# Iran-Austria Joint Scientific Conference in Higher Education

Behzad Mehrabi

Kharazmi University

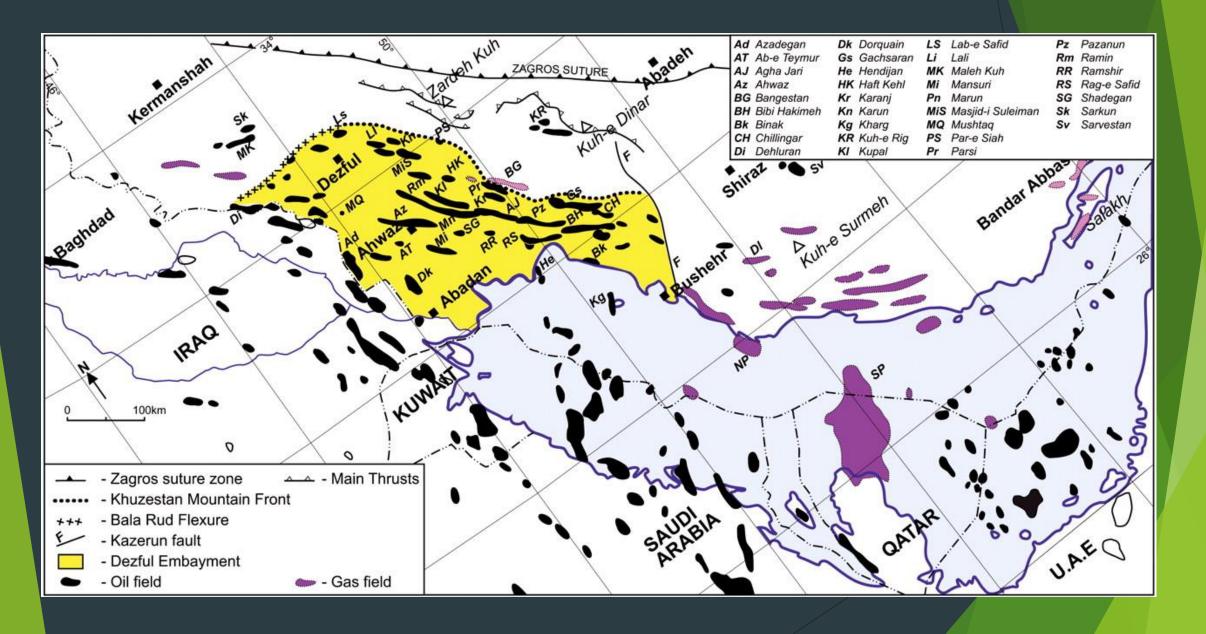
Tehran-January 2017

## Structure of Talk

- Research Topics:
- ▶ Petroleum Geoscience and Engineering
- Mineral Resources
- ► Basic Geological Sciences

## Frame Work of Joint Scientific and Technical Collaboration

- Applied research
- ▶ Joint Venture Research cooperation
- Exchange of Students and Professors
- ▶ Joint Master and PhD Programs
- Cooperation between Science and Technology Parks



## Major Topics on Petroleum Geoscience and Engineering

- 1. Manufacturing, equipments and materials
- 2. Production and Operation
- 3. Modern technology-driven services in drilling operations
- 4. Enhanced Oil Recovery (EOR)
- 5. Modeling, control and management of reservoirs
- **6.** Exploration and geosciences
- 7. Strategic studies, infrastructure and productivity
- 8. Optimizing energy consumption
- 9. Corrosion and protective coating
- 10. Maintenance and productivity
- 11. Development of oil and gas processing technology
- 12. Integrated databases and in-house softwares
- 13. HSE

- ► Manufacturing, equipments and materials
- Construction of modern drilling and maintenance of offshore and onshore
- Design and manufacturing of Pre-processing of oil and gas
- Optimizing of water management facilities and waste management
- Design, construction and production of consumable materials in Hitech process

#### ▶ Production and Operation

- Development of intelligent operations systems in oil and gas fields
- Development of numerical methods in analysis and interpretation of short-term (Well Test) and long-term production of oil and gas wells.
- Development of production history algorithms
- Optimization of Production Optimization in new and under fields
- Development of technical capabilities for exploitation of carbonate reservoirs (Target testing, reservoir characterization, drilling etc)

- ► Modern technology-driven services in drilling operations
- Training technical staff in Exploratory Drilling Operation, Evaluation, Production and Injection
- Development of drilling method
- Applied models for improving safety of drilling and well service
- Fast and Accurate Advanced Well Logging and core analysis tests Technologies for wells and smart fields

#### ► Enhanced Oil Recovery (EOR)

- Feasibility study (technical and economical) of EOR Methods in Iran Reservoirs including
- 1. Gas s or solvent (miscible and immiscible) injection
- 2. Water flooding methods
- 3. heating methods
- Assess the performance of gas condensate reservoirs in the discharge pressure and dry gas cycling
- -EOR research and technology development for heavy oil reservoirs

- ▶ Modeling, control and management of reservoirs
- ➤ Integrated management of wells
- > Static and dynamic modeling, fluid simulation, data interpretation
- Development of new geostatistics algorithms for interpretation and analysis of reservoirs data
- New model of integrated management of reservoirs
- Technology development for abnormal pressure reservoirs
- ► Exploration and geosciences
- Reduce the risk of exploration and operations, offshore and onshore
- Improving the quality of seismic data
- Prediction of consolidated rock and fluid properties
- Techno-economical assessment exploration activities
- Prediction of rock and fluid volumein reservoir using limited indirect and direct data
- Prediction of rock and fluid volumein reservoir using limited indirect and direct data
- Software development and promotion in analyses and interpretation of geological, petrophysical and geophysical data

- ► Strategic studies, infrastructure and productivity
- Codification of specific standards for Iran oil fields development
- -Integrated legal and management format for contractors
- Providing innovative financing models for the development of fields
- Creation of EOR consortium
- Implementation of appropriate management systems and methods for promoting creativity and innovation
- Projects planning and management
- Develop an effective system of evaluation and promotion for human resources

#### Optimizing energy consumption.

- Optimal utilization of available energy and energy auditing
- Long term energy strategy plan
- Integrated culture, education and information program for optimize energy consumption
- Development of heat recovery technologies in large-scale plants
- Optimizing fuel consumption

- Corrosion and protective coating
- Corrosion analysis and prevention
- Developing appropriate coatings to prevent corrosion
- ► Maintenance and productivity
- Development modern strategy for equipment maintenance
- Upgrade and improve equipment performance
- New methods of energy optimization in production and processing equipment and facilities
- Design, construction and production of consumable materials in Hi-tech processing
- Improving production productivity
- ► Development of oil and gas processing technology
- Modern production, desalting and NGL technologies
- Optimizing water management facilities
- Waste processing technology

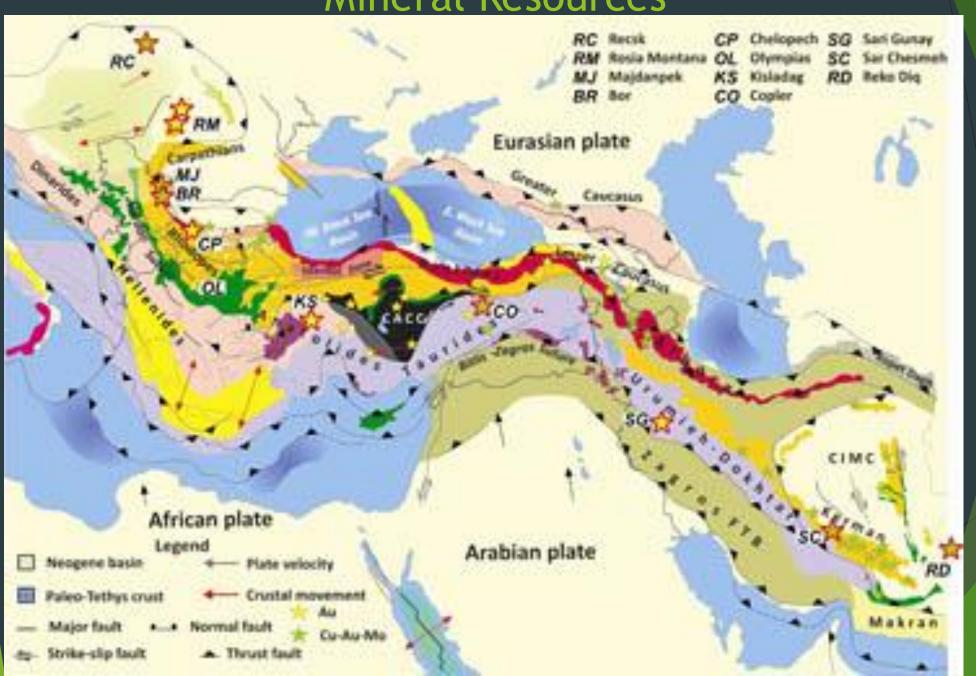
#### ► Integrated databases and in-house softwares

- Production and development of specialized software for petroleum industry
- Customizing softwares based on the characteristics, conditions and specific technical specifications
- Developing algorithms and software for assessment and risk management of oil fields development
- Development of simulation software fractured reservoirs
- Economic evaluation and risk analysis software for reservoir evaluation
- Development of simulation software for EOR

#### > HSE

- Developing regulations, guidelines and standards of HSE
- Promote quality standards in petroleum industry
- Environmental evaluation for drilling operations
- Developing modern safety systems for petroleum industry
- Remediation of oil polluted area

## Mineral Resources



### Mineral Resources-1

### **▶** Exploration

#### - Geology

(Quantitative metallogenic mapping, district and mine based mapping (2D and 3D), basin analyses, magmatism, metamorphism and structural geology in mineral exploration, digital 2D and 3D mapping)

#### - Geochemistry

(New models for geochemical dispersion from deeply, buried mineralization, anomaly enhancements by suitable combinations of sampling processing and analytical methods, separation of background and anomaly using mathematical models)

#### - Geophysics

(Air borne geophysics, Time Domain techniques, 3D modelling, Bore hole exploration)

#### - Geomatics

(Modern technologies i.e. GyroLag, LIDAR)

#### - Drilling

(Robust instrument with minimum maintenance, Versatile drilling rig for shallow and deep drilling, On-line geochemical analyses)

#### - Analyses

(On-Line analysers, quick and reliable analyses)

### Mineral Resources-2

### ► Mineral Processing

- Beneficiation technologies focusing on dry and low water consumption processes
- Beneficiation technologies for low grade ores, tailings and fines
- Energy optimization and water recycling in mining and related industries
- Using clean and renewable energies in mines and mining industries

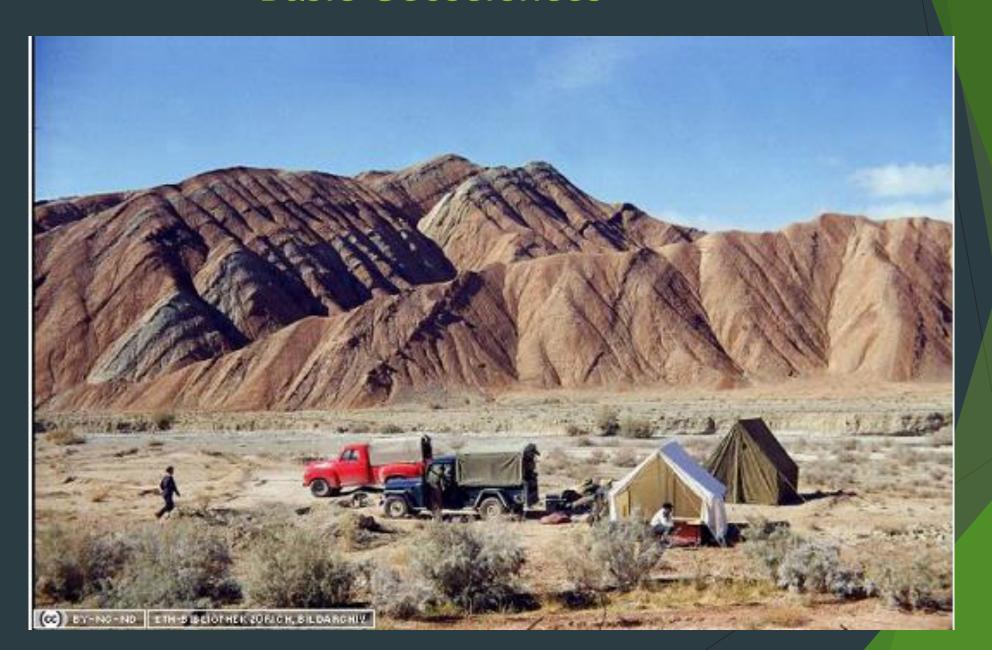
## Waste and tailing managements

- Recycling technologies, reuse of solid wastes and gases in mining plants
- Precious metals recycling from electronic wastes and mining dumps
- Environmental management of wastes and greenhouse or toxic gases emitted from mining plants

### Mineral Resources-3

- ► Hi-tech and modern technologies
- Implementation of modern technology in mining operations: drilling, blasting, loading, haulage, hoisting and so on
- Developing mobile mineral processing and beneficiation plants for small scale mining
- Extraction elements and minerals from sea water and brines
- Employing information and communication technology (ICT) in mining and related industries
- Automation and remote control technologies for mining operations
- ► Improving health, safety and environment (HSE) issues in mines, mining industries and local communities
- Employing information and communication technology (ICT) in mining and related industries

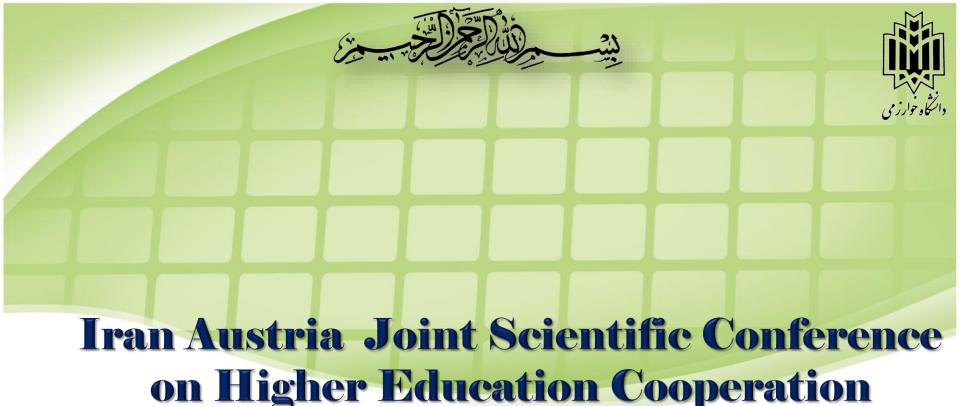
## Basic Geosciences



## Basic Geological Sciences

- Isotope Geochemistry
- Mineral Deposits (Non-Sulphide Pb-Zn, i.e. Mehdi Abad and Anguran, Cu porphyry, Carlin and Orogenic Golds, Alpine chromites, Iron Ore, etc)
- Ophiolites
- Dormant Volcanoes
- Salt Domes
- Continental-Continental Collisions
- Mud Volcanoes
- Fragmented Continental Crust
- Crustal evolution
- Hydrogeology and Hydrology
- Geohazards
- ► Neo- and Morpho-Tectonics

# THANK YOU FOR YOUR ATTENTION



Joint Scientific Proposed Research Subjects, January, 2017.

Presented by: Jamshid Shanbehzadeh

Dean Faculty of Engineering Kharazmi University

## **Mechanical Engineering**

Laboratory

Damage analysis

**Dynamics and vibration** 

**Control and robotics** 

**Energy** 

## **Civil Engineering (I)**

| Laboratory   |
|--|
| Road and Transportation                                  |
| Geotechnics  |
| Structural Engineering, Concrete Technology, Strength of |
| Materials  |
| Environment  |
|  |
| Hydraulic  |
| Construction Engineering and Management                  |

## **Electrical and Computer Engineering**

| Laboratory                             |
|--|
| Computer Vision & Body Sensor Networks |
| Data Mining & Cognitive Science        |
| Signal & Network                       |
| Control Systems                        |
| Power System                           |
| Software Engineering                   |
| Computer Architecture                  |

## **Industrial Engineering**

Laboratory

**Quality Engineering** 

**Logistics & Supply Chain Management** 

**Managerial Aspects** 

## Categories of Joint Studies

- 1) IT and Electrical Engineering
- 2) Civil Engineering
- 3) Mechnical and Industrial Engineering

## Main Theme of Possible Projects

- Collaboration with Austrian Universities
- Main problems we face including
  - Environment pollution
  - Green Power
  - Health
  - Job Creation by Solving Environmental Pollution

## IT and Electrical Engineering

(including Interdisciplinary subjects)

- 1) Threats Analysis, framework architecture for Secure Internet of Things
- 2) Cloud Big data Platform Research Project.
- 3) Impact of Information Technology to develop a shared based economy, reduce the environment pollution and placements.
- 4) Health insurance fraud detection: big data analytics.
- 5) Renewable Energy Integration in Power Grid of Iran

## Civil Engineering

(including Interdisciplinary subjects)

- 1) Sustainable design of smart/waste Material for smart structures
- 2) A cross-cultural social cognition approach to sustainable transportation.
- 3) Towards a Safe and Reliable Railway System (Case study Iranian and Austrian Railway System).
- 4) Application of Reclaimed Material in Railway Infrastructure
- 5) Factors influencing traffic signal violations by car drivers, cyclists and pedestrians.

## Mechanical and Industrial Engineering

(including Interdisciplinary subjects)

- 1) Raising Competitiveness for Tourist Destinations through Information Technologies; Case Study: Iran-Austria.
- 2) Developing an IT Based Serious Game for Financial Policy Making in Health System.
- 3) Modeling and Optimal Control of a Sport Utility Cable Suspended Robot

## IT and Electrical Engineering (1)

#### Title

## Threats Analysis, framework architecture for Secure Internet of Things

## By: Omid Mahdi Ebadati

- Risk Analysis of a cluster based high availability of IoTs.
- Energy-efficiency of the various models and routes.
- Enhanced of various policies and security policies to exchange the development of this security domain.
- Focuses to protect a particular domain, like, cities, medical and health basis or energy industries.

We shall work to build this architecture and test it in real environments. In collaboration with Vienna Technology University and SBA Research Lab, Prof. Dr. Tjoa A Min.

## IT and Electrical Engineering (2)

#### Title

## Cloud Big data Platform Research Project

## By: Leili Mirtaheri

The preliminary roadmap of the project are:

- Provides a high-level description and decision criteria for the types of Big Data analytic applications that are appropriate to deploy to the cloud vs. the type of Big Data analytics applications which are not.
- Describes the principal use cases for Big Data in the cloud, including Big Data exploration, data warehouse augmentation, enhanced 360 degree view of the customer, operations analytics, security and intelligence analytics.
- Highlights the potential benefits of developing new and/or deploying existing Big Data analytics applications to the cloud.
- Articulates the challenges associated with deploying new and/or existing Big Data analytics applications to the cloud (challenges will vary depending on the type of Big Data analytics application which is being considered for deployment to the cloud).

## IT and Electrical Engineering (3)

#### Title

# Impact of Information Technology to develop a shared economy, reduce the environment pollution and placements

## By: Omid Mahdi Ebadati

Monitoring various activities in order to detect different environment pollutions Finding different policies and day-to-day operations

Long planning of a terotechnology to pursuit of economic life cycle costs IT based shared transportation by emphasizing on a demand route to reduce environment pollution.

**Possible partners:** Vienna University and Vienna Technology University through Prof. Dr. Tjoa A Min, University of Applied Sciences Tyrol, Universitat Innsbruck.

## IT and Electrical Engineering (4)

#### **Title**

## Health insurance fraud detection: big data analytics

By: Nasim Ghanbar Tehrani, Marzieh Zarinbal, Hamidreza Izadbakhsh

- Developing a fraud detection system for health insurance
- Applying big data analytics in fraud detection

## IT and Electrical Engineering (5)

#### Title

## Renewable Energy Integration in Power Grid of Iran

## By: Abolfazl Nateghi, , Maryam Karami.

In this project, a comprehensive study will be executed in three phases:

- A) A Renewable Resource Data Center (RRDC) will be built by means of the resource information available in Iran and international organizations. This RRDC will be useful for the government to use in phase B and also, the private investors to use in their allocation and feasibility study analysis. This Data Center will include the information of wind speed, solar radiation and ground temperature.
- B) In this phase, the potential of solar, wind and geothermal power plants of Iran will be evaluated by means of the RRDC of phase A. The results of this phase will show the capacity and location of solar, wind and geothermal power plants which can be constructed in each Regional Electric Company (REC) of Iran.
- C) In this phase, the effect of the renewable energy integration in power grid of Iran will be analyzed. For this purpose, the technical analysis with presence of renewable power plants for power network of each REC will be executed. As a conclusion of this phase, the required expansion in power network including Transmission, Substation and Distribution parts of each REC will be evaluated.

## Civil Engineering (1)

#### Title

## Sustainable design of smart/waste Material for smart structures

Iranian Partner: H.H.Lavasani

Austrian Partner: Herbert A. Mang and Mehdi Amin Baghai/ Technische Universitat Wien

## Civil Engineering (2)

#### Title

## A cross-cultural social cognition approach to sustainable transportation

## By: Mohsen Fallah Zavareh

The Iranian, and Austrian counterparts (Dr. Mohsen Fallah Zavareh from the department of civil engineering at Kharazmi University and Dr. Ralf Risser from Factum and the University of Vienna) both have a good background in cross-cultural research in social cognition and transportation. The Iranian side has conducted surveys, mostly done in developing countries, e.g. Iran, Turkey, Pakistan and China. The proposal will mainly focus on cross-cultural social cognition approach to sustainable transportation, including a survey design for being conducted in both Iran and Austria, to test the validity of developed models and frameworks.

## Civil Engineering (3)

#### **Title**

### Towards a Safe and Reliable Railway System

(Case study: Iranian and Austrian Railway System)

### By: Saleh Sharif Tehrani

Using incident data in Iranian and Austrian rail networks (other European railways can be considered as well), different infrastructure and human factors that can lead to incidents will be evaluated. Iran and Austria, both have a long history of using railway system. Considering the old monitoring systems used in Iran and higher technology used in Austria, different aspect of safety in both system can be evaluated. The results and contributions of this project can be used in modern and developing countries safety.

TU Wien: Technische Universität Wien

Website: http://www.ivv.tuwien.ac.at/home/

TI Wien University Professors: Ronald Blab, Günter Emberger, Thomas Macoun

Institute that can be considered: http://verkehrswissenschaften.tuwien.ac.at/

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## Civil Engineering (4)

#### Title

## Application of Reclaimed Material in Railway Infrastructure

By: Saleh Sharif Tehrani

Both Iranian and Austrian recycled/reclaimed material which are commonly available will be selected and the loading device will be designed and used together.

TU Wien: Technische Universität Wien

Website: http://www.ivv.tuwien.ac.at/home/

TI Wien University Professors: Ronald Blab, Günter Emberger,

**Thomas Macoun** 

Institute that can be considered:

http://verkehrswissenschaften.tuwien.ac.at/

## Civil Engineering (5)

#### Title

### Factors influencing traffic signal violations by car drivers, cyclists and pedestrians

### By: Saleh Sharif Tehrani

The traffic violation data, collision data, intersection design and signal design information for the selected intersections both in City of Tehran and City of Vienna will be selected and the people involved will be surveyed both in Iran and Austria. The results of this study can be very useful in decreasing the number of traffic violations and increasing road safety both in modern and developing countries.

TU Wien: Technische Universität Wien

Website: http://www.ivv.tuwien.ac.at/home/

TI Wien University Professors: Ronald Blab, Günter Emberger, Thomas Macoun

Institute that can be considered: http://verkehrswissenschaften.tuwien.ac.at/

## Industrial Engineering (1)

#### Title

Raising Competitiveness for Tourist

Destinations through Information Technologies

Case Study: Iran-Austria

By: Zahra Alasadat Ardestani

- Modul Vienna university WKO
- Tourism school Salzburg
- FH Krems university of applied sciences

## Industrial Engineering (2)

#### Title

## Developing an IT Based Serious Game for Financial Policy Making in Health System

By: Hamidreza Izadbakhsh, Nasim Ghanbar Tehrani and Marzieh Zarinbal

- Gathering a comprehensive knowledge about health system in both countries
- Developing a conceptual model for learning and policy making
- Collecting data from both countries.
- Designing and Implementing a gamified simulation model

## Industrial Engineering (3)

#### **Title**

## Modeling and Optimal Control of a Sport Utility Cable Suspended Robot

### By: Hami Tourajizadeh, Maryam Karami

Related Universities in Austria: University of applied science Technikum Wien; Technical university of Wien; Technical university of Griz

Prof. Corrina Engelhardt Nowitzki, PHD mechanical engineering, PD mechatronics and Robotics, University of applied science Technikum Wien, Corinna. Engelhardt-Nowitzki@univie.ac.at

Prof. Wilfried Kubrringer, Porgram director, University of applied science Technikum Wien.

Thanks for your attention and any question please





Islamic Republic of Iran
Ministry of Health and Medical Education
Deputy of Research and Technology

## Iran and Austria Collaboration in Biomedical Research

Bita Mesgarpour, Pharm D (Tehran), MPH (Tehran), PhD (Vienna)

International Affairs Consultant
Vice-Chancellor for Research & Technology
Iran Ministry of Health & Medical Education



#### DR. JACOB EDUARD POLAK (1818 – 1891)

The pioneer of modern medicine in Iran



### Medical Universities in Iran

### **Medical Universities in Iran**

- 50 public medical universities and 12 medical schools
  - 17,500 academic staffs
  - 160,000 students included 5500 PH.D and 11000 clinical postgraduate

- One private medical university: "Islamic Azad University"
  - 86 schools/faculty
  - 1798 academic staffs
  - 61,000 students



#### **Bio-Medical Research in Iran**

- 685 Research Centers
- 37 Research Institutes



- 390 Peer-review Journals
  - 85 indexed in MEDLINE
  - 59 indexed in Web of Science
  - 96 indexed in Scopus



### IR of Iran Governmental Grant Awarding Research Institute



National Institute for Medical Research Development (NIMAD) Islamic Rebpubic of Iran

### National Institute for Medical Research Development (NIMAD)



### **Austria & Iran Facts**

#### **Austria**



**Iran** 



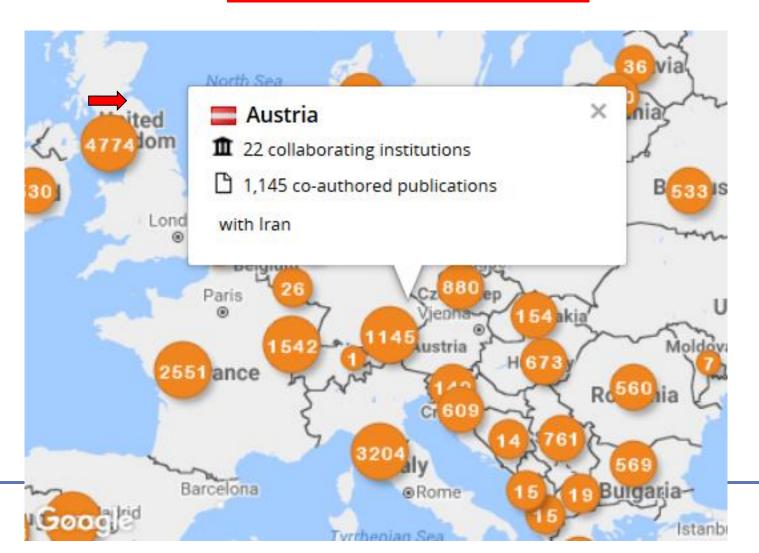
- Population: **8,725,931**
- GDP Per Capita: \$47,856
- Papers in Scopus: **318,576**
- Total Citations: **5,752,072**
- Int. Collaboration: 51.7%

- Population: **82.8 million**
- GDP Per Capita: \$19,050
- Papers in Scopus: **389,525**
- Total Citations: **2,491,61**1
- Int. Collaboration: 19.6%

\*FWCI: 1.44

• \*FWCI: 0.84

## Iran-Austria Collaboration in ALL Sciences

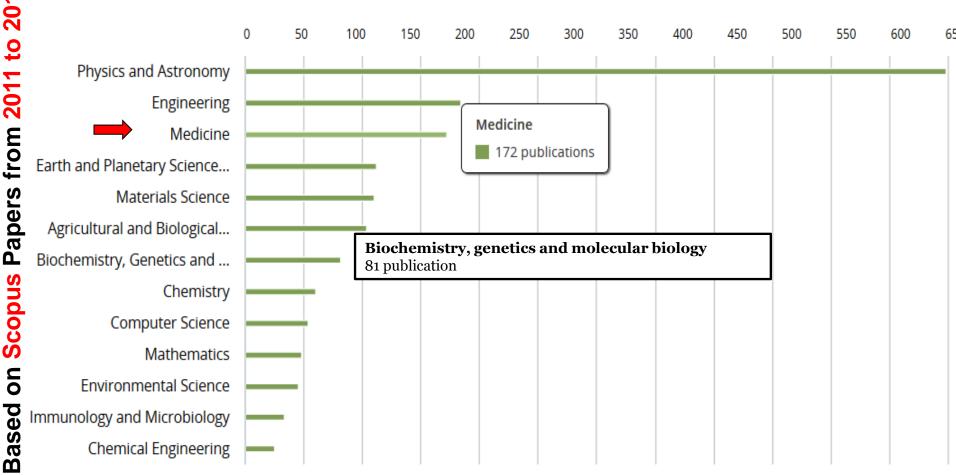


## Iran Collaboration with Austria in <u>ALL Sciences</u>

Papers from 2011 to 2016

|                             | ≖ Iran       | Co-authored                    | 💻 Austria                      |
|-----------------------------|--------------|--------------------------------|--------------------------------|
| B                           | 1,255 🔺      | 🖰 1,145 🛦                      | <b>△</b> 948 ▲                 |
| co-authors                  | with Austria | publications                   | co-authors with Iran           |
|                             | 0.87         | <b>→</b> 3.56                  | 1.54                           |
| Field-Weighted Cita         | ation Impact | Field-Weighted Citation Impact | Field-Weighted Citation Impact |
| Authors                     | 225,240 🔺    | -                              | 73,195 🔺                       |
| Scholarly Output            | 258,249 🔺    | -                              | 134,479 🔺                      |
| Views count (from Scopus)   | 4,939,962    | 76,726                         | 2,232,967                      |
| Field-Weighted Views Impact | 1.43         | 7.21                           | 1.37                           |
| Signature Count             | 982,695      | 26,275                         | 1,024,801                      |
| Number of Institutions      | 95           |                                | 38                             |

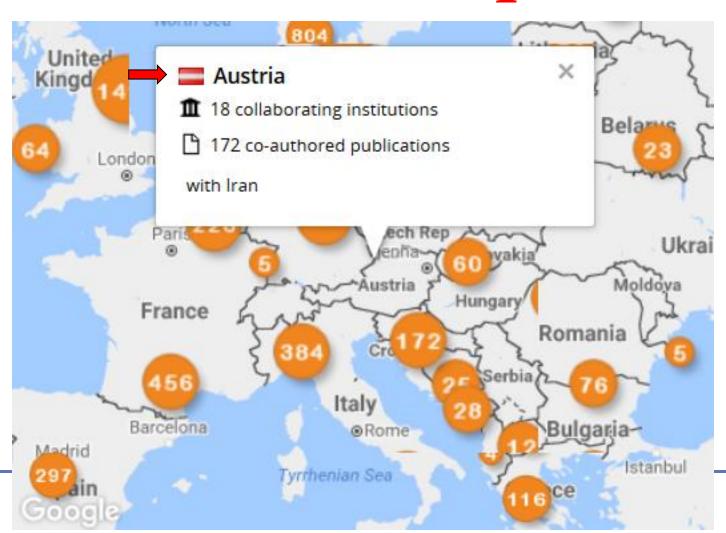
## Iran-Austria Co-authored publications in <u>ALL Sciences</u> by Subject Area





# Iran-Austria Collaboration in Medical Papers

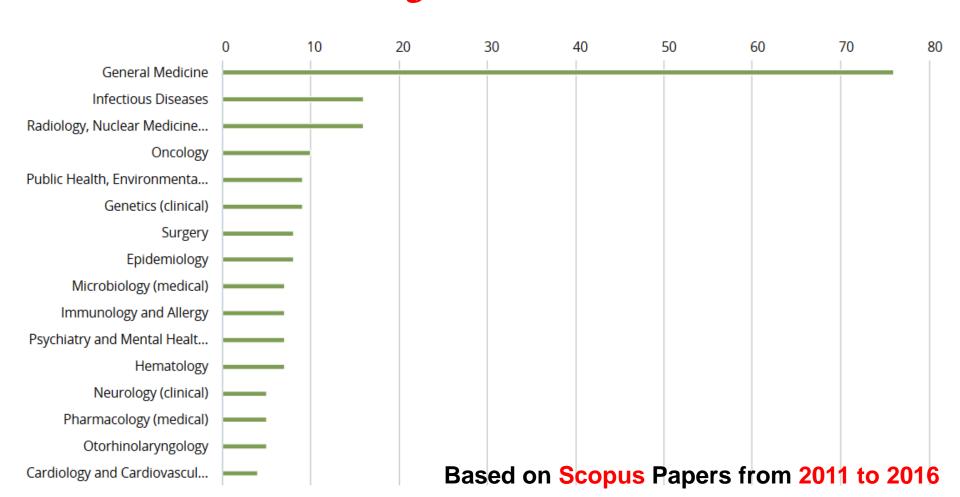
## Iran-Austria Collaboration in Medical Papers



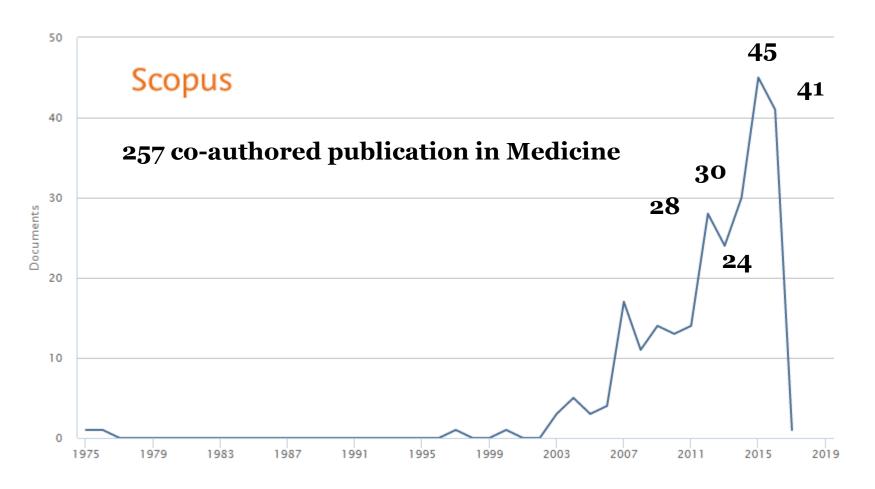
## Iran Collaboration with Austria in *Medicine*

| Based on Scopus Papers from |                         |                                   |                         |
|-----------------------------|-------------------------|-----------------------------------|-------------------------|
| 2011 to 2016                | ≖ Iran                  | Co-authored                       | = Austria               |
| d                           | <b>№ 426</b>            | □ 172                             | <b>☎294</b> ▲           |
| co-authors with Austria     |                         | publications                      | co-authors with Iran    |
|                             | 0.73                    | <b>→</b> 9.06                     | 1.72                    |
| Field-Weig                  | hted Citation<br>Impact | Field-Weighted Citation<br>Impact | Field-Weighted Citation |
| Authors                     | 86,196 🔺                | -                                 | 32,953 🔺                |
| Scholarly Output            | 62,317 🔺                | -                                 | 43,764                  |
| Views count (from Scopus)   | 1,285,051               | 14,234                            | 606,484                 |
| Field-Weighted Views Impact | 2.05                    | 8.28                              | 1.31                    |
| Citation Count              | 211,399                 | 6,541                             | 422,066                 |
| Number of Institutions      | 94                      |                                   | 36                      |

# Iran-Austria Co-authored publications in *Medicine* by Subject Area

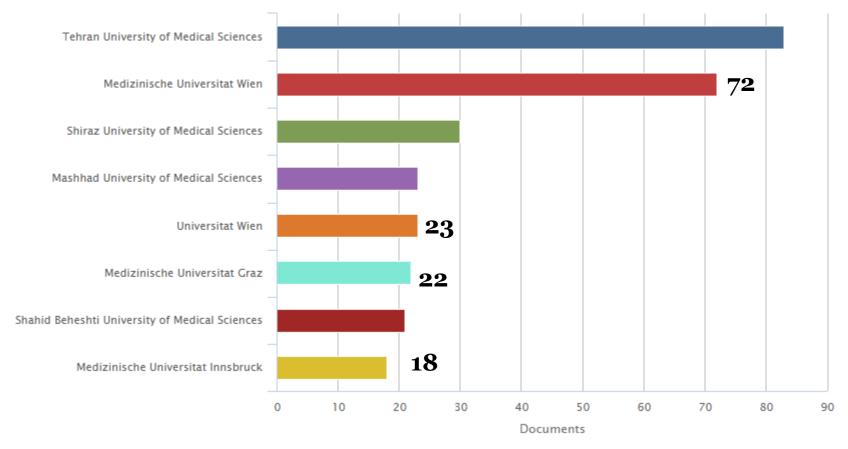


## Iran-Austria co-authored publications in *Medicine* by year (1975-2017)



## Iran-Austria co-authored publications in *Medicine* by affiliation (1975-2017)

#### Iran and Austria Affiliations







## Steps to forward

- Bio-medical research collaboration with Austria is very welcomed
- NIMAD Institute prioritizes projects with international collaboration
- Training of Iranian students and researchers at the fellowship periods of 6-12 months
- Offering specific number of research grants for Iranian Medical Universities (OeAD, ...)
- Visa facility for faculties and post-graduate students in the Austrian Embassy in Iran

### **Many Thanks for Your Attention**







Islamic Republic of Iran Ministry of Health and Medical Education Deputy of Research and Technology



## AN OVERVIEW OF THE MAJOR BIOMEDICAL RESEARCH CENTERS IN IRAN

#### In the Name of God

## AN OVERVIEW OF THE MAJOR BIOMEDICAL RESEARCH CENTERS IN IRAN

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| Digestive Diseases Research Institute   |    |
| Drug Applied Research Center  | 12 |
| Endocrinology and Metabolism Research Institute   | 14 |
| Immunology, Asthma and Allergy Research Institute                                       | 16 |
| Iranian National Center for Addiction Studies   | 18 |
| Isfahan Cardiovascular Research Institute   | 20 |
| Kerman Neuroscience Research Center   | 22 |
| Mental Health Research Center   | 24 |
| Nanotechnology Research Centre  | 26 |
| National Research Institute of Tuberculosis and Lung Disease, Masih Daneshvari Hospital | 28 |
| Neuroscience Research Center  | 30 |
| Nursing Care Research Center  | 32 |
| Ophthalmic Research Center  | 34 |
| Otolaryngology-Head and Neck Surgery Center of Excellence                               | 36 |
| Research Center for Immunodeficiencies  | 38 |
| Pharmaceutical Sciences Research Center   | 40 |
| Psychiatry and Psychology Research Center   | 42 |

#### **Foreword**

According to the latest statistics released by the Scopus database, Iran produced 39,890 scientific articles in 2014 putting Iran at 16<sup>th</sup> position in the world, and securing its position in the region above Turkey. Iran is among the countries with the world's fastest-growing scientific output, measured by the number of peer-reviewed papers published in the international journals on a yearly basis. In 2000, Iran ranked 53<sup>rd</sup> in the world in terms of highly cited medical articles, but this position improved to the 22<sup>nd</sup> rank in 2014. According to the Institute for Scientific Information (ISI), Iranian researchers and scientists published a total of 60,979 scientific articles in major international journals from 1999 to 2008, making Iran the fastest scientifically growing country (even above China) as far as publications are concerned. Much has been said about this growth but whatever the view, the country's achievement in spite of going through the worst possible economic and political sanctions in history is undeniable. The achievement will appear even more impressive when one considers that during the last few years Iran managed to spend only less than 0.5% of her GDP on research and development.

Iran has been doubling its total scientific output every three years at a rate of 25% every year. Extrapolating this growth predicts that Iran will reach the level of Canadian annual scientific output by 2020. "If Iran keeps moving with the present momentum, it can ascend to the 4th place from the current 16th (in the world ranking of scientific growth and scientific production) in the next 10 years".

With Iran's 'Comprehensive Plan for Science', the country intends to increase her investment on research and development to 4% of her GDP by 2020. With removal of economic and political sanctions, Iranian scientific societies are now looking up to their leaders to prepare the ground for acceleration of this growth even further. This booklet presents some of achievements made by a few major medical research institutes in Iran.

Reza Malekzadeh, MD, AGAF
Prof. of Internal Medicine
Deputy of Research and Technology
Ministry of Health and Medical Education





#### **Avicenna Research Institute**

Affiliation: Iranian Academic Center for Education, Culture and Research

Avicenna Research Institute (ARI) was founded in 1998. There are currently four ARI-Designated Research Centers: Reproductive Biotechnology, Monoclonal Antibody, Nanobiotechnology, and Reproductive Immunology Research Centers and eleven departments: Embryology and Andrology, Reproductive Genetics and Biotechnology, Reproductive Immunobiology, Tissue Engineering, Biolaw & Ethics, Hybridoma, Immunochemistry, Antibody-Antigen Engineering, Nanotechnology, Recombinant Technology and Nanobiosynthesis. In addition, Avicenna Fertility Center and Avicenna Health Technology Incubator were set up as complementary initiatives outside the Institute. ARI has developed its activities in the fields of reproduction, biotechnology and cancer. Since the beginning, ARI has continued its scientific research on reproductive biology, cancer drug discovery and immunotherapy through interdisciplinary cooperation and collaboration with national and international universities, institutes and research centers. ARI academic staffs constitute a large corpus of experts from different academic backgrounds to interact efficiently with each other and provide a basis for scientific and clinical research and educational activities. As the result of ceaseless endeavors in the basic and clinical settings, ARI has succeeded in treatment of thousands of patients with such reproductive disorders as infertility, recurrent abortion and endometriosis, produced hundreds of novel monoclonal and a set of chimeric and humanized therapeutic





anti-cancer antibodies and applied nanoparticles in cancer diagnosis. In line with its main areas of research activities, ARI publishes two PubMed-indexed journals covering peer-reviewed cutting-edge papers in the fields of reproduction and medical biotechnology, respectively.

Moreover, exchange of knowledge, methods, biological samples and staff in infertility treatment and reproduction with the Academic Medical Center (AMC) of the Netherlands, University of Sheffield, and University of Lübeck in Germany are the exemplary activities of ARI.

In general, ARI expresses its utmost willingness to expand and reinforce its international interactions with overseas research centers and universities.

#### Fields of cooperation:

- Early diagnosis and immunotherapy of cancer
- Fertility preservation
- Menstrual blood stem cells in regenerative medicine

**Contact Information:** Avicenna Research Institute

Chamran Exp. Way, Evin Tehran 1177-19615, Iran Tel: (+98-21) 22 43 20 20 Fax: (+98-21) 22 43 20 21 http://www.ari.ir/index.php/en/ari





#### **Blood Transfusion Research Center**

Affiliation: High Institute for Research and Education on Transfusion Medicine

Blood Transfusion Research Center was founded in 2003 for improvements and scientific developments in the fields of transfusion medicine and transfusion sciences. The activities of the center are the supply of safe blood and blood components, programs to educate researchers on blood transfusion, and education-oriented efforts on recruiting and training MSc and PhD level students in the field of Hematology and Blood Banking and also MSc in Biotechnology. So far more than 130 MSc and 14 PhD have graduated in the fields of Hematology and Blood Banking and Biotechnology.

This center has also played an active role in the establishment of training courses including educational target-oriented programs, workshops, and scientific-specialized seminars, preparation of scientific-specialized handouts, brochures and pamphlets aiming to upgrade the scientific and practical capabilities.

The 3<sup>rd</sup> international congress on transfusion medicine will be held in December 2015. In addition, several international workshops in collaboration with WHO and an international congress on rare blood group have been held in recent years. This center was selected as WHO Collaborating Center for research and education in safe blood and blood products in 2013.



So far, more than 450 research projects have been approved and conducted and 30 books and more than 800 articles in scientific journals (ISI- and PubMed-indexed) have been published.

#### Fields of cooperation:

 Determination of blood group genotypes and prevalence of minor blood groups and related alloantibodies

Contact Information: High Institute for Research and Education in Transfusion Medicine

- Banking of stem cell derived biologic components
- Blood safety and pathogen inactivation of human derived components
- Advance methods to prepare qualified plasma derived and blood components
- Manufacturing of blood bank laboratory reagents (HLA kit, ...)
- Donor and donation
- Patients' blood management and hemovigilance

Hemmat Expy, Next to the Milad Tower, Tehran 14665-1157, Iran

Tel: (+98-21) 88 60 15 72- 4 Fax: (+98-21) 88 62 87 41 http://www.tmi.ac.ir/ info@tmi.ac.ir





#### Center for Research and Training in Skin Diseases and Leprosy

Affiliation: Tehran University of Medical Sciences

The need for harmonization research activities on skin diseases in Iran encouraged the Ministry of Health to establish a center devoted to this goal in 1992. The center was named "Center for Research and Training in Skin Diseases and Leprosy (CRTSDL)." In 1993, CRTSDL was separated from Ministry of Health and joined Tehran University of Medical Sciences (TUMS).

The Center has been involved in several international scientific collaborations. Partners include: World Health Organization (WHO), National Institute of Health (NIH), University of Franche-Comte (France), Karolinska University (Sweden), School of Tropical Medicine (UK), Johns Hopkins University (USA), IDRI (USA), Cochrane Skin Group, Frei University (Germany), Graz University (Austria), Khartoum University (Sudan), and Isayev Research Institute (Uzbekistan), Umea University (Sweden), Brighton Collaboration (UK), DNDi (Switzerland), University of British Columbia (Canada), University of Toronto (Canada), Wayne State University (USA), International Society of Dermatology (Mentorship program), Department of Dermatology & INSERM U1035, Bordeaux Segalen University (France).



#### Fields of cooperation:

The Center has four units and field of cooperation

- Tropical Diseases Unit (leprosy, leishmaniasis): The Secretariat for National Leishmaniasis Research Network and MOH Committee for Leprosy is established in the Center.
- Dermatoepidemiology Unit: The Center is the pioneer for Evidence Based Dermatology and Good Clinical Practice in the country.
- Skin Biometrology Unit: The Center has established the only accredited laboratory by Food and Drug Organization (FDO) for evaluating skin and cosmeceutical products (DermaLab).
- Nano-dermatology Unit: Formulation and evaluation of novel topical and transdermal drug delivery systems.
- Dermatitis Unit: The Center has established the National Registry for contact dermatitis.





Contact Information: Center for Research and Training in Skin Diseases and Leprosy

No. 415, Taleghani Ave., Tehran14166-13675, IRAN.

Tel: (+98-21) 88 9781 90 Fax: (+98-21) 88 96 38 04 http://crtsdl.tums.ac.ir crtsdl-head@tums.ac.ir





#### **Digestive Diseases Research Institute**

**Affiliation:** Tehran University of Medical Sciences

Digestive Diseases Research Center (DDRC) was established in 1993 and was upgraded to a research institute, Digestive Diseases Research Institute (DDRI) in 2011. DDRI consists of 3 research centers: Digestive Oncology Research Center, Hepato-Pancreato-Billiary Disease Research Center, and Digestive Disease Research Center. DDRI has also established anoffice on Non-Communicable Diseases (NCDs) in general, as many projects conducted in DDRI are related to NCDs including cardio-vascular diseases (coronary heart diseases and stroke), cancers in all sites, and chronic respiratory and kidney diseases. DDRI is in close collaboration with the Global Burden of Disease project in the Institute of Health Metrics and Evaluation. The most important research project in DDRI is the Golestan Cohort Study (GCS), in which over 50,000 participants were recruited in Golestan province. GCS is the largest cohort in Middle East. The results highlighted the importance of NCDs. Several nested case-control and randomized controlled trials (RCTs) have been conducted in the setting of GCS and new prospective projects, the Ardabil study andthe PARS cohort study on 10,000 participants have been designed based on the methodologies validated in GCS. DDRI is the coordinator of PERSIAN Cohort Study on over 100,000 participants in 11 provinces of Iran. Other main research studies include prospective studies on autoimmune hepatitis, gastro-esophageal reflux disease, and colorectal cancer including





pilot study for feasibility of screening, case-control studies on cancers of stomach, esophagus, and pancreas, five GWAS studies, and several community-based pragmatic and clinical-based randomized clinical trials.

DDRI has extensive collaborations with many major medical universities and research institutes across the world such as National Cancer Institute, International Agency for Research on Cancer, Harvard and Johns-Hopkins Universities, University of Cambridge, and University of Washington. DDRI plan for further future international collaborations and exchange of students and research experts.

#### Fields of cooperation:

DDRI consists of three fields of cooperation:

- Digestive Oncology,
- Hepato-Pancreato-Billiary Disease,
- Digestive Disease

Contact Information: Digestive Diseases Research Institute

Tehran University of Medical Sciences

Shariati Hospital, Kargar-e-Shomali, Tehran, 14117-13135, Iran

Tel: (+98-21) 82 41 52 36 Fax: (+98-21) 82 41 54 00

www.ddri.ir info@ddri.ir





#### Drug Applied Research Center \_\_\_\_\_

Affiliation: Tabriz University of Medical Sciences

Drug Applied Research Center (DARC) was founded and began to work in 2001, and now is the first and largest pharmaceutical and basic sciences research center of the country. It consists of laboratories in almost all fields of medical sciences.

Many researchers and students are engaged in collaborative multidisciplinary studies at DARC. According to Iranian Health Ministry annually evaluation reports and Razi Research Festival on Medical Sciences, Drug Applied Research Center has been selected as one of the high ranked research centers in Iran for the last 10 years.

#### Scientific productions:

Number of articles published in international journals: more than 1215 Number of articles published in national journals: more than 265 Presentation in international conferences: more than 100

Presentation in national conferences: more than 335 Postgraduate and graduate thesis more than 340

Approved research projects: 460 Inventions and Patents: 63

Training workshops: more than 40 PhD by Research courses from 2010



#### Fields of cooperation:

- Pharmacology
- Pharmaceutical Analysis
- Drug Design & Chemometrics
- Pharmaceutical Technology
- Pharmacognosy,
- Synthesis

- Toxicology
- Clinical Pharmacy
- Histology & Cell Biology
- Radiopharmacy
- Nutraceuticals and Food Safety
- Immunology, Bacteriology and Physiology

Contact Information: Drug Applied Research Center

Medical Research and Development Complex

Tabriz University of Medical Sciences Daneshgah St. Tabriz 51656-65811, Iran

Tel: (+98-41) 33 36 33 11 Fax: (+98-41) 33 36 32 31

http://darc.tbzmed.ac.ir/ darc@tbzmed.ac.ir





#### **Endocrinology and Metabolism Research Institute**

Affiliation: Tehran University of Medical Sciences

Endocrinology and Metabolism Research Institute is founded in 1993. Due to the commitment and efforts of members; the institute is promoted to the highest possible status of a research institute in Iran in terms of academic output and citation indices.

Endocrine related research activities are conducted at three research sub-institutes including Endocrinology and Metabolism Clinical Sciences, Molecular- Cellular Sciences, and Population Sciences Research Institutes, which each are composed of three Research Centers.

EMRI as a pioneering institute aims to combine clinical care, research and education in diabetes, endocrine and metabolic diseases and strives to maintain the national, regional, and international standing. The institute offers PhD, fellowship, Post Doc., and sabbatical research programmes. Health services are also provided at two Specialty and Subspecialty diabetes clinics, as well as obesity and osteoporosis clinics.

The most prominent features of the institute are: equipped and modern laboratories such as food and drug, hormone, bio-nanotechnology, molecular and cellular biology, and genetic research laboratories. Clinical facilities, diagnostic laboratories, and imaging departments are also integrated to ensure covering wide ranges of activities.



#### **Achievements**

- EMRI has developed a novel treatment option for patients with diabetic foot
- Following several years of research at EMRI, for the first time in Iran, pancreatic cell transplantation has been successfully performed in 2010.
- The institute has made outstanding contributions in stem cell research for the treatment of diabetes.
- A multiphase cohort study of elderly health in Bushehr province is also being conducted by the institute.

#### Fields of cooperation:

EMRI has been successful in establishing collaboration and partnership with numerous world-class organizations, universities, and research institutes such as WHO, IOF, IDF, AACE, ENDO, and WDF. We highly welcome to facilitate further international multidisciplinary collaborations in research and education aiming at promoting:

- Joint research activities and publications
- Student and/or faculty exchanges
- Joint courses and curricula including sabbatical and fellowship Programs
- Mutual assistance in the establishment of new educational programs
- Organizing conferences, seminars, and academic meetings
- Exchange of information and publication

Contact Information: Endocrinology and Metabolism Research Institute

Shariati Hospital Complex

North Kargar Avenue, Tehran 14114-13137, Iran

Tel: (+98-21) 88 22 00 37-8 Fax: (+98-21) 88 22 00 52

http://emri.tums.ac.ir emrc@tums.ac.ir





#### Immunology, Asthma and Allergy Research Institute

Affiliation: Tehran University of Medical Sciences

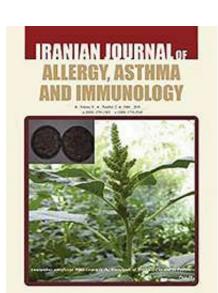
Immunology, Asthma and Allergy Research Institute (IAARI), as a referral academic center in Tehran University of Medical Sciences was established in 2001 with the mission of production of knowledge and technology to maintain and improve the health of society in immune-mediated diseases, asthma and allergy. IAARI works in multidisciplinary fields to promote the health indices of the society in the related fields, based on its strategic plan.

With more than 40 part time and full time researchers, IAARI is trying to fulfill its major goals such as: decreasing the burden of immune system diseases, improving the quality of life of patients; improving the diagnostic and treatment methods, preventive measures, rehabilitation methods and identifying research priorities in Iran in the field of immunology.

IAARI prioritizes its activities in the fields of research, training, publication, networking, advocating and patient services and consists of several committees including research, ethics, hematopoietic stem cell transplantation and education with professional members. In addition to an active clinic, it has specialized lab facilities including genetic, cell culture, and allergy labs.

Several national registries including Iranian Primary Immunodeficiency Registry (IPIDR), asthma, allergic rhinitis, food allergy, anaphylaxis and Hereditary Angioedema were founded by IAARI. Furthermore, Iranian Basic and Clinical Immunology Network (IBCIN) have been set up by IAARI





with the purpose of providing a media for better communication of national experts in this field. The Iranian Journal of Allergy, Asthma and Immunology, an ISI-indexed journal, is also publishing international researches in the related fields by the aid of IAARI. IAARI has broad international scientific collaborations with Germany, France, Hungary, UK, Sweden and Italy and hosts the UNESCO Chair in Health Education with the aim of promoting an integrated system of research, training, information and documentation activities in the field of health education.

#### Fields of cooperation:

- Primary Immunodeficiency
- Asthma
- Immunogenetics
- Allergy:
  - Food Allergy
  - Drug Allergy
  - Allergic Rhinitis
  - Aeroallergy
  - Anaphylaxis

**Contact Information:** Immunology, Asthma and Allergy Research Institute

4<sup>th</sup> Floor, Building No 3, Children Medical Center, No.62 Dr. Gharib St, Keshavarz Blvd, Tehran 1419733151, Iran

Tel: (+98-21) 66 93 58 55 Fax: (+98-21) 66 42 89 95

http://iaari.tums.ac.ir iaari@tums.ac.ir





#### **Iranian National Center for Addiction Studies**

Affiliation: Tehran University of Medical Sciences

Iranian National Center for Addiction Studies (INCAS) has been established in 2004. The Center has set and followed two main goals: 1) to decrease burden of drug use and drug use disorders in Iran, by production, translation and dissemination of the essential knowledge; 2) to significantly contribute to the world production of science in the field of drug use and addiction. INCAS is a two story building with a total area of approximately 2000 square meters. It consists of four departments including departments for epidemiology and public health, clinical sciences, cognitive sciences and basic sciences.

INCAS has had several programs for capacity building through a variety of graduate and post-graduate trainings, as well as short training courses and thousands of professionals have participated in the training courses of the center. Since 2006, with the support from the World Health Organization, INCAS has acted as a regional Knowledge Hub (KH) for harm reductionand has had an active role in capacity building in the region, especially neighboring countries, Afghanistan and Pakistan. INCAS has been closely worked with the country's Ministry of Health, Drug Control Headquarters (DCHQ), Welfare Organization and other national bodies as well as other academic bodies. INCAS



has had close collaborations with a variety of academic departments in universities in UK, Australia, Japan, Canada, and USA. INCAS members have been consultants to various United Nations bodies, like WHO, UNODC and UNAIDS in the last decade and have contributed to the policy and intervention developments in Regional and global level.

#### Fields of cooperation:

There are four laboratories working with the departments and fields of cooperation:

- neuro-cognitive lab, genetic lab,
- toxicology lab, and animal behavioral lab.
- INCAS benefits from several clinics including methadone and buprenorphine clinic, alcohol clinic, amphetamine-type stimulants clinic, women's clinic and sexual health clinic.
- INCAS has more than 500 scientific publications in the mentioned fields.



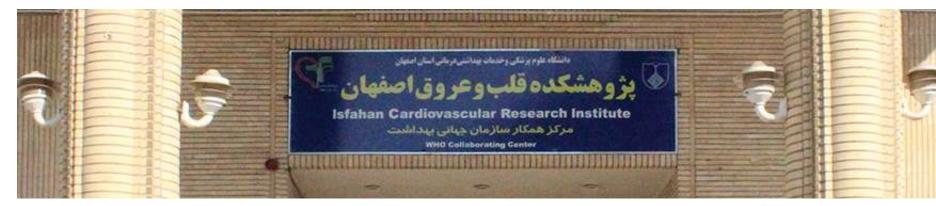
Contact Information: Iranian National Center for Addiction Studies

No. 486, South Karegar Ave., Tehran 1336616357, Iran

Tel: (+98-21) 55 41 22 32 Fax: (+98-21) 55 41 22 32

http://incas.tums.ac.ir incas@tums.ac.ir





#### Isfahan Cardiovascular Research Institute

Affiliation: Isfahan University of Medical Sciences

Isfahan Cardiovascular Research center (ICRC) was among the first centers approved by the Ministry of Health (MoH) in 1993 with the aim of performing research on cardiovascular diseases (CVD) prevention and health promotion to produce evidence that can be utilized for action. ICRC became a World Health Organization (WHO)collaborating center for research and training in CVD control, prevention and rehabilitation for cardiac patients in the Eastern Mediterranean Region since 2003. It was promoted to an institute (ICRI) in 2011 by the MoH.

The main fields of research in ICRI are in public health, clinical and basic sciences. Large-scale community-based preventive programs like Isfahan Healthy Heart Program, Cohort studies like Isfahan Cohort and PURE studies, surveillance of CVDs and risk factors, disease registry like PROVE study beside many randomized clinical trials at local or international levels were conducted and some are undergoing. ICRI has its own official employing chart and independent budget since1997. The National Cardiovascular Research Network Secretariat is located in ICRI since its establishment in 2011.

ICRI is collaborating with many international organizations such as WHO, World Hypertension League, World Heart Federation, International Society of Hypertension, International Atherosclerosis Society and conducting joint multicentric studies with some universities and academic institutes



in Canada, USA, UK and other European and Asian countries. More than 30 national and international meetings or short-term training courses and workshops have been held by this institute. ICRI has PhD by Research courses, has published 14 books and many book chapters, more than 1150 articles in local and international peer-reviewed journals. 640 national and international projects and 270 thesis have been conducted in ICRI. It's official PubMED and Scopus indexed journal is ARYA Atherosclerosis.



ICRI constitute of the six following Research Centers:

- Isfahan Cardiovascular Research Center
- Cardiac Rehabilitation Research Center
- Hypertension Research Center
- Heart Failure Research Center
- Applied Physiology Research Center
- Interventional Cardiology Research Center

#### Fields of cooperation:

- Cardiovascular Research
- Rehabilitation
- Hypertension
- Heart Failure
- Applied Physiology

Contact Information: Isfahan Cardiovascular Research Institute (ICRI)

Hazrate Sadigeh Tahere Research Complex

Khorram St, Jomhoriye Eslami Sq, Isfahan 8187698191, Iran

Tel: (+98-31) 33 37 78 89 Fax: (+98-31) 33 37 34 35 http://icri.mui.ac.ir nsarrafzadegan@gmail.com





#### **Kerman Neuroscience Research Center**

Affiliation: Kerman University of Medical Sciences

Kerman Neuroscience Research Center (KNRC) which is the first research center in the field of Neuroscience was established in 1995.

Our members conduct basic and clinical research in the areas of molecular, behavioral and cognitive neuroscience, Addiction, pain, and neurodegenerative disease.

Currently, KNRC has eight full-time and 22 part-time faculty members.

The center has the ability of collaboration with other research centers in the field of Neuroscience specifically cognitive neuroscience in the world. At the present, KNRC has signed memorandum of understanding with several universities and research centers in some other countries.





KNRC is equipped with 9 laboratories which are stated in the following:

- Molecular Neuroscience
- Patch Clamp
- Sensory Processing
- Cell Culture
- Behavioral Neuroscience
- General Neuroscience
- EEG/ERP
- Electron Microscope (TEM)
- Non-human primate facility center

#### Fields of cooperation:

Basic Neuroscience specifically cognitive neuroscience

Contact Information: Kerman Neuroscience Research Center

Ebnesina Ave, Jahad Bolv, Somaye cross road,

Kerman 7619813159, Iran

Tel: (+98-34) 32 26 41 96 Fax: (+98-34) 32 26 41 98

www.knrc.kmu.ac.ir

kerman.neuroscience@gmail.com





#### **Mental Health Research Center**

Affiliation: Iran University of Medical Sciences

Mental Health Research Center (MHRC) was established in 2003 and has been active in planning and execution of programs and projects on mental health. MHRC works in the fields of psychiatry, clinical psychology and mental health and aims to improve the Iranian mental health delivery system.

To provide high quality evidence based health services for the community, by means of designing applied researches and using modern educational methods, is the main mission of the MHRC. MHRC has had shared projects with UNODC, UNAIDS, and WHO during recent years and has the potential to collaborate with international centers in the abovementioned areas.



#### Fields of cooperation:

- Community Mental Health, including studies on designing, implementing, monitoring, and evaluation of mental health programs
- Sexual disorders including transsexualism and high risk behavior in specific groups
- Mood disorders including studies on clinical aspects of mood disorders
- Knowledge management in mental health, including secondary data analysis studies, systematic reviews, and studies on burden of diseases

MHRC has also been selected as a knowledge management unit (KMU) of Iran University of Medical Sciences in mental health by Ministry of Health.

Contact Information: Mental Health Research Center, Tehran Institute of Psychiatry

School of Behavioral Sciences and Mental Health

Shahid Mansouri Lane, Niayesh Street, Sattarkhan Avenue,

Tehran 1443813444, Iran

Tel: (+98-21) 66 50 68 62 Fax: (+98-21) 66 50 68 62

www.mhrc.iums.ac.ir mhrc@iums.ac.ir





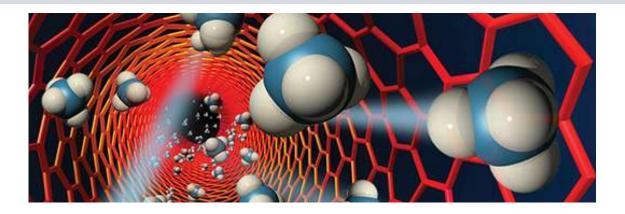
#### **Nanotechnology Research Centre**

**Affiliation:** Tehran University of Medical Sciences

The Nanotechnology Research Centre is an Iran-based multidisciplinary enterprise locating at Tehran University of Medical Sciences (TUMS). Founded in 1995 by Professor Rassoul Dinarvand, has since then been joined by the following academic staff: Professor Fatemeh Atyabi, Professor Mohammad Hossein Ghahremani, Professor Seyed Nasser Ostad, Professor Hamid Akbari, Dr Ali Mohammadi, Dr Morteza Mahmoudi, and Dr Navid Goodarzi. In addition to the academic staff, at any time the Centre typically has over 20 research associates and research students, as at present.

As a pioneer research center in Iran, the prime aim of the Centre is to pursue multidisciplinary research into the development, refinement and application of pharmaceutical nanotechnology to improve national and global health.

The Centre's experimental research is supported by Faculty of Pharmacy through its access to state-of-the-art fabrication and characterization facilities. The Centre has an operating model that accesses and focusses the combined skills across several key departments; Pharmaceutical Nanotechnology, Pharmaceutics, Medicinal Chemistry, Toxicology and Pharmacology and, Food and Drug Control. The Centre also has strong relationships with the broader nanotechnology and commercial communities and is involved in many major collaborations.



Researchers at the Centre have a long and strong tradition for research collaboration and copublishing and are eager to engage in international research collaboration to the benefit of all involved. A deep partnership covering several areas opens the door to:

- joint research
- exchange of staff and students
- exchange of samples
- shared use of major research facilities
- research outputs, such as joint publications, patents and new product

#### Fields of cooperation:

Drug delivery

Tissue engineering

Drug targeting

Protein corona

Drug conjugates

SPION

Contact Information: Nanotechnology Research Centre

Faculty of Pharmacy, Tehran University of Medical Sciences

Tehran 14155-6451, Iran Tel: (+98-21) 64 12 11 25 Fax: (+98-21) 66 95 90 52 http://nanomed.tums.ac.ir







### National Research Institute of Tuberculosis and Lung Disease, Masih Daneshvari Hospital

Affiliation: Shahid Beheshti University of Medical Sciences

In 1899, Mozafar-al-Din ShahGajar came down with tuberculosis and French physicians advised him to stay in a mansion with fresh air during his recovery. After Mozafar-al-Din Shah's death, this mansion was gradually converted into a sanitarium for TB patients. After the change of government, this piece of land along with the mansion inside were abandoned until Dr. Masih Daneshvari with his utmost effort obtained permission from the majesty to establish a nursing school in it. In 1986 this hospital became a subdivision of ShahidBeheshti University of Medical Sciences and the hospital served as a center for tuberculosis and lung diseases. In 1992, a research institute was established and merged with the hospital entitled "National Research Institute of Tuberculosis and Lung Disease (NRITLD), Masih Daneshvari Hospital".

**Vision:** NRITLD is determined to gain international fame as an active prosperous center in providing medical services in the field of tuberculosis and lung diseases.



#### International commitments and collaborations of the NRITLD:

- WHO Collaborating Center for Tuberculosis Education in EMRO
- WHO Collaborating Center for Tobacco Control
- Collaborating center in Global Alliance against Chronic Respiratory TB, TB/HIV (epidemiology, diagnosis and treatment) Diseases in Iran.
- Secretariat Office of Iranian Stop TB Committee
- Training Affairs Office, self-reliance in vaccine production among Islamic Occupational Diseases countries in collaboration with the IDB (Islamic Development Bank), — Primary Pulmonary Hypertension, deep vein thrombosis 2005-2008
- Secretariat Office of the IUATLD in the Middle East Region, 1996-2008 Pulmonary and thoracic Pathology
- Signing Memorandum of Understanding with well-known universities Clinical Pharmacy and organizations (Tufts, Utrecht, Menzies, ATS, etc.).

#### Fields of cooperation:

- Chronic Respiratory Diseases
- Pediatric Chronic Pulmonary Diseases
- Air Pollution

- Pain Management

- Thoracic Oncology and Surgery

Contact Information: National Research Institute of Tuberculosis and Lung Disease

Masih Daneshvari Hospital, Darabad, Shahid Bahonar Avenue

Tehran 19556-44413, Iran Tel: (+98- 21) 27 12 20 20 Fax: (+98- 21) 26 10 94 84

www.pccmed.sbmu.ac.ir pccmed@sbmu.ac.ir



#### **Neuroscience Research Center**

Affiliation: Shahid Beheshti University of Medical Sciences

The Neuroscience Research Center (NRC) of the Shahid Beheshti University of Medical Sciences was established as a University Center in 2000. The principal objective of this center is to integrate basic, translational and clinical research in neuroscience from molecule to behavior. Expanding the scientific knowledge on neuroscience and finding appropriate and useable preventive and curative medical procedures is basic conceptual aim in this center.

NRC is a center of excellence for brain research and neuroscience education in Iran. Researchers and students could found opportunities for training, consultation, using facilities and doing collaborative research. The NRC offers some programs designed to train candidates for a PhD in Neuroscience, as well as postdoctoral fellows and MD's for careers as physician-scientists. To this end, we have forged collaborate with highly ranked national and international research institutes to provide expertise, and technology development services.



#### Fields of cooperation:

Multidisciplinary researches are conducted in various neuroscience research areas such as neurodegenerative diseases, addiction, pain, epilepsy, memory and learning. The investigators in the NRC contribute to a growing neuroscience research community through scientific collaboration, pre- and post-doctoral training programs, jointly sponsored seminar series and special interest groups.



Contact Information: Neuroscience Research Center

Shahid Beheshti University of Medical Sciences, Daneshjo St., Evin

Tehran1983963113, Iran

Tel: (+98- 21) 22 43 16 24 (+98- 21) 22 42 97 65

Fax: (+98- 21) 22 43 16 24 (+98- 21) 22 43 20 47

www.nrciran.sbmu.ac.ir or www.nrc.sbmu.ac.ir nrciran@sbmu.ac.ir





#### **Nursing Care Research Center**

Affiliation: Iran University of Medical Sciences

Nursing Care Research Center (NCRC) was founded as a Nursing and Midwifery Research Center in 2001. It became authorized as the first Nursing Care Research Center by Ministry of Health and Medical Education in 2007 in order to facilitate and advance nursing research in the field of chronic disease as well as to build scientific collaborations with other institutions. In 2014, the center was designated as a WHO Collaborating Center for Education and Research in Nursing and Midwifery (WHOCCERNM) in Iran, which is the third WHOCC for Nursing and Midwifery in Eastern Mediterranean Region and the 44<sup>th</sup> worldwide. Nursing Care Research Center is a member of the global network of nursing and midwifery collaborating centers as well as national WHO collaborating centers' network. In addition, the center is the head quarter of Iran's national network of nursing research.

Our vision is to become one of the leading centers for nursing research and to be a pioneer in development nursing knowledge and improve nursing practice through highly impacts publication as well as dissemination and translation of research findings. The focus of center in research is on improving evidence-based nursing practice and developing culturally-oriented policy in the field of chronic disease to enhance outcomes for clients, their families and community. Nursing Care



Research Center has admitted five PhD by research students since 2011. Besides, the center conducted some national projects including development of national strategic plan for nursing, conduction of national research in violence against nurses, conduction of national research in improving nurses' health, generation of national nursing registration process, creating clinical guidelines.

#### Fields of cooperation:

- HIV in women
- Diabetes in pregnant women (Typ1, Typ2)
- Breast cancer in patients and family
- Adolescent health
- Ethics



**Contact Information:** Deputy of Center for Nursing Care Research

& School of Nursing and Midwifery,

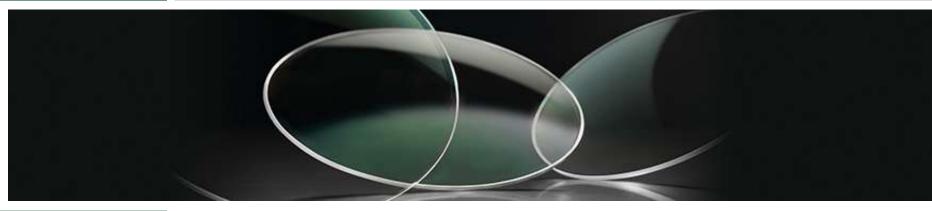
Rashid Yasami St., Valiasr Ave, Tehran 1996713883, Iran

Tel: (+98- 21) 88 88 28 85

http://en.ncrc.iums.ac.ir, http://ncrc.iums.ac.ir/

ncrc@iums.ac.ir





#### **Ophthalmic Research Center**

Affiliation: Shahid Beheshti University of Medical Sciences

The Ophthalmic Research Center (ORC) was established in 1999 as the first Iranian eye research center. ORC is affiliated to the Ophthalmology Department at Shahid Beheshti University of Medical Sciences. The vision of this center is to contribute to elimination of avoidable blindness and the main mission of the center is to provide facilities to perform high quality research, and generate and disseminate information regarding eye health.

**Clinical Studies:** Clinical trials in different subspecialties have been performed with significant impact on clinical practice and high citation rates in textbooks and peer-reviewed journals.

**Basic and Translational Studies:** Parallel to the establishment of the biotechnology laboratory at ORC in 2010, there has been an increasing rate of basic and translational research projects and publications in the field of vision science.

Public Health and Epidemiologic Studies: ORC has been involved in multiple population-based studies in different provinces of Iran. The results of these studies are used as advocacy and promotional tools for prevention of blindness.





**Journal of Ophthalmic and Vision Research:** Journal of Ophthalmic and Vision Research (JOVR) is the quarterly official publication of ORC and is indexed in the PubMed database through PubMed Central, SCOPUS and other international databases.

National and International Collaborations: ORC has close collaborations with a number of national and international institutes and universities(Harvard Medical School, University of Wisconsin, SUNY Upstate Medical University, University of Illinois and Singapore National Eye Center). ORC was officially designated as a World Health Organization Collaborating Center (WHOCC) for prevention of blindness in 2011. Recently, the WHO has re-designated the center for the next four years. Based on this agreement, ORC is committed to contribute to prevention of blindness and improvement of eye health at national, regional and international levels.

#### Fields of cooperation

- Diabetic retinopathy
- Glaucoma
- Hereditary retinal degenerations; macular dystrophy and macular degeneration
- Cell therapy & Gene therapy
- Ocular regenerative medicine &
   Ocular pharmacotherapy innovations

Contact Information: No. 23, Paidarfard St., Boostan 9 St., Pasdaran Ave.,

Tehran 1666667311, Iran

Tel: (+98- 21) 22 58 59 52; (+98- 21) 22 58 47 33

Fax: (+98-21) 22 59 06 07

www.orcir.org

info@orcir.org; labbafi@hotmail.com





#### **Otolaryngology-Head & Neck Surgery Center of Excellence**

Affiliation: Iran University of Medical Sciences

Otolaryngology-Head & Neck Surgery Center of Excellence is an actual collection of the most distinguished faculty members of Otolaryngology Ward of Hazrat RasoulAkram Hospital & ENT-HNS Research Center of Iran University of Medical Sciences and non-faculty researchers with outstanding superb abilities, potentialities, and capabilities who enjoy high scientific caliber in otolaryngology area and related fields, who are active in offering services in the area of education, research, and presenting medical services in their relevant specialty areas. The most distinguishing characteristics of them are:

Scientific productivity and innovation, connection with industry and producing prosperity, and the attainment of superb scientific and educational quality (point of reference) at national, regional, and or international levels, and the provider for basic needs of the country and [possibly] the region concerning otolaryngology, along with achieving the aims of the 20 year roadmap & the comprehensive scientific map of Iran.

The first official step for the establishment of Otolaryngology-Head & Neck Surgery Center of Excellence occurred on 2001 by Minister of Health & Medical Education.

Our faculty members include general otolaryngologists and sub-specialists in head and neck surgery, endoscopic sinus surgery, facial plastic and reconstructive surgery, neuro-otology, skull-



base surgery, laryngology and audiology. Special program components include a complete voice laboratory for the diagnosis and rehabilitation of voice disorders, a cochlear implant team, LASER and photodynamic therapy and all aspects of audiology (hearing diagnostic testing and rehabilitation, auditory evoked potentials, pediatric audiology and vestibular testing laboratory), Cellular & Molecular Laboratory and Genetic Laboratory.

WHO Collaboration Center for Research and Education on Hearing Loss was established in 01/Apr/2011 to extend research and education on hearing health and prevention of hearing loss implemented by ENT-HNS Research Center, Iran. It has a systematic work with collaboration of Iranian Ministry of Health and Iran State Welfare Organization (SWO).

#### Fields of cooperation:

Our important Research Core Lines are:

- Base of Skull Surgery
- Audiology Neuroscience & Tinnitus
- Olfaction
- Head& Neck Cancers in Iran
- Nasal Polyp

Contact Information: Otolaryngology-Head & Neck Surgery Center of Excellence

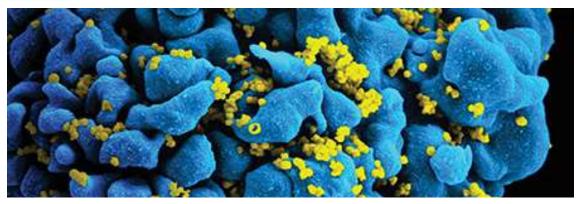
Hazrat Rasoul Medical Complex

Niatesh St, Sattarkhan Ave, Tehran 144551364, Iran

Tel: (+98- 21) 66 52 53 29 Fax: (+98- 21) 66 50 42 94

http://www.ent-hns.org info@ent-hsn.org





#### **Research Center for Immunodeficiencies**

**Affiliation:** Tehran University of Medical Sciences

In 1999, primary immunodeficiency diseases Registry (IPIDR) in Iran was established. During following years, the number of interested researchers has substantially risen and this expansion has been commensurate with a growth in the complexity of the group, necessitating a clearer definition of the purposes and activities. In 2010, the Research Center for Immunodeficiencies (RCID) affiliated to Tehran University of Medical Sciences (TUMS) was established. It is to be hoped, RCID could promote scientific activities in this field, not only in respect to research, but also in education and care of affected patients.

RCID is active in carrying out the following programs:

- 1- Running national registry of PID with collaboration of 28 University of Medical Sciences around the country.
- 2-Conducting research activities in different areas of PID including epidemiology, prevention, laboratory methods, molecular study.
- 3- Collaborating with other national and international research centers and organization, mainly with Harvard Medical University (Boston, MA, USA), the Karolinska University (Stockholm, Sweden), and University of Brescia (Brescia, Italy)



4-Establishing national PID networks in country to increase physician' awareness and ability of peripheral centers for diagnosis and treatment of affected individuals

- 5- Education programs targeting the following groups
- Training of medical students and PhD students
- Promote physician' awareness
- Promote awareness general public and healthcare workers

6-Planing to develop appropriate screening tests for identification of PID; developing genetic laboratories as part of prenatal, newborn and carrier screening programs 7-Designing specific programs for prenatal diagnosis and

preimplantation genetic diagnosis for those families with history of one child with PID.

8-Planing to identify ways of improving current therapies and discovery of new modalities for PID patients

#### Fields of cooperation:

- The research area includes primary immunodeficiency mainly primary antibody deficiency disorders (XLA and CVID, IgA deficiency, Hyper IgM syndrome).
- Molecular diagnosis of patients with antibody deficiency.
- Management and treatment of patients with antibody deficiencies

**Contact Information:** Research Center for Immunodeficiencies

Children's Medical Center, Dr. Qarib St., Keshavarz Blvd.,

Tehran, IRAN.

Tel: (+98-21) 66 42 89 98 Fax: (+98-21) 66 92 30 54

http://rcid.tums.ac.ir rcid@tums.ac.ir





#### **Pharmaceutical Sciences Research Center**

**Affiliation:** Tehran University of Medical Sciences

Pharmaceutical Sciences Research Center (PSRC) was established in the mid-2003. The PSRC tries to spread interest of research among students and support them at all academic levels to conduct both fundamental and applied researches in different fields of pharmaceutical sciences, and to promote research methods and trainings. Since establishment, PSRC has got several awards regarding its positive activities in promoting science and technology countrywide.

#### Goals:

- To carry out and direct basic and applied research in various branches of pharmaceutical sciences.
- To provide facilities and a suitable environment to attract young and talented researchers to basic and applied research projects.
- To direct and promote research activities in terms of quantity and quality.
- To establish a center for academic exchanges between pharmaceutical science researchers at national and international levels by exchanging students
- To participate in education of research staff in the field of pharmaceutical sciences
- To encourage the partnership of the benficiaries of pharmaceutical sciences, including the industry and the private sector



#### **Research Priorities:**

To endeavor accomplishing practical and innovative researches to discover new medicines including basic, clinical, and knowledge-based studies

#### Field of cooperation:

- Ready to attract international students at postgraduate levels (2 international PhD students graduated in September 2015, 3 international PhD students are studying at the moment; 4 will be joining soon)
- Ready to hold sabbatical programs
- Ready to hold post-doctoral programs (many postdocs have been graduated and many are studying)
- Ready to hold fellowships programs (1 fellowship was approved)



Contact Information: Pharmaceutical Sciences Research Center

Keshavarz Boulevard, Poursina Avenue,

Tehran University of Medical Sciences, Faculty of Pharmacy,

The old building, 2nd floor, Tehran 14155-6451, Iran Tel: (+98- 21) 66 48 27 04 Fax: (+98- 21) 66 48 27 04

http://psrc.tums.ac.ir/ psrc@tums.ac.ir





#### **Psychiatry and Psychology Research Center**

**Affiliation:** Tehran University of Medical Sciences

Psychiatry and Psychology Research Center (PPRC) was established in 2005. PPRC has rewarded by the experience and knowledge of faculty members, students and assistants of Roozbeh Hospital and activate as the most productive Iranian research center in the field of psychiatry and psychology. It consists of 12 research groups including Consultation-Liaison Psychiatry, Clinical Psychology, Memory and Behavioral Neurology, Mental Health, Spiritual Psychotherapy, Child and Adolescent Psychiatry, Social Psychiatry, Cultural Psychiatry and Psychology, Psychopharmacology, Education Psychiatry, Genetic Psychiatry and Psychosexual Health. The main activities of PPRC are:

- Supporting basic and applied science research related to psychiatry, psychology and mental health, neuroscience and neuro-psychopharmacology
- Collaboration with national and international research centers
- Publishing the Iranian Journal of Psychiatry (IJP) as the first peer reviewed scientific journal of psychiatry, neuroscience and psychology in Iran
- Offering training courses that aimed at enhancing research skills of mental health professionals
- Performing international and national congresses and seminars





#### PPRC has been honored and awarded for:

- Selected as the first outstanding biomedical research center in Iran in10<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup>, 17<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>Razi festival in 2004, 2006, 2007, 2008, 2010, 2012 and 2013, respectively. Also, three faculty members received the best researcher award
- The Chief director of the center was selected as the best research director by the National Center of Research and Technology of the Ministry of Science, Research and Technology
- The Chief director of the center was nominated for WHO's Dr. Shusha prize in 2013
- Implementing PhD by research program from 2012 in the field of psychiatry, psychology and mental health
- Writing "Comprehensive Textbook of Psychiatry" As the worthy of appreciation book in the 13<sup>th</sup> annual award of the Ministry of Culture and a guideline for GPs entitled "General Anxiety Disorder Guideline" for Iranian Health Centers

#### Fields of cooperation:

- Psychiatry
- Child & Adolescence Psychiatry
- Clinical Psychology
- Neuropsychopharmacology

Contact Information: Psychiatry and Psychology Research Center

Roozbeh Hospital, Psychology and Psychiatry Research Center,

South Kargar Avenue, Tehran 1333795914, Iran

Tel: (+98- 21) 55 41 35 40 Fax: (+98- 21) 55 42 19 59



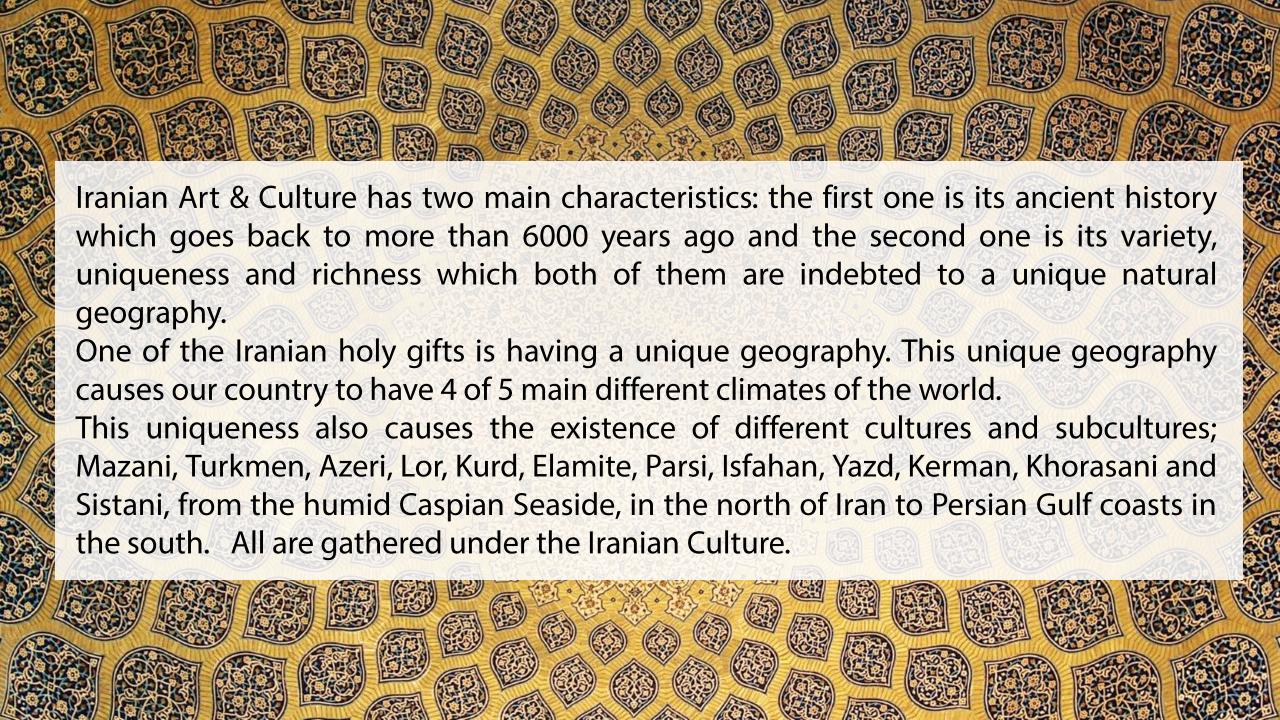
Deputy of Research and Technology
Ministry of Health and Medical Education
15th Floor, Block A, Eyvanak Blvd., Shahrak-e-Qods, Tehran 1467664961, Iran
Tel: (+98-21) 81 45 5210-11
www.hbi.ir

# Iran Austria Culture & Art

## Art is language of meaning Art makes cultures











The diplomatic relationships between these two countries started in the Safavi era in 1552 to Habsburgs Dynasty.

The academic relationships between Iran and Austria return back to Qajar Era, when Amir Kabir established Dar ul-Funun, the first official Iranian academy of art and science in 1851.

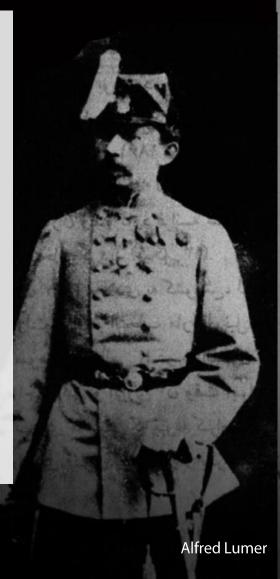




Amir Kabir invited Austrian Professors in medicine and mineral sciences to teach in Dar ul-Funun instead of French, English and Russian teachers who could not meet his demands. This caused two countries become closer further.

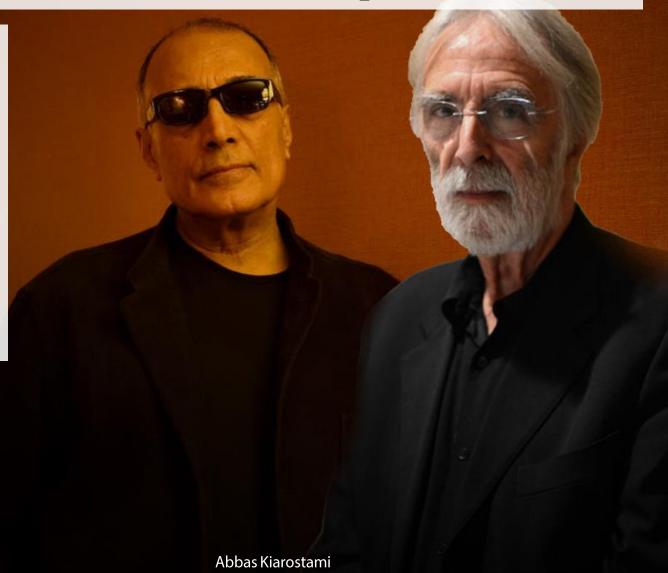


Four years before the French Alfred Lumer visited Iran, Johann Strauss in 1864 composed a march called "Iranian March", that afterword, in the time of welcoming Naser al-Din Shah Qajar in Vienna, sang instead of Iran's national anthem. Abbas Amanat in *The Pivot of the Universe* said: "The military song that in 1873 ordered to Johann Strauss, to play instead of Iran's national anthem for welcoming the Shah in Vienna, was the symbol of a gesture of solidarity between Iran and Austria."



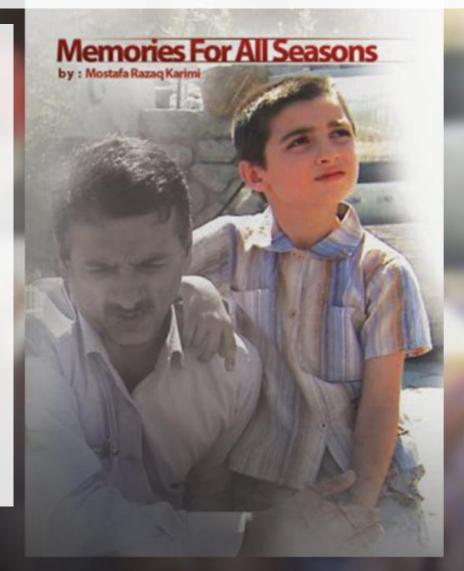


Many critics of the world cinema, recognize the cinema of Austria like Iran, as a cinema with peculiar tendency. Hence filmmaker like Michael Haneke, can be compared to Abbas Kiarostami in Iranian cinema, that with his special approach tried to represent cinema as a noble media.

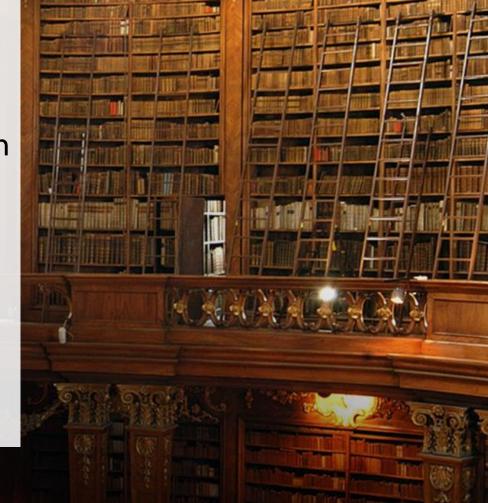


It has been many years that Iranian filmmakers like Khosro Sinaiee, Mostafa Razaq Karimi and Farhad Varahram lived and made movies in Austria. Iranian films too have always been noticeable in Vienna Film Festival.

A documentary, filmed in Austria, named "Memories for All Seasons", shows shocking moments of the ordeals of Iranian chemical victims, who went to Austria for treatment. This documentary and the presence of Iranian chemical victims in Austria, wake the conscience of European people to the depth of the disaster in Iran-Iraq War.

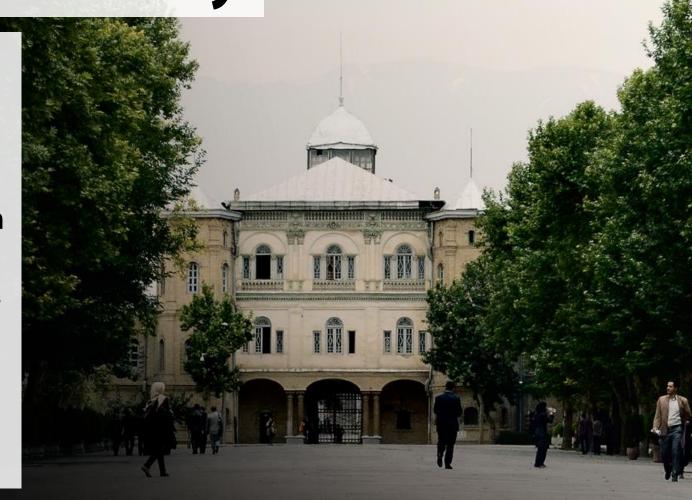


After the establishment of Institute of Oriental Study in Austria, some of its graduated students started to share Persian literature and poems in European cultural societies; among them we can see the name of Joseph von Hammer-Purgstall who was the first person translated HAFIZ's poems into German that later inspired Goethe. The Library of University of Vienna contains 40,000 handwritten Persian books and nowadays more than 30,000 of Iranian people live there in Austria.



# **Academic Iranian Art Study**

The academic art studies in Iran goes back to Dar ul-fonun, being started by military music courses in 1851, then continued by Founding of Tehran University in 1940. After the revolution in 1979, and through merging 5 independent higher education institutes the University of Art emerged in Tehran. Later Islamic Art University of Tabriz, Art University of Isfahan and recently, Art University of Shiraz have arisen.







#### Introduction:

The University of Art is one of the accredited universities in Iran. Some parts of this university were established in 1979. Then in 1991 five different institutes of arts combined together and University of Art was founded. This is the largest comprehensive universality in Iran which is devoted to the art fields.

In 1979 after reorganizing five formerly independent institutions: The Conservatory of Music (1918), The College of National Music (1949), The College of Decorative Arts (1960), The College of Dramatic Arts(1964), And Farabi University (1975), it was formed as the Art Academic Complex, and in 1991, it was named as University of Art.

# Why University of Art?



University of Art is a major center for art education in Iran with an international reputation. This university has been pioneer in teaching so many of art majors in Iran and Middle East. University of Art has seven faculties in Tehran and Karaj: Faculty of Applied Arts, Faculty of Visual Arts, Faculty of Theoretical Sciences and Art Studies, Faculty of Conservation and Restoration, Faculty of Cinema & Theater, Faculty of Music, Faculty of Architecture and Urban Planning.

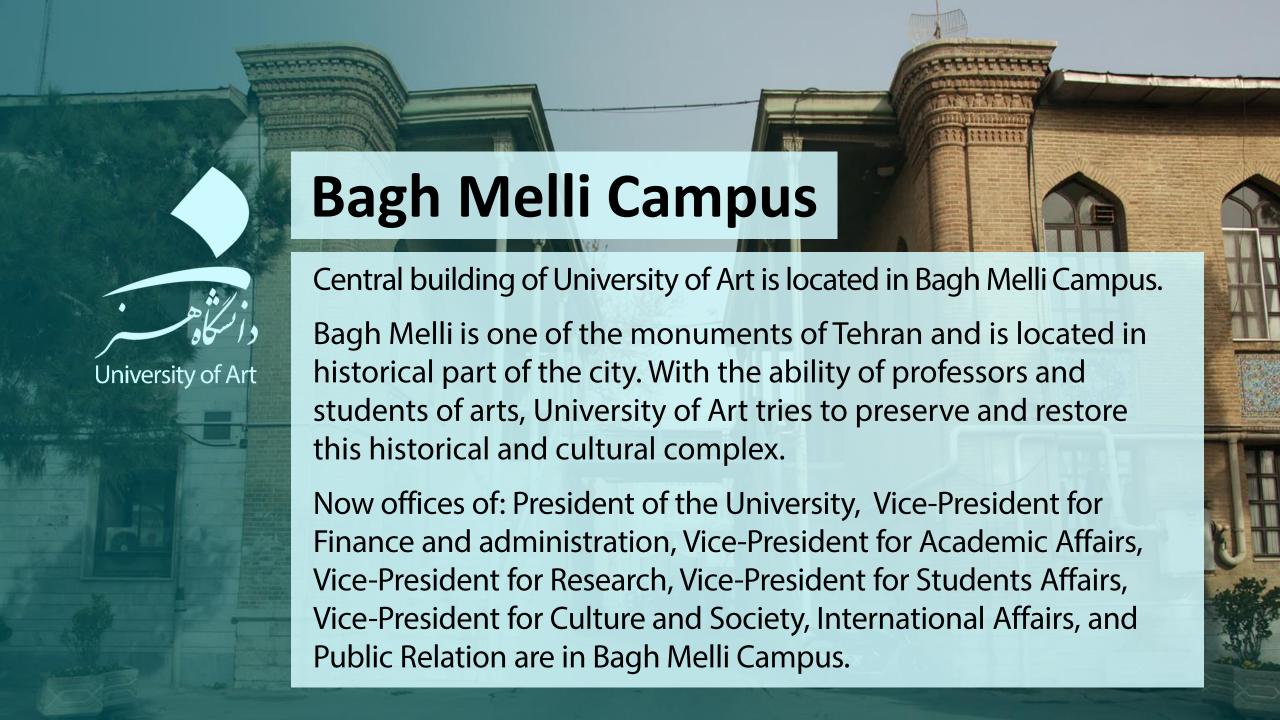
Currently there are 3957 full time students, 143 full time faculty members, and 330 part time professors in this university; with 21 majors in bachelor's degree, 29 majors in master's degree, and 5 major in PhD.





The highly qualified academic faculty of the university is a community of some tenured scholars, teaching and conducting in different study programs. These professors work in collaboration with colleagues from other leading Iranian universities.







# Faculty of Applied Arts

| Field of study              | Academic Level |          |     |  |
|-----------------------------|----------------|----------|-----|--|
|                             | BA             | MA       | PhD |  |
| Carpet                      | $\checkmark$   | <b>√</b> | -   |  |
| Textile and Clothing Design | √              | √        | -   |  |
| Handicrafts                 | $\checkmark$   | √        | -   |  |
| Industrial Design           | $\checkmark$   | √        | -   |  |
| Printing                    | $\checkmark$   | -        | -   |  |







| Field of study       | Academic Level |    |     |  |
|----------------------|----------------|----|-----|--|
|                      | ВА             | MA | PhD |  |
| Visual Communication | $\checkmark$   | √  | -   |  |
| Illustration         | -              | √  | -   |  |
| Painting             | $\checkmark$   | √  | -   |  |
| Sculpture            | $\checkmark$   | -  | -   |  |
| Photography          | $\checkmark$   | √  | -   |  |





| Field of study              | Academic Level |              |     |  |
|-----------------------------|----------------|--------------|-----|--|
| Field of study              | ВА             | MA           | PhD |  |
| Military Music              | $\checkmark$   | -            | -   |  |
| Iranian Music Performance   | $\checkmark$   | $\checkmark$ | -   |  |
| Classical Music Performance | $\checkmark$   | √            | -   |  |
| Composition                 | $\checkmark$   | √            | -   |  |
| Ethnomusicology             | -              | √            | -   |  |



#### Faculty of **Cinema and Theater**

| Field of study      | Academic Level |              |     |  |
|---------------------|----------------|--------------|-----|--|
|                     | BA             | MA           | PhD |  |
| Cinema              | $\checkmark$   | √            | -   |  |
| Acting              | -              | $\checkmark$ | -   |  |
| Puppet Theater      | √              | -            | -   |  |
| Scenery Design      | √              | -            | -   |  |
| Acting - Directing  | √              | -            | -   |  |
| Dramatic Literature | √              | √            | -   |  |
| Animation           | -              | √            | -   |  |
| Theater Directing   | -              | √            | -   |  |



# Faculty of **Architecture and Urban Planning**

| Field of study                      | Academic Level |              |     |  |
|-------------------------------------|----------------|--------------|-----|--|
| Field of study                      | BA             | MA           | PhD |  |
| <b>Urban Planning Engineering</b>   | $\checkmark$   | -            | -   |  |
| Architectural Engineering           | $\checkmark$   | -            | -   |  |
| Urbanism                            | -              | -            | √   |  |
| Architecture                        | -              | $\checkmark$ | √   |  |
| Interior Architecture               | $\checkmark$   | $\checkmark$ | -   |  |
| Urban Planning                      | -              | $\checkmark$ | -   |  |
| Urban Design                        | -              | $\checkmark$ | -   |  |
| Architecture and Energy             | -              | $\checkmark$ | -   |  |
| Project Management and Construction | -              | $\checkmark$ | -   |  |
| Urban Planning Engineering          | V              | -            | -   |  |







| Field of study                                  | Academic Level |    |     |  |
|---|----------------|----|-----|--|
|   | ВА             | MA | PhD |  |
| Art Studies                                     | -              | √  | √   |  |
| Philosophy of Art                               | -              | √  | -   |  |
| Comparative and Analytic History of Islamic Art | -              | -  | √   |  |



#### Faculty of **Conservation and Restoration**

| Field of study                                | Academic Level |    |     |  |
|---|----------------|----|-----|--|
| Field of study                                | BA             | MA | PhD |  |
| Museum Studies                                | -              | √  | -   |  |
| Islamic Arts                                  | -              | √  | -   |  |
| Renovation of Cultural & Historical Artifacts | -              | √  | √   |  |
| Renovation & Reconstruction of                | _              | √  | _   |  |
| Monuments & Historical Buildings              |                | V  |     |  |



# Thanks for your attention



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