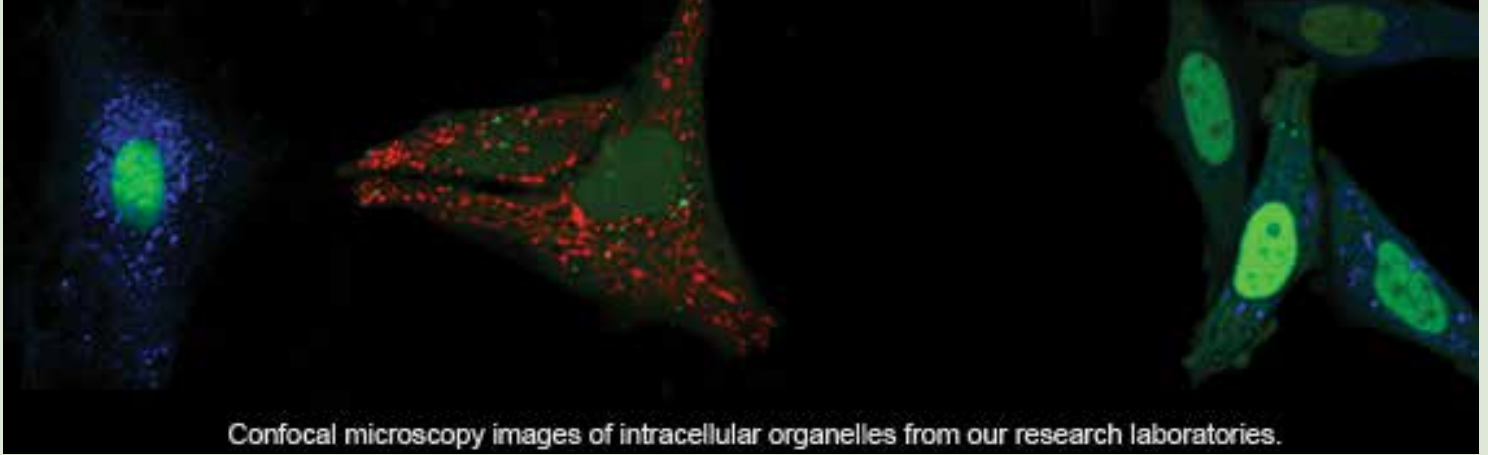


# MOLECULAR BIOLOGY, GENETICS AND BIOENGINEERING INSTITUTE OF ENGINEERING AND NATURAL SCIENCES GRADUATE PROGRAMS



## ABOUT THE PROGRAM

The Molecular Biology, Genetics and Bioengineering program (BIO) aims to develop an integrated scientific perspective on the fundamentals of molecular biology, biochemistry, genetics and cell biology. These topics all rely on a solid background in mathematics, physics, and chemistry. The program also has a biotechnology dimension with courses on the exploitation of biological systems for developing new technologies and industrial applications. We educate future bioengineers who benefit from interdisciplinary undergraduate courses to build an understanding of engineering concepts and techniques. Students learn to apply engineering principles to the re-conceptualization of biological phenomena and are trained to acquire skills for developing new materials and processes, including genetic modification of agriculturally important plants and human cells.

Most of the graduates of the BIO program continue on with graduate education in Turkey and abroad. All of our graduates are equipped with in depth knowledge of modern molecular biology. Our graduates attain research and management positions in industrial and research institutions operating in various areas of the biological sciences and biotechnology.

### Research Areas

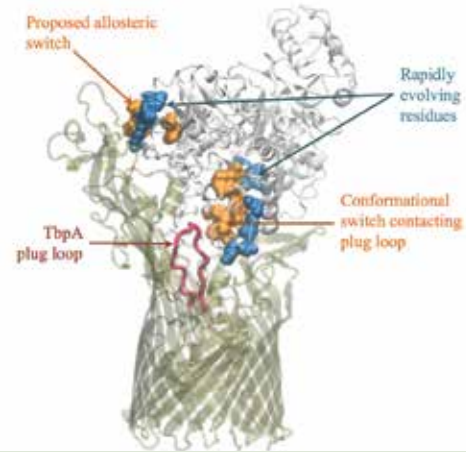
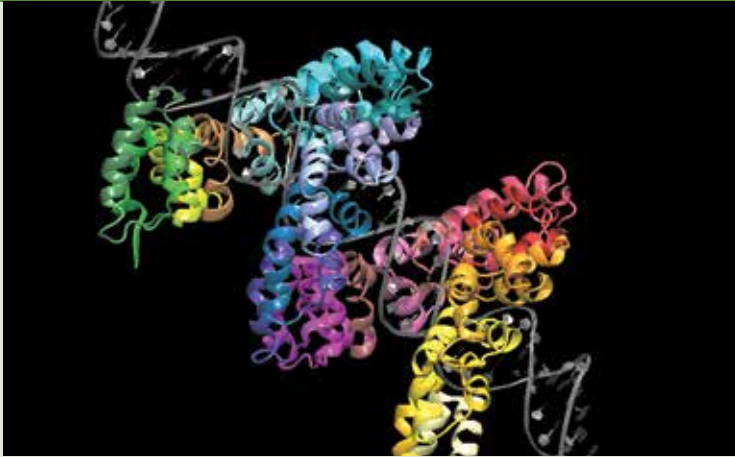
- Bioinformatics
- Molecular and Cellular Biology
- Plant Molecular Biology and Genetics
- Plant Nutrition and Physiology
- Structural and Computational Biology

### Faculty Members

- Abdullah Kahraman
- Batu Erman
- Deniz Sezer
- Devrim Gözüaçık
- Hikmet Budak
- Hüveyda Başağa
- İsmail Çakmak
- Levent Öztürk
- Selim Çetiner
- Zehra Sayers



# MOLECULAR BIOLOGY, GENETICS AND BIOENGINEERING INSTITUTE OF ENGINEERING AND NATURAL SCIENCES GRADUATE PROGRAMS



## Benefits Provided for Graduate Students

- Full tuition Waiver
- Monthly stipend
- Housing/transportation support
- Private health insurance
- Conference travel funding
- Financial incentives for project and research

## Application Requirements

- Official Transcript
- Statement of Purpose
- Two Letters of Recommendation
- ALES or GRE Scores
- English Proficiency Exam (TOEFL (IBT) or YDS/e-YDS Scores)

## Online Application

[admission.sabanciuniv.edu](http://admission.sabanciuniv.edu)

The Online Graduate Student Application System for the 2017-2018 Fall Semester is now open!

## Contacts

Graduate Coordinator

**Prof. Batu Erman**

☎ +90 (0216) 483 9530

✉ [batu@sabanciuniv.edu](mailto:batu@sabanciuniv.edu)

## For more information

🌐 [bio.sabanciuniv.edu](http://bio.sabanciuniv.edu)

🌐 [su-fens-gradoffice@sabanciuniv.edu](mailto:su-fens-gradoffice@sabanciuniv.edu)

Application Deadline

May 12<sup>th</sup>, 2017



# COMPUTER SCIENCE AND ENGINEERING

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### ABOUT THE PROGRAM

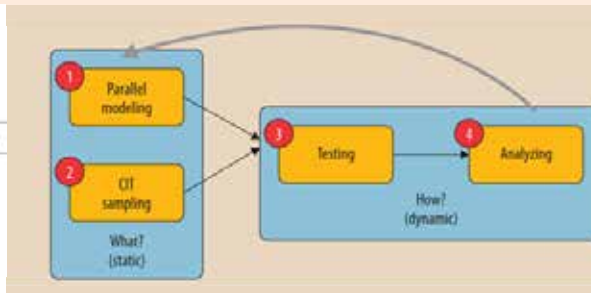
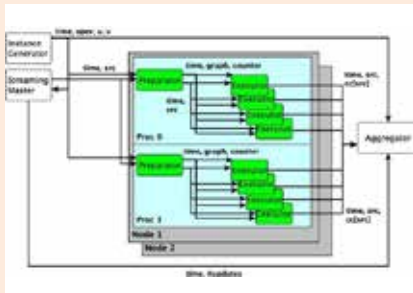
Computer Science and Engineering has contributed immensely in shaping our lives in many areas encompassing communication, commerce, medicine, education, entertainment, and human interaction, to name a few. This significant role will continue to do so in the foreseeable future as well. Current major topics of interest at Sabancı University include the following areas, many of which have direct applicability.

#### Research Areas

- Artificial Intelligence, Machine Learning
- Cognitive Robotics
- Computer Graphics & Visualization
- Computer Networks
- Computer Vision & Signal Processing
- Data Analytics
- Security and Privacy
- Software Engineering

#### Faculty Members

- Albert Levi
- Berrin Yanıkoğlu
- Cemal Yılmaz
- Erkey Savaş
- Esra Erdem
- Gülşen Demiröz
- Hüsnü Yenigün
- Kamer Kaya
- Kemal İnan
- Selim Balcısoy
- Yücel Saygın



	A	B	C	D	E	Scheduled test cases
	0	1	1	2	0	$(t_p, t_s)$
	0	0	0	0	0	$(t_p, t_s)$
	0	0	0	1	1	$(t_p, t_s)$
	1	1	1	0	1	$(t_p, t_p, t_s)$
	0	1	0	0	2	$(t_p, t_p, t_s)$
	1	0	1	1	0	$(t_p, t_p, t_s)$
	1	1	1	1	2	$(t_p, t_p, t_s)$
	1	0	0	2	1	$(t_p, t_p, t_s)$
	1	0	0	2	2	$(t_p, t_p, t_s)$
	1	1	1	2	0	$(t_s)$
	0	1	0	2	1	$(t_s)$
	1	0	0	0	0	$(t_s)$
	0	1	0	1	1	$(t_s)$





# ELECTRONICS ENGINEERING

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### ABOUT THE PROGRAM

Our main objectives are to conduct internationally competitive research and deliver high quality teaching. The department conducts research across a wide range of topics, and targets both fundamental advances and practical applications of science and technology. The quality and impact of our research are demonstrated by our many highly cited publications, the personal recognition of our researchers through awards and honours, and the commercial adoption of our results and innovations.

The discipline of electronics engineering is grounded in the sciences and in mathematics. If you enjoy these subjects, then you will find electrical engineering a fascinating and rewarding field of study with many opportunities to solve key engineering problems. Subareas within the discipline range from the exploration of information and its communication, through the physics of new materials and devices and the circuits made from them, to the algorithms that run on next generation computing platforms.

Basic interest areas of the program can be listed as the following.

#### Research Areas

- Digital Systems
- Electronics and Circuits
- Optics and Photonics
- Signal Processing
- Telecommunications

#### Faculty Members

- Ayhan Bozkut
- İbrahim Tekin
- İlker Hamzaoğlu
- Mehmet Keskinöz
- Meriç Özcan
- Müjdat Çetin
- Murat Kaya Yapıcı
- Özgür Erçetin
- Özgür Gürbüz
- Yaşar Gürbüz



# ELECTRONICS ENGINEERING

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### Benefits Provided for Graduate Students

- Full tuition Waiver
- Monthly stipend
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#### Application Requirements

- Official Transcript
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#### Online Application

[admission.sabanciuniv.edu](http://admission.sabanciuniv.edu)

The Online Graduate Student Application System for the 2017-2018 Fall Semester is now open!

#### Contacts

Graduate Coordinator

**Prof. Özgür Erçetin**

☎ +90 (0216) 483 9608

✉ [oercetin@sabanciuniv.edu](mailto:oercetin@sabanciuniv.edu)

#### For more information

🌐 [ee.sabanciuniv.edu](http://ee.sabanciuniv.edu)

🌐 [su-fens-gradoffice@sabanciuniv.edu](mailto:su-fens-gradoffice@sabanciuniv.edu)

Application Deadline

May 12<sup>th</sup>, 2017





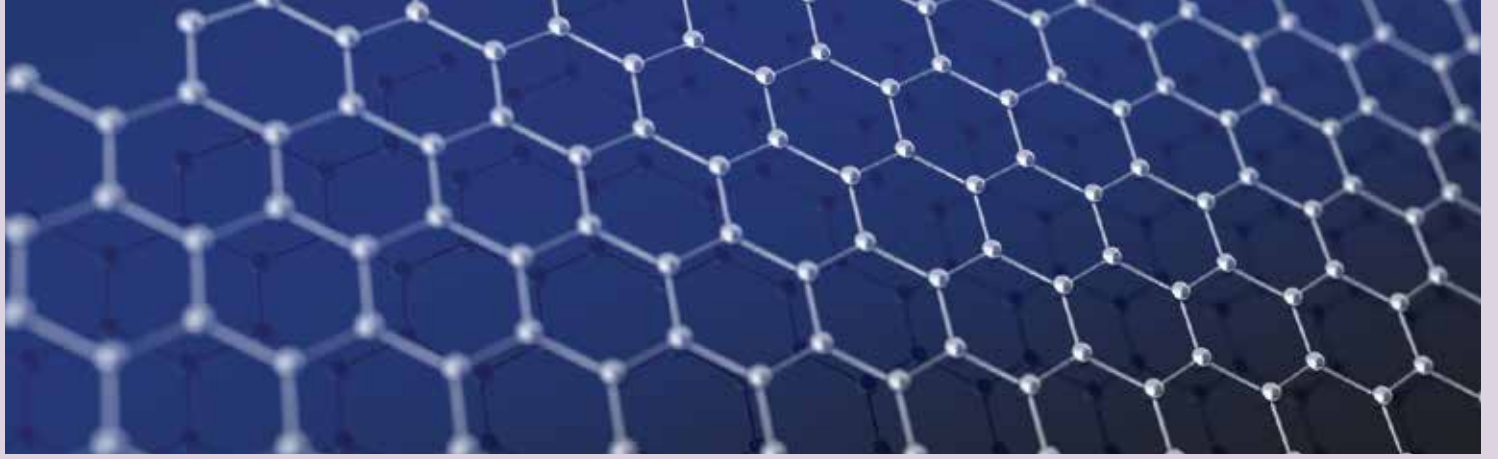




# MATERIALS SCIENCE AND NANO ENGINEERING

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### ABOUT THE PROGRAM

The Materials Science and Nano Engineering program (MAT) is aimed at providing its students with the theoretical and practical skills necessary for the understanding and design of engineered materials for applications in advanced technology of high environmental and societal impact. Addressing a broad spectrum of interests, from rheology of cement to materials for alternative energy, the MAT program members position their output as critical linkages between science/technology and industry. Augmented by the Technology Transfer Office and the entrepreneurial activities of the University, the students of our program graduate with the skills for i) identifying a high impact problem, ii) developing an innovative material/processing solution or improving an existing one, and iii) pursuing the implementation of their solution in industry or by themselves as entrepreneurs. Graduate students in the MAT program cherish research in a world-class environment with distinguished faculty.

To achieve these goals, a state-of-the-art research environment is offered based on advanced research centers and laboratories, such as the Composite Technologies Center of Excellence, Computational Materials Science Laboratories, Thin Film Coating Laboratories, Polymer and Nanomaterials Syntheses Laboratories, and Materials Characterization Laboratories. Students of MAT also have full access to Sabancı University Nanotechnology Research and Application Center (SUNUM) which hosts Micro/Nano Fabrication (Clean Room) and Electron Microscopy & Spectroscopy Laboratory.

#### Research Areas

- Advanced Composite Materials
- Carbon-based Materials
- Cement
- Materials for Energy
- Smart Materials and Structures
- Theoretical and Computational Materials Science
- Semiconductor Interfaces
- Surface Science
- Zero-Energy Consumption Lighting Materials

#### Faculty Members

- Ali Rana Atılğan
- Burç Mısırlıoğlu
- Canan Atılğan
- Cleve Ow-Yang
- Fevzi Çakmak Cebeci
- Gözde İnce
- Mehmet Ali Gülgün
- Melih Papila
- Özge Akbulut
- Selmiye Alkan Gürsel
- Yuda Yürüm
- Yusuf Menceoğlu



# MATERIALS SCIENCE AND NANO ENGINEERING INSTITUTE OF ENGINEERING AND NATURAL SCIENCES GRADUATE PROGRAMS



## Benefits Provided for Graduate Students

- Full tuition Waiver
- Monthly stipend
- Housing/transportation support
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## Application Requirements

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- Statement of Purpose
- Two Letters of Recommendation
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## Online Application

[admission.sabanciuniv.edu](http://admission.sabanciuniv.edu)

The Online Graduate Student Application System for the 2017-2018 Fall Semester is now open!

## Contacts

Graduate Coordinator

**Asst. Prof. Özge Akbulut**

☎ +90 (0216) 483 9968

✉ [ozgeakbulut@sabanciuniv.edu](mailto:ozgeakbulut@sabanciuniv.edu)

## For more information

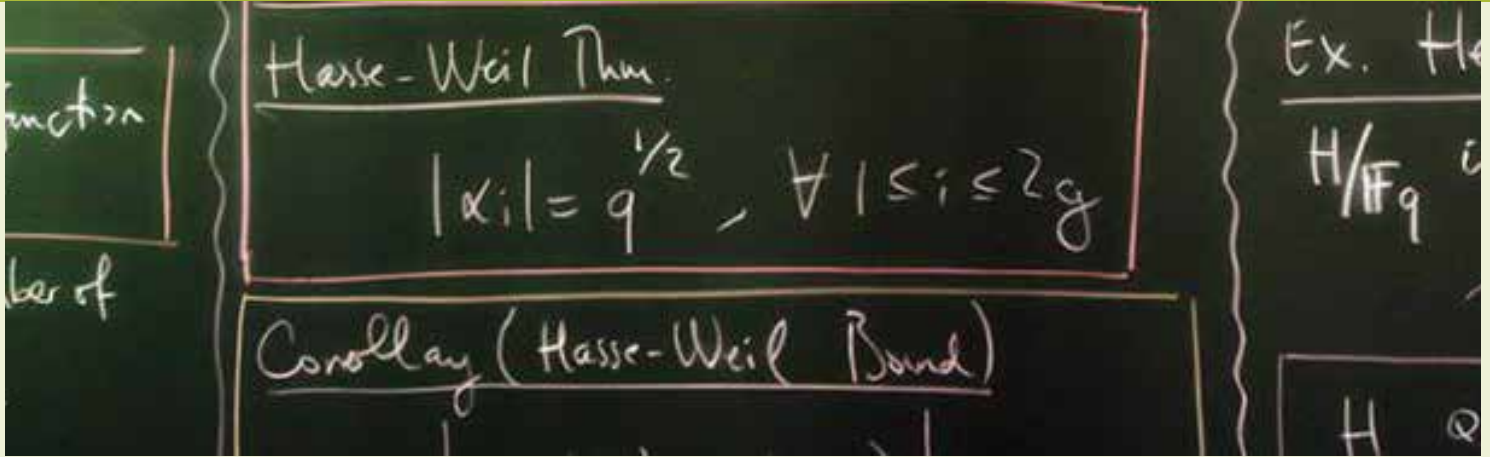
🌐 [mat.sabanciuniv.edu](http://mat.sabanciuniv.edu)

🌐 [su-fens-gradoffice@sabanciuniv.edu](mailto:su-fens-gradoffice@sabanciuniv.edu)

Application Deadline

May 12<sup>th</sup>, 2017





## ABOUT THE PROGRAM

The mathematics program through the MS and PhD programs aims to train future researchers and teachers in mathematics.

The mission of the MS program is to equip the students with advanced knowledge in analysis and algebra as well as a deeper understanding in a chosen field of study. The mission of the PhD program, in addition, is to educate students to become independent researchers producing and disseminating original results. Both programs have an emphasis on teaching practice. The graduate students gain valuable experience by giving recitations and holding office hours for a variety of undergraduate courses.

The MS students must fulfill a certain credit load and compose a thesis which explores a specific mathematical field. The recipient of the MS degree is then ready for doctorate-level studies or skilled work in industry.

The PhD students in addition must pass written and oral qualifying examinations in two subjects, and write a thesis containing original mathematical research. Upon completion of the PhD program, the graduates are stand-alone scholars who can be part of prestigious universities or research centers in Turkey or abroad.

The students are encouraged to participate in exchange programs to broaden their perspective and take part in different research groups.

## Research Areas

### Algebra, Number Theory And Combinatorics:

- **Arithmetic of Finite Fields:**  
Permutation polynomials, polynomial factorization.
- **Function Fields and Curves over Finite Fields:**  
Rational points, maximal curves, towers of function fields, automorphisms, modular curves, Drinfeld modular curves.
- **Coding Theory:**  
Cyclic and quasi-cyclic codes, algebraic geometry codes, asymptotically good codes.
- **Cryptology:**  
Sequences and stream ciphers, cryptographically significant functions (bent, plateaued, almost perfect nonlinear), secret sharing schemes.

### Enumerative Combinatorics and Applications:

Integer partitions, permutations and permutation statistics. Basic hypergeometric series and their identities. Bijective and sieve methods.

### Commutative and Computational Algebra, Combinatorics and Algebraic Statistics:

Investigation of questions related to binomial ideals, toric rings, Koszul Algebras and their filtrations, lattice ideals, combinatorics of partially ordered sets, application of Gröbner bases, and algebraic and homological properties of powers of ideals.

### Analysis And Partial Differential Equations:

- **Functional and Complex Analysis:**  
The structure theory of locally convex spaces including spaces of analytic,

harmonic, and infinitely differentiable functions of several variables. Linear topological invariants, isomorphisms and bases in locally convex spaces; complex potential theory, approximation and interpolation of analytic and harmonic functions, composition operators on analytic function spaces

- **Partial Differential Equations:**  
Operator theory, pseudo-differential operators, nonlinear partial differential equations, infinite-dimensional dynamical systems, calculus of variations and their applications to mechanical problems.

### Probability And Statistics:

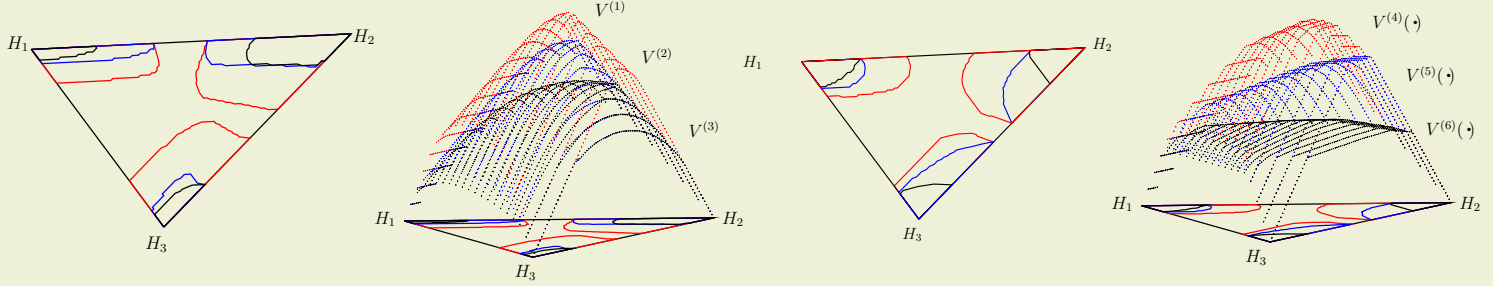
Probability measures in infinite dimensional spaces, nonlinear theory of distributions.



# MATHEMATICS

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### Faculty Members

- Albert Erkip
- Alev Topuzoğlu
- Ayesha Asloob Qureshi
- Cem Güneri
- Henning Stichtenoth
- Kağan Kurşungöz
- Michel Lavrauw
- Nihat Gökhan Göğüş
- Plamen Djakov
- Semih Onur Sezer
- Yasemin Şengül Tezel

#### Benefits Provided for Graduate Students

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#### Online Application

[sugradapp.sabanciuniv.edu](http://sugradapp.sabanciuniv.edu)

The Online Graduate Student Application System for the 2017-2018 Fall Semester is now open!

#### Contacts

Graduate Coordinator

**Assoc. Prof. Kağan Kurşungöz**

☎ +90 (0216) 483 9964

✉ [kursungoz@sabanciuniv.edu](mailto:kursungoz@sabanciuniv.edu)

#### For more information

🌐 [math.sabanciuniv.edu](http://math.sabanciuniv.edu)

🌐 [su-fens-gradoffice@sabanciuniv.edu](mailto:su-fens-gradoffice@sabanciuniv.edu)

Application Deadline

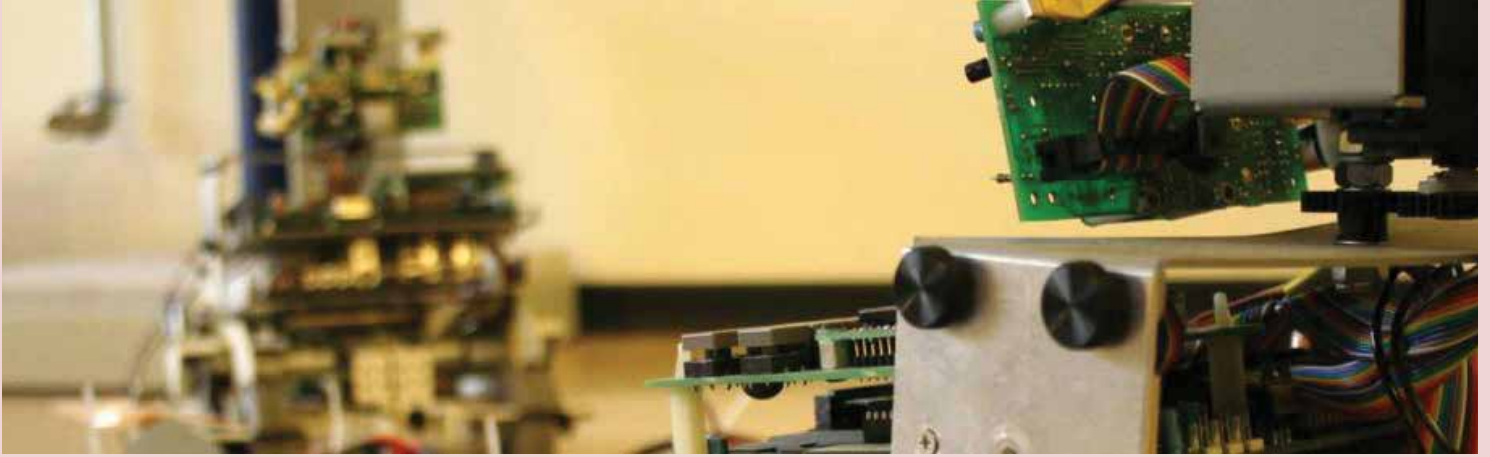
May 12<sup>th</sup>, 2017



# MECHATRONICS ENGINEERING

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### ABOUT THE PROGRAM

Mechatronics is the design methodology of systems based on multidisciplinary engineering approaches. Most modern systems such as consumer products, manufacturing machines, or even exotic measurement devices must be designed to comply with several constraints at the same time, including complex behavior, mechanical and electronic precision, low cost, low power consumption, environmental friendliness, networked operation, smart interaction with users and work in uncertain environments. Their design requires engineers who are fluent in such disciplines as electronics, mechanics, computers, control, and other areas like optics and material science.

Mechatronics program at Sabancı University aims to educate creative individuals who can apply ideas from all such disciplines to design today's complex systems. The approach is supported by a curriculum seamlessly integrating the diverse disciplines, while being hands-on and research oriented from the undergraduate education, utilizing our comprehensive research infrastructure used for the industrial projects and fundamental research conducted by the program members.

#### Research Areas

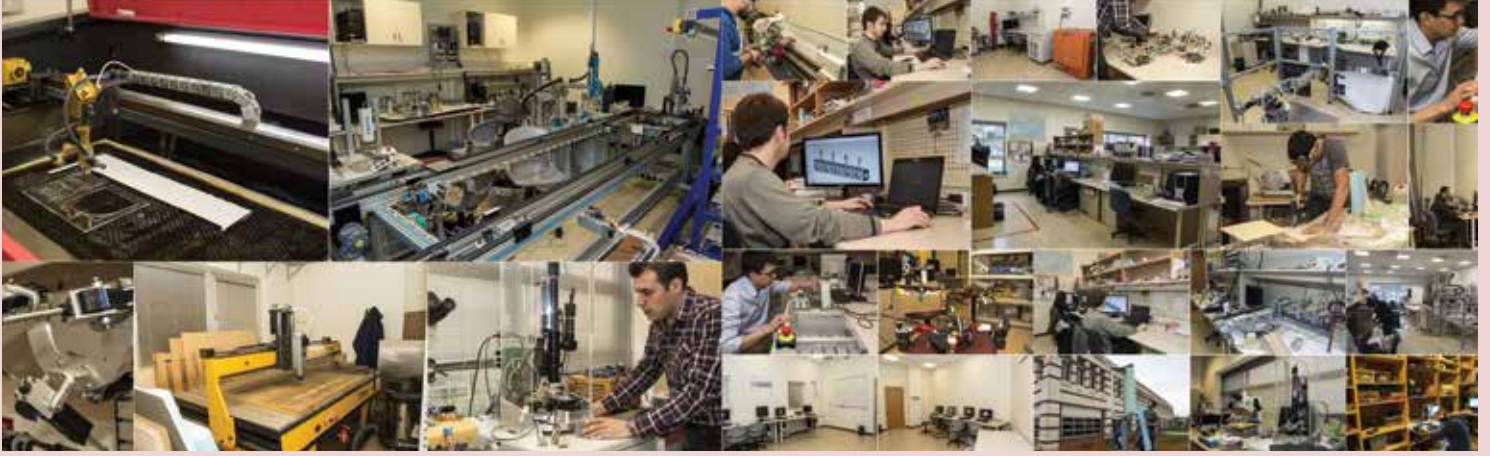
- Automotive Systems
- Design of Mechatronic Systems
- Dynamics and Vibration
- Embedded and Real-time Systems
- Energy Systems
- Experimental and Computational Micro/Nano Fluidics and Heat Transfer
- Real-Time Imaging and Machine Vision Systems
- Robotics, Systems and Controls
- Topology Optimization of Metamaterials and Tissue Engineering Systems

#### Faculty Members

- Ahmet Onat
- Ali Koşar
- Asif Şabanoviç
- Bekir Bediz
- Güllü Kızıltaş Şendur
- Kemalettin Erbatır
- Kürşat Şendur
- Mahmut Faruk Akşit
- Meltem Elitaş
- Mustafa Ünel
- Serhat Yeşilyurt
- Tuğçe Yüksel
- Volkan Patoğlu



# MECHATRONICS ENGINEERING INSTITUTE OF ENGINEERING AND NATURAL SCIENCES GRADUATE PROGRAMS



## Benefits Provided for Graduate Students

- Full tuition Waiver
- Monthly stipend
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## Online Application

[admission.sabanciuniv.edu](http://admission.sabanciuniv.edu)

The Online Graduate Student Application System for the 2017-2018 Fall Semester is now open!

## Contacts

Graduate Coordinator

**Prof. Ali Koşar**

☎ +90 (0216) 483 9621

✉ [kosara@sabanciuniv.edu](mailto:kosara@sabanciuniv.edu)

## For more information

🌐 [me.sabanciuniv.edu](http://me.sabanciuniv.edu)

🌐 [su-fens-gradoffice@sabanciuniv.edu](mailto:su-fens-gradoffice@sabanciuniv.edu)

Application Deadline

May 12<sup>th</sup>, 2017



# MANUFACTURING ENGINEERING

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### ABOUT THE PROGRAM

The Manufacturing Engineering Program deals with integrated science and technologies to develop and improve innovative products and manufacturing processes. This interdisciplinary program integrates fundamental science and knowledge from Mechanical, Industrial, Production, and Materials Engineering to research, design and develop manufacturing systems, processes, machines, tools, and equipment. The Manufacturing Engineering program focuses on advanced manufacturing technologies. The research areas include manufacturing processes and equipment, computer-aided design and manufacturing, integrated manufacturing systems, additive manufacturing (3D printing), biomanufacturing, nano-micro manufacturing, composite and polymer manufacturing, and manufacturing and technology strategies with special emphasis on industrial applications.



#### Research Areas

- Advanced Composite Materials
- Machining and Machine Tools
- CAD/CAM Integration
- Unconventional Manufacturing
- Robotics and Machine Vision
- Computational Methods
- Additive Manufacturing, 3D Printing
- Manufacturing Applications

#### Faculty Members

- Bahattin Koç
- Eralp Demir
- Erhan Budak
- Güllü Kızıltaş Şendur
- Lütfi Taner Tunç
- Murat Kaya
- Mustafa Ünel
- Yusuf Menceloğlu



# MANUFACTURING ENGINEERING INSTITUTE OF ENGINEERING AND NATURAL SCIENCES GRADUATE PROGRAMS



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## Contacts

Graduate Coordinator

**Prof. Erhan Budak**

☎ +90 (0216) 483 9519

✉ [ebudak@sabanciuniv.edu](mailto:ebudak@sabanciuniv.edu)

## For more information

🌐 [mfg.sabanciuniv.edu](http://mfg.sabanciuniv.edu)

🌐 [su-fens-gradoffice@sabanciuniv.edu](mailto:su-fens-gradoffice@sabanciuniv.edu)

Application Deadline

May 12<sup>th</sup>, 2017

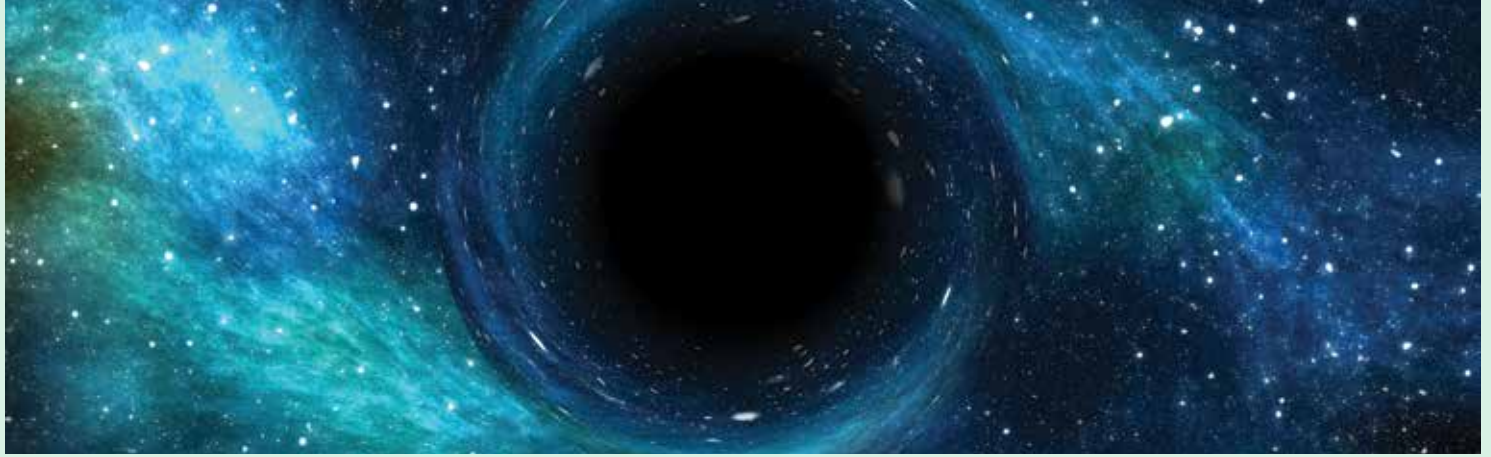




# PHYSICS

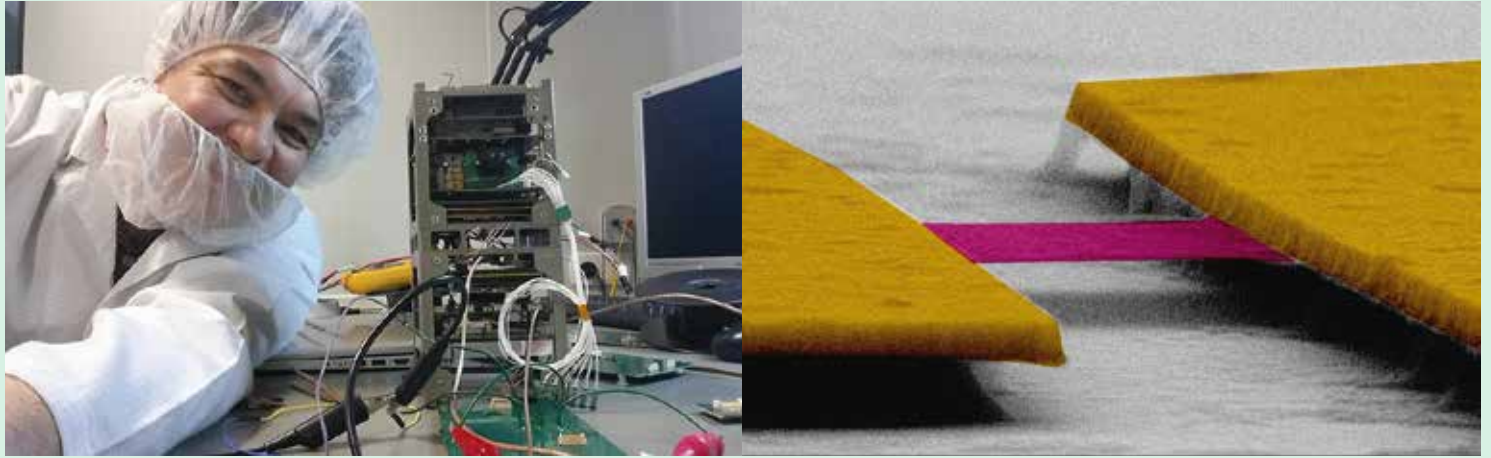
## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



#### ABOUT THE PROGRAM

The Physics graduate program (PHYS) offers cutting edge research opportunities in a wide variety of topics, from the smallest scales in nature such as experimental and theoretical studies in nanotechnology to large scales in high energy astrophysics. With a solid educational background and teaching opportunities, Physics program prepares students to future academic positions as well.



#### Research Areas

- High Energy Astrophysics
- Experimental Condensed Matter Physics
- Theoretical Condensed Matter Physics
- Mathematical Physics
- Theoretical Molecular Biophysics

#### Faculty Members

- Cihan Saçlıođlu
- Deniz Sezer
- Emrah Kalemci
- Ersin Gögüş
- İnanç Adagideli
- İsmet İnönü Kaya
- Mehmet Ali Alpar
- Sondan Durukanođlu Feyiz
- Ünal Ertan
- Zafer Gedik



# PHYSICS

## INSTITUTE OF ENGINEERING AND NATURAL SCIENCES

### GRADUATE PROGRAMS



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#### Contacts

Graduate Coordinator

**Assoc. Prof. Emrah Kalemci**

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🌐 [su-fens-gradoffice@sabanciuniv.edu](mailto:su-fens-gradoffice@sabanciuniv.edu)

Application Deadline

May 12<sup>th</sup>, 2017

