

NUCLEAR SCIENCE and APPLICATIONS in TURKEY (overview)

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TURKISH ATOMIC ENERGY AUTHORITY

● CNAEM , Istanbul

Physics:

SAMES T-400

SAMES T-150

- Neutron Induced Reactions
- Neutron Activation Analysis
- Explosive Detection
- Rutherford Back-Scattering
- α -d at low energies
- Accelerator Driven Systems

Radiobiology:

- Radioactivity Measurements

Industrial Applications:

- XRF
- Neutron Activation Analysis

Nuclear Engineering:

TR-2 Pool Type Reactor 6 MW

● ANAEM, Ankara

Physics:

- XRF
- Neutron Activation Analysis
- Radioactivity Measurements

Planning: **CYCLOTRON**

(15 MeV proton)

Radioisotope production for
medicine + Physics



TRIGA MARK II

Research Reactor

Pulsed 250 kW

-Energy Science and Technologies MSc. & PhD. Courses

Departments:

- Nonrenewable-Conventional Energy
- Renewable Energy
- Nuclear Investigation
- Energy Management and Planning
 - 7 professors
 - 3 associate professors
 - 3 assistant professors
 - 9 research assistants (2 with Ph.D. in engineering)



MSc. & PhD. Courses in Nuclear science

Research Laboratories:

Luminescence spectrometry

Nuclear spectroscopy

Radioactivity counting

Radium-Radon

ICP

Nuclear fuel

Radio analytical chemistry

Instrumental analysis

Nuclear chemistry

Nuclear electronics

Divisions:

-Nuclear Science

2 professors, 2 assoc. professors 1 assist. professor

-Nuclear Technology

3 professors, 2 assoc. professors 2 assist. professors

-Nuclear Applications

1 professor, 1 assoc. professor 2 assist. professors

UNIVERSITIES

Nuclear Physics Divisions



ANKARA University, Ankara *

4 professors, 2 assoc. professors, 2 assist. Professors

Experimental Nuclear Physics

Nuclear Structure

Nuclear Medicine & Medical Physics

BALIKESIR University, Balikesir

2 assoc. professors

Experimental Nuclear Physics

BOGAZICI University, Istanbul

3 professors

Experimental & Theoretical Nuclear Physics

Celal Bayar University, Manisa *

2 assoc. professor, 2 assist. Professors

Theoretical Nuclear Physics

IBM calculations

Dumlupınar University, Kutahya *

1 professor, 2 assist. Professors

Theoretical Nuclear Physics

IBM calculations

EGE University, Izmir

2 professors, 1 assoc. professor, 2 assist. Professors

Experimental & Theoretical Nuclear Physics

ERCIYES University, Kayseri *

1 assoc. professor, 2 assist. Professors

Experimental & Theoretical Nuclear Physics

Astrophysics

Model Calculations

GAZI University, Ankara

2 professors, 2 assist. Professors

Experimental & Theoretical Nuclear Physics

Model Calculations

GAZIANTEP University, Gaziantep *

1 professor, 2 assist. Professors

Theoretical Nuclear Physics

Reaction theory

Model Calculations

HACETTEPE University, Ankara

1 professor

Experimental Nuclear Physics

Van der Graaf 500 KV (1976)



ISTANBUL University, Istanbul *

5 professors, 1 assoc. professor, 5 Research assistants with PhD

7 PhD 4 MSc Students

Experimental Nuclear Physics

Charged particle Dosimetry

EURONS(AGATA/SEENet)

Collaborations: Balkan/Demokritos/Sofia/
iThemba/LNL/YALE/ Camerino

Cockroft-Walton 800 KV (1954)



ISTANBUL Technical University, Istanbul *

1 professor, 2 assoc. professors

Experimental & Theoretical Nuclear Physics

TRIGA II

IZMIR Institute for Advanced Technology, Izmir

1 assistant professor

Experimental Nuclear Physics

KOCAELI University, Kocaeli *

1 professor, 2 assist. Professors

Theoretical Nuclear Physics

NIGDE University, Niğde *

1 assoc. professor

Experimental Nuclear Physics

ONDOKUZMAYIS University, Samsun

2 professors, 1 assistant professor, 1 Research assistant with PhD

Experimental Nuclear Physics

METU (Middle East Technical University), Ankara *

2 professors, 1 Research assistant with PhD

Theoretical Nuclear Physics

OSMANGAZI University, Eskişehir *

1 assistant professor

Experimental Nuclear Physics

SAKARYA University, Sakarya *

1 professor, 2 assistant professors

Theoretical Nuclear Physics

SELCUK University, Konya *

1 professor, 1 assistant professor

Theoretical Nuclear Physics

SÜLEYMAN DEMIREL University, Isparta *

2 assoc. professors, 4 assistant professors

Experimental & Theoretical Nuclear Physics

ULUDAG University, Bursa

2 professors, 2 assistant professors

Experimental & Theoretical Nuclear Physics

YILDIZ Technical University *

1 professors, 1 assoc. professor, 2 assist. Professor

Experimental & Theoretical Nuclear Physics & Applications

Actively working Nuclear Physicists
in Turkey incl. applications
(private communications)

Professors :15
Assoc. Professors : 14
Assistant Professors : 29
MSc & PhD students ~ 100

What we observe :

- Motivated young researcher
- Scattered centres
- Lack of hands on training

NEEDED :

- closer collaboration within the country
- umbrella organization to promote and provide access to regional & international centres

GALATASARAY: 5

FENERBAHCE :1

Thanks HAGI...

