as an indispensable part of scientific and engineering investigations. Development of algorithms for SBE&S can be accomplished by interdisciplinary computational science and engineering programs, which are usually dispersed into various disciplines. However most of these programs are of graduate level, where most undergraduates are not exposed to these thus come to graduate programs unprepared.

Parallel to this, scientific and engineering organizations in many developed countries have been investing heavily on building scientific and engineering computing environments for simulations called *computing grids* for shared usage of resources. Examples are TeraGrid ([www.teragrid.org](http://www.teragrid.org)) in USA and TR-Grid ([www.grid.org.tr](http://www.grid.org.tr)) in Turkey. These grids are formed by connecting the computer systems at geographically distant locations with fiber optics networks and are administered by some alliances. Mostly targeted for massive data sharing, research, and development, such grid alliances are designed to form community of researchers and educators sharing the hardware and software resources, expertise, and knowledge for scientific discoveries. While the parallel computing algorithms developed by subdividing a large problem into smaller parts and solving each part concurrently on distributed computer systems have long been used, a new computing paradigm called *grid computing* has emerged during the recent years to harness the enormous power of such computing grids. This has brought many opportunities as well as challenges. In spite of these investments, utilization of these resources among engineers is still lacking. Although the impact of SBE&S is enormous on engineering and scientific discoveries in several areas, most engineers and scientists are not adequately trained to use and/or develop these tools effectively. The core expertise needed for development and utilization of such simulation algorithms are based on mathematics, science, and computer programming. A panel from the World Technology Center (WTEC) in 2007 assessed that the inadequate education and training of the next generation of computational scientists threatens global as well as U.S. growth of simulation-based engineering and science. The panel found concern that students use codes primarily as black boxes, with only a very small fraction of students learning proper algorithm and software development, in particular with an eye towards open-source or community code development.

In this talk, we will make recommendations to engineering programs to increase this emphasis during the early years of engineering educations, to prepare engineers for current and future challenges. We will also review some model undergraduate and graduate programs in this area.



## Davetli Konuşmalar Hakkında Detaylar

# Konferans Hakkında Bilgilendirme

## Engineering Education in the 21st Century

Adnan Akay

Bilkent University, Ankara, TURKEY

### Abstract:

Discussions on engineering education continue around the world as technology has been recognized as an inevitable part of modernity and economic development. In particular, emphasis placed on engineering in the most populous nations of the world has raised additional questions about whether engineering education in the western nations provide the necessary added value. Additional efforts to provide global experience to students as well as to fulfill the needs for graduate students have brought many representatives of western universities to Turkey and other countries. Notwithstanding these discussions and conferences, the education enterprise needs re-examination. This presentation will address some of the reasons why there is a need for re-examination and briefly describe advances external to engineering but highly relevant to education.



Davetli Konuşmalar Hakkında Detaylar

# Konferans Hakkında Bilgilendirme

- In Demand Skills in an On Demand World

**Paul Kontogiorgis**

**Program Director of IBM's IT Service Curriculum  
(ITSC) ,Chicago, USA**



Dil / Yayın

## Konferans Hakkında Bilgilendirme

- Konferans Yayın Dili: Türkçe + İngilizce
- Konferans Sunum Dili: İngilizce
- Konferans kalıcı çıktıları:
  - Konferans Bildiriler Kitabı (2 cilt)
  - SCI-Expanded indeksinde yer alan “International Journal of Engineering Education” dergisi tarafından olası genişletme ve revizyonları takiben basım olanağı



# Çalıştaylar

- Konferans kapsamına girebilecek ilgili başlıklarda paralel çalıştaylar düzenlenecektir.

## Önemli Tarihler

Çalıştay Öneri Formu Gönderimi için Son Gün	16 Nisan
Kabul Edilen Çalıştayların Duyurulması	30 Nisan
Çalıştay Bildirisi Gönderimi için Son Gün	21 Mayıs

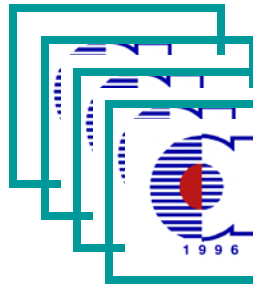




# Çalıştaylar

## Kabul Edilen Çalıştaylar

- **Çalıştay 1:** Mühendislik Lisans Eğitimi Sonrası Meslek içi Sürekli Eğitim Örneği MİSEM
- **Çalıştay 2:** Teaching Global Software Development Courses
- **Çalıştay 3:** Understanding and Measuring College Students Engineering Self-Efficacy



# Çalıştaylar

## Kabul Edilen Çalıştaylar

- **Çalıştay 4:** İlköğretim Öğrencilerine Matematik Fen Bilimleri ve Teknoloji Derslerinin Mühendislik Eğitimi kullanılarak Öğretilmesi
- **Çalıştay 5:** Technology Enhanced Engineering Education Studies
- **Çalıştay 6:** Recommendations for Engineering Education Innovations





<http://meuk10.atilim.edu.tr>

Konferans sitesi (İngilizce)

# Konferans Hakkında Bilgilendirme



call for papers

Turkey's Vision  
2023 Conference Series:  
November 04-06, 2010

International  
**ENGINEERING**  
Education Conference  
The Marmara Hotel, Antalya = Turkey

May 21 Paper Submission Deadline  
July 02 Notification of Accepted Papers  
September 10 Camera Ready Copies

Conference Secretariat  
Atılım University Faculty of Engineering  
InceK, Sebaste Sokak, Ankara, TÜRKİYE  
P: +90 (312) 5868311 • 5868680 • 5868621  
F: +90 (312) 5868307  
E: [meukonferans@atilim.edu.tr](mailto:meukonferans@atilim.edu.tr)  
Assoc. Prof. Dr. Bestem BARANÖZLÜ  
ADINEÇTNER  
Doç. Ayhan Kemal ERGÖZÜ  
Dr. Filiz KORKMAZ

For detailed information please visit <http://meuk10.atilim.edu.tr>

General Chair  
Prof. Dr. İ. ÜRDAN, Atılım University, TR

Advisory Board  
Prof. Dr. H. AKAY, Atılım University, TR  
Prof. Dr. G. AKGÖNÜL, Ankara University, TR  
Prof. Dr. Z. AKTAŞ, Başkent University, TR  
Prof. Dr. H. ALKANALIN, Trakya University, RDM  
Prof. Dr. E. ARKUN, Ege University, TR  
Prof. Dr. M. BARAN, Hacettepe University, TR  
Prof. Dr. M. BABAY, Bilkent University, TR  
Prof. Dr. N. BARAN, Sogut University, TR  
Prof. Dr. S. BASKAK, Hacettepe University, TR  
Assoc. Prof. Dr. T. Kaya BRENDSHAR, TUDAC, TR  
Assoc. Prof. Dr. M. E. COLE, Utah State University, USA  
Assoc. Prof. Dr. K. CAGILTAY, METU, TR

Dr. G. P. COLE, Purdue University, USA  
Prof. Dr. A. DENSOZ, Bilkent University, TR  
Prof. Dr. Z. DURSUNKAYA, METU, TR  
Prof. Dr. Y. ERGON, TOBB-TEI, TR  
Prof. Dr. M. ERGON, Ankara University, TR  
Assoc. Prof. Dr. B. FIDAN, Teikyo University of Health, SCM  
Prof. Dr. A. GARCIA-ZURBA, University of Oviedo, ESP  
Assoc. Prof. Dr. C. KIMBLEY, Indiana University, USA  
Prof. Dr. L. KANDILLER, Çukurova University, TR  
Prof. Dr. M. KARAFAN, Hacettepe University, TR  
Prof. Dr. D. KARADAGA, Erciyes University, TR  
M. KARAKUL, Hacettepe University, TR  
Prof. Dr. M. Ali KURBANOV, Ankara University, TR  
Prof. Dr. H. MANDALIEVE, TR  
Prof. Dr. S. E. OKAL, Anadolu University, TR  
Prof. Dr. S. SARIÖZGÜL, Odu University, TR  
Prof. Dr. A. K. SARGULLA, Çukurova University, TR  
Prof. Dr. İ. S. SÖZAL, Trakya University, RDM  
Prof. Dr. A. TURKDOĞLU, Adnan Menderes University, TR  
Prof. Dr. M. F. UNGAR, Sabanci Technical University, TR  
Prof. Dr. N. UNGAR, Odu University, TR  
Prof. Dr. Y. YILMAZ, Kadir Has University, TR  
Assoc. Prof. Dr. S. YUNSEL, Odu University, TR

Steering Committee  
Prof. Dr. Nermin AMMAN, Atılım University, TR  
Prof. Dr. Ramazan AYDIN, Atılım University, TR  
Assoc. Prof. Dr. N. CAGILTAY, Atılım University, TR  
Assoc. Prof. Dr. N. CAGILTAY, Atılım University, TR  
Prof. Dr. Neşe CELİBER, Atılım University, TR  
Prof. Dr. M. ERGON, Atılım University, TR  
Prof. Dr. Bilgin KAFYANOĞLU, Atılım University, TR  
Assoc. Prof. Dr. Mehmet KURBANOV, Atılım University, TR  
Assoc. Prof. Dr. Şenel PALAMAM, Atılım University, TR  
Prof. Dr. Sühan ÖZAYDINOĞLU, Atılım University, TR  
Prof. Dr. Sönmez SAKIN, Atılım University, TR  
Prof. Dr. Emrah TEKİN, Atılım University, TR  
Assoc. Prof. Dr. Halim TOKAL, Atılım University, TR  
Prof. Dr. Ali VAZELI, Atılım University, TR

Local Organizing Committee  
Prof. Dr. İ. ÜRDAN, Atılım University, TR  
Assoc. Prof. Dr. B. BARANÖZLÜ, Atılım University, TR  
Assoc. Prof. Dr. N. CAGILTAY, Atılım University, TR  
Prof. Dr. A. K. SÖZAL, Atılım University, TR  
Assoc. Prof. Dr. İ. KILIÇ, Atılım University, TR  
Dr. B. KORKMAZ, Atılım University, TR  
Dr. G. ÖRMEY, Atılım University, TR

TOPICS

- Infrastructure in Engineering Education
- International Cooperation and Cooperation in Engineering Education
- Reinstating Engineering Education Curriculum
- Instructional Methods in Engineering Education
- Educational Technologies and Distance Education Applications in Engineering Education
- Sustainability and Environmental Awareness in Engineering Education
- New Models of Engineering Education Institutions and Delivery
- Engineering Education, Testimonials and Centers of Attraction
- Pedagogical Approaches and Assessment Methods in Engineering Education
- Innovative Approaches in Engineering Education
- New Financial Sources in Engineering Education
- Success of Engineering Education in Developing Countries
- Engineering Education in Foreign Language and Its Benefits
- Significant of Knowledge and Skills in Engineering Education
- Design Process and Engineering Education
- Future Engineers - How should they be?
- Collaboration with Industry in Engineering Education
- Accreditation in Engineering Education
- Engineering Education and R&D
- Other Related Topics in Engineering Education



Click Here for Turkish Pages

- >Welcome
- Committees
- Call for Papers
- Topics
- Important Dates
- Paper Submission
- Publication
- Workshops
- Invited Speakers
- Conference Programme
- Registration
- Accommodation
- Transportation
- Venue
- About Atılım
- Contact



Last Updated: 03/04/2009

Turkey's Vision 2023 Conference Series  
International Engineering Education Conference

November 4 - 6, 2010  
The Marmara Hotel, Antalya, TURKEY

ATILIM UNIVERSITY

## Welcome

In the 21st century, humanity has started to appreciate the significance of terms such as; global warming, recycling, renewing, sustainability, energy, rapid technological development, rapid social transformation, faster communication, information technologies, taking examples and setting examples. Since the beginning of the twenty-first century, transforming into information societies has gained momentum in developed countries and a new economic structure called "the information economy" has come into existence. In this framework, knowledge, quality and level of education are the criteria for economical status among people, whereas human & social investments become the measures for competitive power among countries. These changes and developments have increased the demand from higher educational institutions and universities due to their primary role in the production, application and sharing of information. The restructuring of universities in order to fulfill these growing expectations with globalization, competition and internationalism in higher education has created the phrase "the third generation university". The course that paves the path to achieving solid ground in global marketing is the ability to transfer science and technology into economic values and competitive power to be achieved from R&D policies. These, in reality, are the key issues in creating development and welfare in a society. Today, the gap in the countries creating information and technology and those with no domestic technology is becoming more significant. The concept of globalization makes such distinction even clearer. These facts and conditions in the near future rapidly change the concept of engineering in the 21st century. The main goal is to seek development and the spread of contemporary engineering education, thus educating more skilled engineers to fit in the current conditions and taking social welfare a step beyond. In the light of these new terms, it is inevitable for the groups and societies worldwide to transform and create new models for the future. In this shifting, engineers with technical know-how, talent and experience will play a key role. As a consequence, the education program in this field has to be structured and updated for training such specialists to lead social transformation and to meet future expectations. Similar to education in other disciplines, expertise and experience are the key elements in engineering education.

Considering this vision, Atılım University in the Republic of Turkey organized the International Engineering Education Conference, to be held on November 4-6, 2010 in the city of Antalya, in line with *Turkey's vision 2023 conference series* which celebrates the 100th anniversary of foundation of Republic of Turkey in 2023. The conference is expected to contribute solutions to the problems stated above, encourage new studies and collaborations, and also to create guidelines for the decision-makers in strategic positions, as well as heads and executives of higher education institutions.

ATILIM UNIVERSITY, Incek/Ankara Tel: +90 312 5868319, +90 312 5868680, Fax: +90 312 5868091

Webmaster: Tuncay Kaplan - [itsweb@atilim.edu.tr](mailto:itsweb@atilim.edu.tr)



Önemli tarihler

## Konferans Hakkında Bilgilendirme

Tam Bildiri Teslimi İçin Son Gün

**21 Mayıs → 25 Haziran**

Kabul Edilen Bildirilerin Duyurulması

**2 Temmuz → 30 Temmuz**

Basıma Hazır Bildiri Kopyalarının Teslimi

**10 Eylül**

Konferans

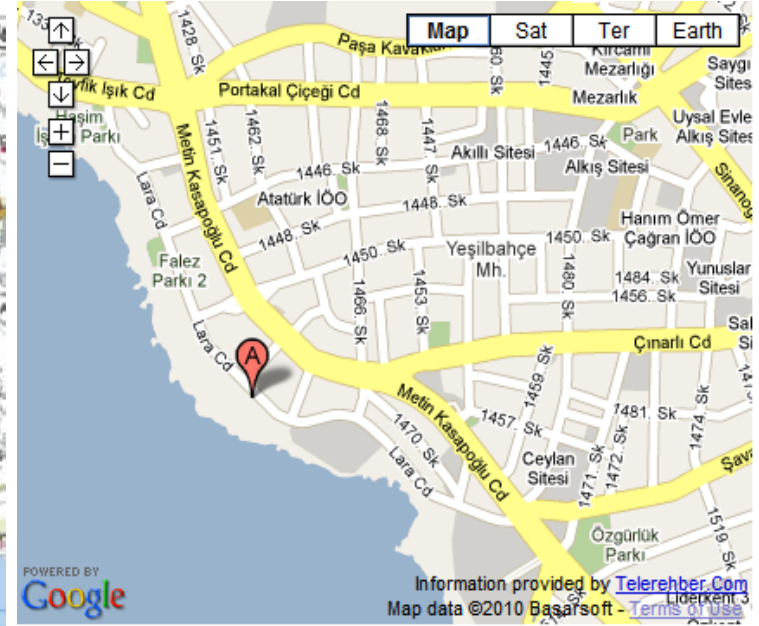
**4-6 Kasım**

# Konferans Yeri

## Konferans Hakkında Bilgilendirme



Antalya



The Marmara Oteli



## Beklentiler

- Konferansa bildiri sunmak / çalıştay düzenlemek yoluyla aktif katılım
- Süreklilik/eşgüdüm sorunu: Kalıcı ve geniş katılımlı bir ulusal/uluslararası Mühendislik Eğitimi konferansının tesisi için girişim



# İletişim

## **Konferans Genel Başkanı**

Prof.Dr. İsmail Bircan

## **Konferans Sekreterleri**

- Yrd.Doç.Dr. Besim Baranoğlu
- Azime Çetiner
- Öğr.Gör. Aylin Konez Eroğlu
- Dr. Filiz Korkmaz

## **Posta Adresi**

T.C. Atılım Üniversitesi, Mühendislik Fakültesi

İncek, Gölbaşı, 06836, Ankara TÜRKİYE

**Tel:** +90 312 5868319, +90 312 5868680, +90 312 5868621

**Fax:** +90 312 5868091 **E-posta:** [meukonferansi@atilim.edu.tr](mailto:meukonferansi@atilim.edu.tr)





# Teşekkürler