

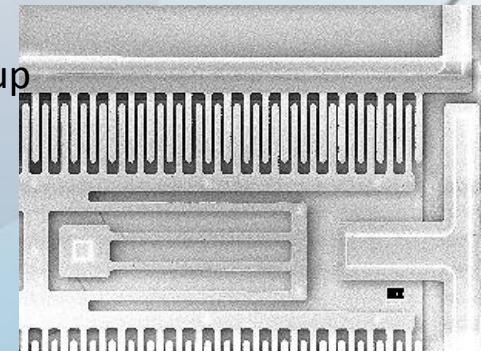
# Department of Electrical & Electronics Engineering

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## **RESEARCH RESOURCES:**

*26 full-time faculty members*

- BETA: Bogazici University Electronics Design Laboratory
- BUSIM: Signal and Image Processing Laboratory
- BUSIM / VAVlab: Volumetric Analysis & Visualization Group
- ISL: Intelligent Systems Laboratory
- LAL: Lung Acoustics Laboratory
- Mechatronics Laboratory
- BUMEMS: BU Micro Electro Mechanical Systems Laboratory
- BUSIM / SPG: Speech Processing Group
- WCL: Wireless Communication Laboratory
- MNL: Micro Nano Characterization Laboratory
- NECS: Networked & Embedded Control Systems Laboratory



# Synopsis of EE Staff

- **Strong faculty** 26 faculty members with international experience
- **Research oriented:** 85% of the faculty conducts funded research
- **Funding:** 9.000.000 USD current total research funding
- **Publications:** 300 journal papers and about 800 conference papers in the last 5 years
- **Interdisciplinarity:** Joint research with CMPE, Physics, Biomedical and Geophysics departments
- **International cooperation:** BU-Tokyo University, BU-Georgia Tech, BU-Telecom Paris, BU-Singapore (NUS), BU-Harbin ...



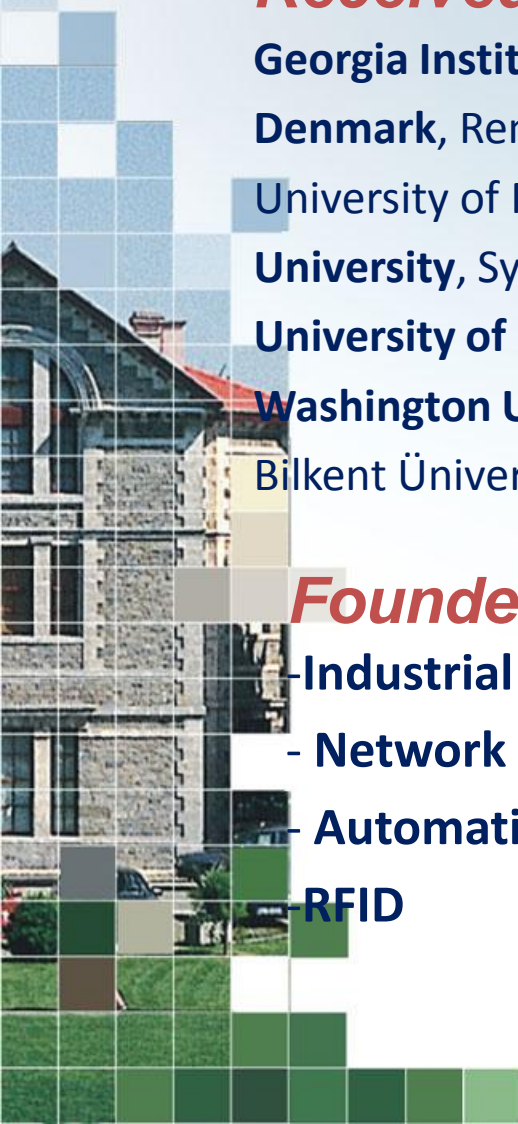
# BUEE Faculty

## *Received their PhD's from:*

**Georgia Institute of Technology, Boğaziçi Üniversitesi, Technical University of Denmark, Rensselaer Polytechnic Institute, İstanbul Teknik Üniversitesi, University of Michigan, University of Maryland, Ohio State University, Yale University, Syracuse University, University of Birmingham, Duke University, University of California at Davis, Johns Hopkins University, George Washington University, University of Virginia, University of Notre Dame, Bilkent Üniversitesi, University of Illinois at Urbana-Champaign ...**

## *Founded four spin-off companies:*

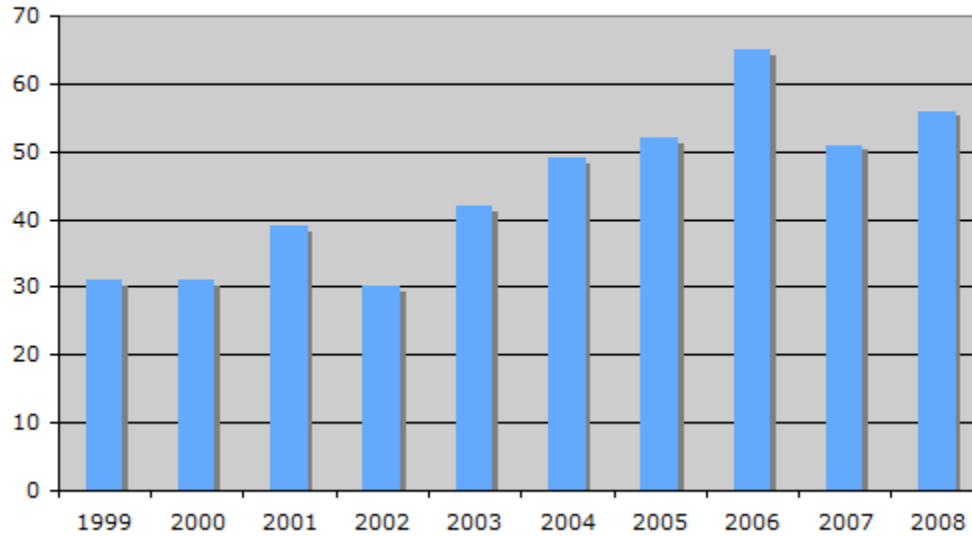
- Industrial software and optimization
- Network provisioning and security
- Automatic speech interfaces
- RFID



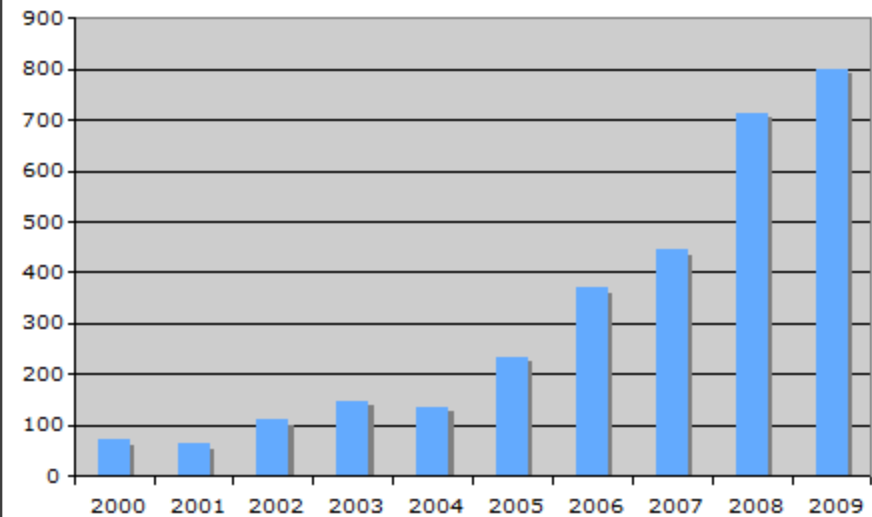
# BUEE Faculty publishes and is cited



**Publications**



**Citations**



# EE Student Statistics

	B.Sc.	M.Sc.	Ph.D.
<b>Students</b>	<b>275</b>	<b>100</b>	<b>75</b>
<b>Student/Faculty Ratio</b>	<b>10</b>	<b>6</b>	<b>5</b>
<b>Graduating</b>	<b>55-60</b>	<b>10-20</b>	<b>5</b>

<b>Alumni sample</b>	
<b>Academic</b>	<b>%20</b>
<b>R &amp; D Engineer</b>	<b>%30</b>
<b>Director &amp; Design Leader</b>	<b>%30</b>
<b>Entrepreneur</b>	<b>%5</b>
<b>Finance &amp; Banking</b>	<b>%15</b>

# EE Student Facts

- **MSc:** 70% of our graduates proceed for M.Sc.
- **PhD:** 20% receive PhD degree, thus 300 PhD's since 1980, 50 from BU
- **Recent admitting universities:** MIT , TU München, Princeton, EPF Lausanne, Stanford, TU Delft, Purdue, Telecom Paris, UCSD, Ohio State, Milano Poly., Brown, Geneva, Boston, TU Karlsruhe, North Carolina, Lyon, UT Dallas, ETH Zürich, UPenn, British Columbia, Eurocom, Rensselaer, ...



# Our strengths in Telecommunications and Signal Processing

- **Forensics and Security**

- Reliable biometrics
- Video mining

- **Telecommunications:**

- Wireless networking
- Advanced error correcting codes
- Statistical signal processing

- **Speech and Audio:**

- Automatic dialog systems
- Large vocabulary speech recognition

- **Image and Video:**

- Medical image analysis and visualization
- Medical IR
- Affective man-machine interfaces

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# Our strengths in Electronics and MEMS

- **VLSI Design**

- ADC Design
- Filter Design
- CAD Tool Development

- **Wireless IC Design**

- UWB system design
- 60GHz CMOS Transceiver Design
- High-speed system design

- **MEMS Expertise**

- CMOS-MEMS monolithic integration
- Biomedical microsystem development
- Optical, thermal and fluidic microsystems





# Our strengths in Control Systems and Robotics

- **Intelligent Control in Robotics**
  - Autonomous robots and systems
  - Biologically motivated sensing (vision, laser, sonar)
- **Mechatronics:**
  - Sliding Mode Control
  - Variable Structure Systems
- **Dynamical Systems:**
  - Modelling of biological systems
- **Chaos Control:**
  - Targeting and control of deterministic chaos