



**Haluk Ünal**

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**President, Turkish American Scientists and Scholars Association (TASSA)**

**ATAA 36<sup>th</sup> Annual Turkish American  
National Leadership Conference  
February 25-27, 2016 Washington, DC**

# Outline

- Significance of Science Diasporas in the United States
- Significance of Turkish Science Diaspora
- Role of TASSA
- Selected success stories of Turkish Scientists in 2015

# University Research and Economic Growth

“Economists broadly agree that about 60% growth of the U.S. economy during the last sixty years has been due to technical innovation much of which has originated in university research.”

Charles M. Vest  
President Emeritus, MIT  
President National Academy of Engineering

C. M. Vest. The American Research University, University of California Press (2007)

# Role of Science Diaspora in University Research

- Not much data available
- But casual observation would show that much of university research is undertaken by scientists and researchers of origin of non-US countries

# International Students in the United States (2013-14): Total International Students: 886,052

<b>Rank</b>	<b>Place of Origin</b>	<b>Number of Students</b>	<b>Percent of Total</b>
1	China	274,439	31.0%
2	India	102,673	11.6%
3	South Korea	68,047	7.7%
4	Saudi Arabia	53,919	6.1%
5	Canada	28,304	3.2%
6	Taiwan	21,266	2.4%
7	Japan	19,334	2.2%
8	Vietnam	16,579	1.9%
9	Mexico	14,779	1.7%
10	Turkey	13,286	1.5%
	All Others	273,426	30.9%

Source: Institute of International Education, *Open Doors Report*

# Degree Level, Top 10 Places of Origin for the United States, 2013-2014

Places of Origin	Top 10 Places of Origin	Total Number of International Students	Undergraduate International Students	Graduate International Students	Non-degree seeking International Students	Optional Practical Training
#1	China	274,439	110,550	115,727	14,761	33,401
#2	India	102,673	12,677	61,058	1,242	27,696
#3	South Korea	68,047	36,992	18,894	5,522	6,639
#4	Saudi Arabia	53,919	26,865	11,108	15,172	774
#5	Canada	28,304	13,916	11,207	613	2,568
#6	Taiwan	21,266	5,886	10,177	1,663	3,540
#7	Japan	19,334	9,155	3,562	5,159	1,458
#8	Vietnam	16,579	11,886	2,562	881	1,250
#9	Mexico	14,779	8,311	4,182	1,080	1,206
#10	Turkey	13,286	5,097	3,118	4,222	849
All Others		273,426	129,389	88,259	29,162	26,616
Total of All Places of Origin		886,052	370,724	329,854	79,477	105,997

# How significant is the contribution of international graduate students?

- Total number of students in research universities in the US enrolled full-time in Fall 2014:
  - 486,925
  - Source (Allum and Okahama, 2015)
- Total number of Graduate International Students enrolled in 2013-2014
  - 329,854
  - About 70% of all the graduate students!
  - (Assuming all go to research universities full time)

## In sum,

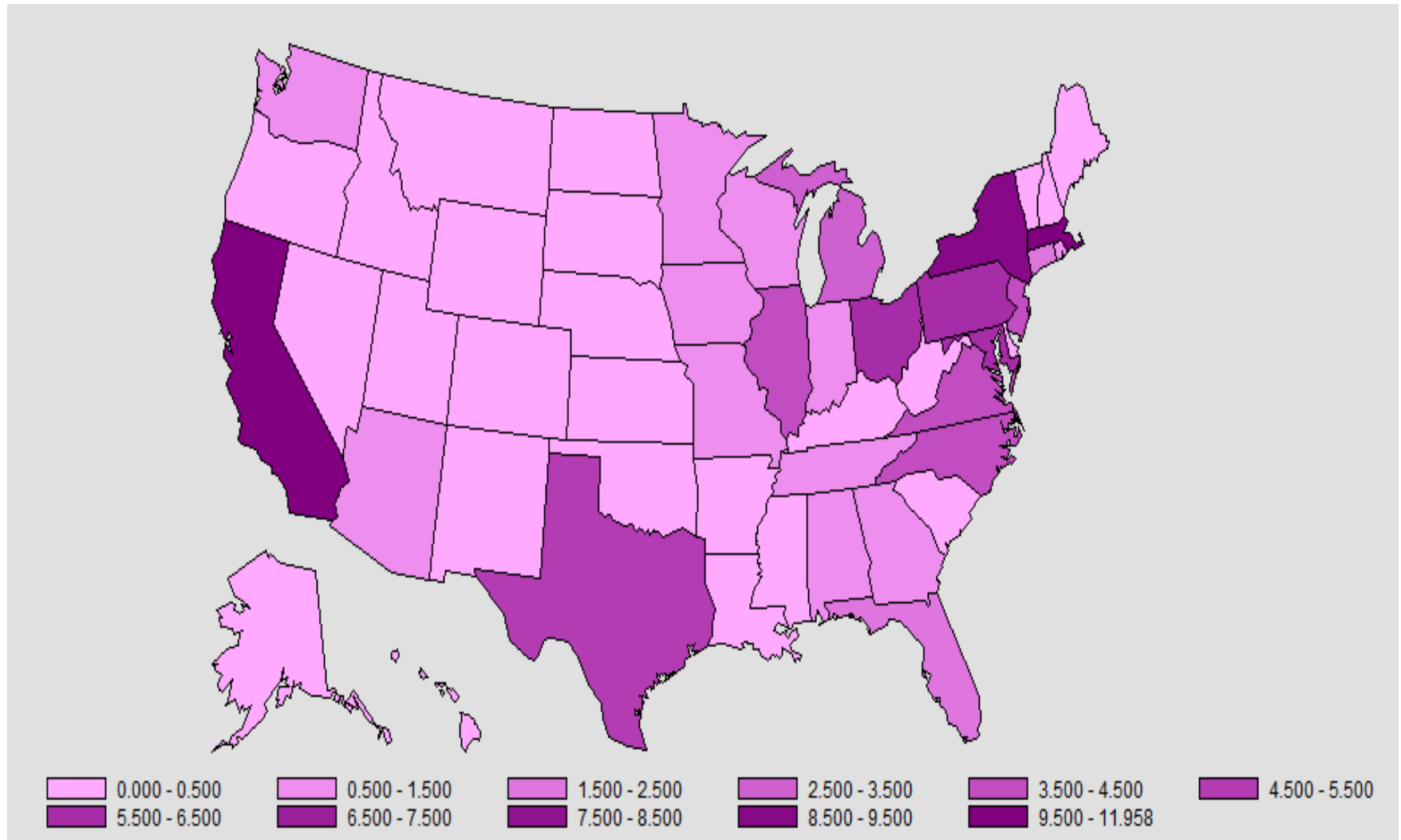
- If United States is a great country, if it is at the forefront of science and innovation, role of Science diasporas in this achievement cannot be denied!
- Beautiful brains from all over the world come together and work very hard to make the world a better place to live in and to make US lead the world in science and technology.
- But, what about us, the Turkish Science Diaspora?



# TASSA Database

	<b>University</b>	<b>Research Inst.</b>	<b>Total</b>
Engineering	289	360	649
Health and Biomedical	266	142	408
Natural Sciences	119	41	160
Social Sciences	428	332	760
<b>Total</b>	<b>1102</b>	<b>875</b>	<b>1977</b>

# Turkish Science Diaspora in the US



# About TASSA

TASSA is an independent, non-profit and non-political organization established in 2004 in Washington, DC.

**Vision :** to build a sustainable science bridge between the U.S. and Turkey.

**Mission:** to promote educational, scientific and technological cooperation between the USA and Turkey and to facilitate the advancement of science in Turkey and the USA through scientific exchange, educational programs, and increased networking.

# TASSA actively organizes and attends events and meetings about science, education, and diaspora



TASSA attended USA-Turkey Joint Science and Technology Committee Meeting in Ankara April 5-6, 2015



TASSA organized a panel at the ATA's 33rd Annual Assembly in Washington DC April 25-27, 2015



Science and Engineering Diaspora Event in Boston February 14, 2015



TASSA met US Science Envoy, Dr. Susan Hockfield in Washington DC on April 26, 2015



US-Turkey Delegation, Biomedical Working Group TASSA representatives met in Ankara April, 2015



TASSA representatives met with Mr. Kemal Kılıçdaroğlu, the leader of Turkey's main opposition party, the Republican People's Party (CHP) on December 1, 2015



"Summit for Turkish Scientists Living Abroad" meeting in Istanbul July 4-5, 2015



TASSA organized "Post-Gen" Turkey and Europe Seminar by Kadir Sevinc on Tuesday October 8 2015 at Robert H. Smith School of Business Suite C-8 Ronald Reagan Building

# TASSA 2014 conference



- March 22-23, 2014 at the University of Maryland College Park
- 400 attendees from all disciplines
- Conference Theme: Global Opportunities
- WISESS Symposium
- Young Scholar Awards
- Poster Presentation Session
- Talent and Innovation Showcase



**TASSA cordially invites you to the  
7th Turkish Science Diaspora Conference**

**Conference Theme:** Science and Society

**Venue:** University of Chicago Booth School of Business

**Dates:** April 2–3, 2016

**Keynote Speakers:**

Aziz Sancar (2015 Nobel Prize winner in Chemistry)

Kenan Şahin (President of TIAX)

*Hon. Fikri Işık, Minister of Science, Industry and Technology  
of Turkey will also join the conference.*

# TASSA 2016 conference

**Confirmed Program Participants:**

Tamer Başar *University of Illinois at Urbana–Champaign*

John Birge *University of Chicago*

Serdar Bulun *Northwestern University*

Kerem Cosar *Stockholm School of Economics*

Miral Dizdaroğlu *National Institute of Standards and Technology*

Murat Günel *Yale University*

Ali Hortaçsu *University of Chicago*

Gökhan S.Hotamışlıgil *Harvard University*

Eric Isaacs *University of Chicago*

Ayşe İmrohoroğlu *University of Southern California*

Sunil Kumar *University of Chicago*

Peter Littlewood *Argonne National Laboratory*

Hayat Önyüksel *University of Illinois at Chicago*

Asuman Özdağlar *Massachusetts Institute of Technology*

Aydoğan Özcan *University of California*

Feryal Özel *University of Arizona*

Tayfun Sönmez *Boston College*

Matt Tirrell *University of Chicago*

**Conference Program Co–chairs:**

Ercan Alp *Argonne National Laboratory*

Burhaneddin Sandıkçı *University of Chicago*

**Conference participation is free, but space is limited. Register at:**


<http://www.tassausa.org/Annual-Conferences/2016/Registration>



# The Bridge

- Bimonthly newsletter distributed by email
- Read by about 2000 academics, students, and scientists
- News about the Turkish American science community
- Success stories of Turkish scientists and scholars
- Announcements about conferences, events, grant applications, and job openings

Turkish American Scientists & Scholars Association



NEWSLETTER VOLUME 3, ISSUE 5, September 2014

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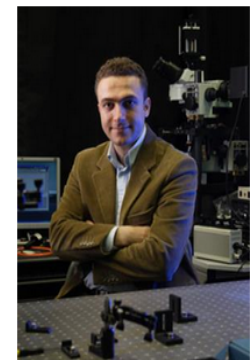
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**Aydoğan Özcan Received HHMI Professorship**



The Howard Hughes Medical Institute (HHMI) recently announced 15 leading scientist-educators as HHMI Professor, including Aydoğan Özcan. Dr. Özcan is the Chancellor's Professor of electrical engineering and bioengineering at the UCLA Henry Samueli School of Engineering and Applied Science. He is also the associate director of California nanosystems Institute (CNSI) and the founder of Holomic LLC.

[Full Story...](#)

**Message from the TASSA President**



Dear Friends of TASSA,

As we start the Fall semester, I wish the members of the TASSA community a healthy and a productive academic year.

At TASSA we are coming out of a slow summer, which was basically a reorganization period.

[Read more...](#)

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**A Turkish Physician Scientist's Study Receives National Attention**



Shortly after departing the boxing ring, the king of boxing, Muhammed Ali, started having symptoms. First his hands started to shake, and then his movements started to slow down. His speech was also affected. The king, who in his own words, "would fly like a butterfly, but sting like a bee" was suffering from a neurologic disease called Parkinson's disease.

The disease was first described by James Parkinson in 1817 as "shaking palsy." Since then many scientists have studied the disease, which affects the central nervous system. One physician scientist studying Parkinson's disease is Ergun Uç, associate professor of neurology, at the Carver College of Medicine of the University of Iowa and Veterans Affairs Medical Center.

[Full Story...](#)

**Crossing the Bridge**



By Nilay Papila

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**MEDIA SPONSOR**

**TUBITAK Academic Research Funding Program Directorate (ARDEB) Announces the Release of "ARDEB Success Stories"**



Much of the research taking place in Turkey's academic, industrial and research centers are sponsored by the Turkish Scientific and Technological Research Council's ARDEB branch. ARDEB reviews research proposals and funds successful proposals that are in alignment with Turkey's general science and technology policies and principles, as well as country's long-term goals.

**Turkish Researchers' Performance in European Research Council Grants**

Last week, the President of European Research Council (ERC), Prof. Dr. Jean-Pierre Bourguignon, visited Turkey to overview Turkish scientists' ERC performance during the EU 7th Framework Program (FP7) (2007-2013) and exchanged ideas on how to improve it for the ERC calls for the Horizon2020 program (2014-2020).

**15**  
[Full Story...](#)



### *For Job Seekers*

- Create a **profile** and post your **resumes** with a brief information about yourself.
- Search and apply for current open positions.
- Post articles about exciting **news**, stimulating **research** results and **collaboration** opportunities.

### *For Institutions*

- Register as an **Institution**
- Create your personal **profile**
- Post your **job positions**, **news**, **collaboration** opportunities.
- Follow the **applications**.





# TASSA ACADEMY

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An Initiative of Turkish Science Diaspora  
For an “OpenCourseWare Program”

TASSA Academy provides open access to the core academic content.

- Video lectures, syllabi, lecture notes, problem sets, reading lists.
- Materials can be used free of charge, distributed, and copied as long as it is for non-commercial purposes.

Expected impact on:

- Education
- Society
- Diasporas
- New Collaboration Opportunities

# TASSA Outreach to other Science Diaspora Organizations

- 1<sup>st</sup> Annual Meeting of European Scientific Diasporas in North America, November 2015
- Networks of Diasporas in Engineering and Science (NODES) Forum 2016, organized by US Department of State, February 2015. Focus was on Engaging Science and Engineering Diasporas in Policy

# Selected Success Stories in 2015 from Turkish Science Diaspora

# Brilliant Young Minds:

## MIT Technology Review 35 Innovators under 35

Canan Dağdelen, developed a tattoo-like wearable device that detects skin cancer



Zakir Durumeriç invents a way to improve online security and listed one of '35 Innovators under 35'



Duygu Karaman develops an app for the blind and the visually impaired



Gözde Durmuş developed a method to understand if cells are dying, or basically cancerous



# Awards that make us proud

Aydogan Ozcan wins International Commission for Optics Prize



The American Institute for Medical and Biological Engineering (AIMBE) elected Candan Tamerler as a fellow



Vamık Volkan won the 2015 Sigourney Award for his work on applying a psychoanalytic approach to conflicts.



Alper Bozkurt named to Popular Science's 'Brilliant 10' for his work on Internet of Bionic Things



# Professional Recognitions

- Serdar Bulun, MD (Northwestern) and Murat Günel, MD (Yale) were first Turkish Americans to be elected to National Academy of Medicine, 2015



# Aziz Sancar

- The first Turkish-American scientist to receive Nobel Prize in Chemistry, 2015

