



2023

Happy New Year

*May the dawn of this New Year,  
Opens up new horizons, and brings you promises of brighter tomorrows.*

*International Scientific Cooperation Center , Isfahan University of Technology*



# IUT International E-Newsletter

A Window to International Activities of IUT

Volume 4, Issue No. 2

November 2022



## What we read in this issue:

- IUT International News
- IUT News on Industry & Technology
- IUT Awards and Honors
- International Opportunities
- IUT Upcoming Events



## Signing an MOU between IUT & Nanjing Tech University



A Memorandum of Understanding between **Isfahan University of Technology (Iran)**, and **Nanjing Tech University (China)** for Academic collaboration was signed.

According to this MOU, IUT and Nanjing Tech University (NTU), wish to expand research collaboration, including joint research projects in areas of mutual interest, exchange of faculty members and research personnel between the two universities.

The MOU aims to facilitate cooperation on study and research activities of the two institutions that will strengthen mutual understanding, foster friendly cooperation, promote sustainable and productive academic collaboration, facilitate exchange

programs which benefit both faculty members and students and expand research activities for both parties in integrated learning programs.

The IUT Initiator of this MOU is **Prof. Nourollah Mirghafari**, a faculty member at IUT Natural Resources Department.

## The 10<sup>th</sup> Forum on Joint Scientific Cooperation among IUN Consortium Members



The meeting, hosted by the International Scientific Cooperation Center on November 15, aimed to discuss expansion of international relationships in order to attract and exchange students with Turkish universities, share ideas on upcoming international events and introduce the Polymer Research Center's International Relations Office to ECOSF.



Given that exchange of students, researchers and knowledge is the forefront of leading universities' agenda in today's dynamic atmosphere which can be benchmarked by our universities and owing to the fact that Iran holds a prestigious position in the region in terms of scientific and research activities, the effort is worth making to actualize such great potential and facilitate admission of international students. This can be achieved by the synergy among pioneer universities and scientific centers in Isfahan in order to guide their efforts towards conducting international joint projects and activities.



## IUT International Scientific Cooperation Center Hosted IUT's Internationalization Officials Meeting



The meeting, held on November 2, hosted the university's Research Vice-President, representatives of Foreign Affairs Ministry in Isfahan as well as faculties' internationalization officials.

**Prof. Mosaddegh**, the Director of ISCC, shed more light on the center's achievements and expressed the need to admit a higher number of international students and receive more international funds. He argued that an expansion of cooperation with foreign countries, countries in South-East Asia in particular, could be the way forward to overcoming current economic hardship.

**Prof. Ebrahimi**, the Director of Postgraduate Studies Office, and **Prof. Safavi**, the University's Vice-President for Research, emphasized on the significance of developing research activities as well as required flexibilities in attracting international students. Prof. Ebrahimi clarified on potentials in neighboring countries as well as newly issued regulations and facilities being provided for prospective international students.

**Mr. Kerdabadi**, the representative of the Foreign Affairs Ministry in Isfahan, put an emphasis on the role of benchmarking our performance against developed countries' experiences along with expansion of ties with neighboring as well as Eastern countries. Acknowledging the vitally important role of agile bureaucratic systems, he stated that general as well as scientific diplomacy together with expansion of ties with Isfahan Sister Cities and facilitation in issuing visas could be the way forward to pursuing our goals.

The session ended with an expression and exchange of ideas among faculties' internationalization officials.

## The 15<sup>th</sup> International Seminar on Polymer Science and Technology was Held at IUT

The 15<sup>th</sup> International Seminar on Polymer Science and Technology was held at Isfahan University of Technology on November 8-10.



The conference was held both in person and online. **Prof. Masoomi**, the chairman of the executive committee, and his colleagues successfully organized this wonderful gathering. Prof. Masoomi went through some details in an interview conducted by the International Scientific Cooperation Center. He stated that they received 622 articles which was a record number amongst all previously held seminars. The conference focused on two areas namely "Polymer in Biomedical and Tissue Engineering" and "Polymer Materials for Medical Care in the Covid-19 Pandemic". Three hundred papers, a record number, met the requirements for oral presentation which proved high quality of the seminar. However, due to time pressure, only a dozen of papers was presented orally and almost 450 as scientific posters. Eighteen keynote lecturers, both Iranians and foreigners including Canadians, Austrians, Australians and the Swedish, presented their research activities. **Prof. Clemens Holzer** from Austria, **Prof. Nayereh Taebniya** a researcher at Carolina University from Sweden, **Dr. Alireza Forouzani** from Johannes Gutenberg University, Mainz, Germany, were amongst prominent lecturers. Some Iranian industries financed this gathering and five foreign institutes and universities supported the seminar spiritually.

**Prof. Nekoomanesh**, Managing Director of Iran Polymer and Petrochemical Institute, was also amongst our prominent guests at the university. He shared his thoughts and ideas on the conference in a friendly talk. He stated that Isfahan University of Technology has a great potential to hold such events due to its facilities and location in the center of Iran. He expressed that Iran Polymer Society is the only scientific polymer society in the country and it seeks to strengthen cooperation amongst scientists in Iran. He addressed some worries expressed by industries regarding better cooperation between academics and the industry. He believed a great deal of work has already been done but admitted the need for further cooperation. Regarding international cooperation, he claimed that due to Covid situation and some global changes, they haven't fully achieved their goals in terms of holding international seminars and gatherings which he hoped to be improved in near future. An interview with the companies participated in the conference indicated that they are highly interested in expanding their cooperation with universities in terms of recruiting young researchers in R & D and QC departments. They expressed their worries in this regard and welcomed such gatherings to strengthen the ties.



## The International School on “Modern Trends in Computational Materials Discovery” was Held at IUT.

The Department of Physics at Isfahan University of Technology held an International School on “Modern Trends in Computational Materials Discovery” on 17-21 November, 2022.

**Prof. Mojtaba Alaei** and **Prof. Artem R. Oganov** with the help of **Prof. Ismaeil Abdolhosseini** and **Prof. S. Javad Hashemifar** organized this five days activity.



The school consisted of two sets of programs, lectures in the mornings and workshops in the afternoons. Some well-known scientists from Russia and Italy (from ICTP) instructed keen young participants and presented their latest achievements in designing novel materials and application of methods including machine learning and evolutionary algorithms in discovering novel materials. The workshops mainly focused on USPEX, as a pioneering package for material design in the framework of evolutionary algorithms.

The International Scientific Cooperation Center held some interviews with foreign participants in which they expressed their content and satisfaction regarding the high quality of this gathering.

Prof. Artem R. Oganov from the Skoltech Institute of Science and Technology, Russia, shared his thoughts on this gathering in a friendly talk. Relying on the fact that the number of publications in Physics has increased twentyfold over the last decade in Iran, he was highly satisfied with the education level of the participants and the overall quality of the school. He claimed that due to some similarities in terms of global limitations imposed on both countries, Iran and Russia need to develop their cooperation by conducting joint research.

### IUT Webinars: The Sixth Lecture from the IUT Series of Interdisciplinary Lectures

#### A Scientific Seminar on Chemical Industries and Sustainable Development was held at Isfahan University of Technology.

The sixth round of interdisciplinary lectures at IUT was presented by **Prof. Mehran Ghiaci**, a retired prominent professor at the Department of Chemistry, on November 16. He stated that the seminar aimed at discussing scientific issues in this area as well as guiding policy-makers and developers.

He claimed that experts in various fields including but not limited to biotechnology, petrochemical-chemical materials, green chemistry and environment safety as well as industrial R&D managers and process engineers can play a crucial role in sustainable development.

He stressed that sustainable development is a path which considers not only the current generation but also future generations and leads to improvement of human health, environment, economy and social necessities.



Prof. M. Ghiaci

### Industry and Technology News

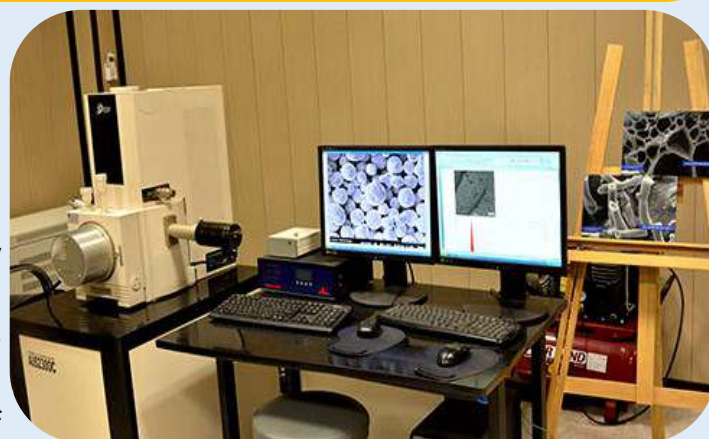
#### *IUT's Electron Microscope Lab Center Has Been Operationalized*

The lab, which conforms to environmental standards in order to improve the performance of industrial imaging equipment, has been put into operation by experts at the Department of Materials Engineering to provide professional research and educational services.

**Prof. Safavi**, the university's Research and Technology Vice-President expressed that apart from educational purposes, the operationalized equipment can increase the university's revenues.

With regard to considerable impact of the Department of Materials Engineering on international rankings, he stated that the department is one of the greatest scientific centers in the country which has close ties with various industries including steel and smelting. These industries have greatly benefited from the achievements gained by the faculty members at this department.

It is worth noting that Isfahan University of Technology has always been a significant center for microscopic studies since it possesses not only three advanced electron microscopes equipped with various detectors but also the required expertise gained through years of utilizing such systems.





### *For the First Time in Iran*

### *Localization of Wave Power Generation Technology at IUT*

**Prof. Shahriyar Mansoorzadeh**, the director of the hydrodynamic research group at Research Institute for Subsea Science and Technology at IUT expressed that the technical knowledge as well as the localization technology for production of the first two-body wave energy convertors in the country have been obtained by researchers at IUT in an international scientific cooperation.

This kind of wave energy convertor consists of a floating and a submerged body which oscillate vertically under their interaction with sea waves. The relative motion of the two bodies creates a reciprocating motion which is then converted into a rotational motion. It drives a DC generator and produces electrical energy in a power take-off system (PTO). The project consists of numerical modeling of the power generation of the WEC, size optimization, PTO design, power control optimization, together with construction and test of the model in a wave tank. The numerical and experimental results are compared in order to develop suitable tools for analyzing a real WEC operating on the sea surface.

The research findings have been published in authentic scientific journals such as Renewable Energy and Ocean Engineering. Such technologies were only available in some developed countries including the U.S.A.; however, it is estimated that our research lead to commercialization of such technologies provided that these activities are supported by foreign and domestic research and scientific centers.

The present project, which was successfully granted by Alexander von Humboldt (Avh) in 2019, is being carried out by two Iranian PhD students namely **S. Rezaei** and **A. Rahimi** under the supervision of **Prof. J. Parviziyan**, a faculty member at the Department of Mechanical Engineering, and **Prof. Sh. Mansoorzadeh**, a faculty member at Research Institute for Subsea Science and Technology at IUT, along with two German students under the supervision of Prof. Duster from TUHH and has successfully attained one of its primary goals which was development of lab centers as well as designing and creation of mechanisms in order to test wave power converters.

It is worth noting that the Research Institute for Subsea Science and Technology at IUT is among few research centers in the country to have taken steps towards conducting research in the field of wave power convertors through creation of required infrastructures and education of experts.







## 40 Faculty Members of IUT among "2022 World Ranking of Top 2% Scientists"

								
Prof. Enayati	Prof. Toroghinejad	Prof. Karimzadeh	Prof. Kermanpur	Prof. Shamanian	Prof. Kharaziha	Prof. Ashrafizadeh		
								
Prof. Raeissi	Prof. Najafzadeh	Prof. Fathi	Prof. Atapour	Prof. Ensafi	Prof. Tabrizchi	Prof. Davar	Prof. Malekpour	
								
Prof. Rezaei	Prof. Hajipour	Prof. Saraji	Prof. Dinari	Prof. Momeni	Prof. Arzani	Prof. Eslamian	Prof. Fathi	Prof. Ayoubi
								
Prof. Sohankar	Prof. Salimpour	Prof. Ziaei-Rad	Prof. Javanbakht	Prof. Khashei	Prof. Modarres	Prof. E. Ghasemi	Prof. Allafchian	
								
Prof. Mostofinejad	Prof. Farzanehfard	Prof. Adib	Prof. Mojiri	Prof. H. Golshan	Prof. Ghasemi	Prof. Hejazi	Prof. Semnani	

The list was announced on October 10, 2022, based on the updated science-wide Scopus databases of standardized citation indicators. The number of enlisted faculty members of IUT shows a considerable improvement.

This ranking, published by Stanford University, which is considered the most prestigious worldwide, is based on the bibliometric information contained in the Scopus database and includes more than 190,000 researchers from more than 8.5 million scientists considered to be active worldwide, with 22 scientific fields and 176 subfields taken into account.

The list was presented based on two different types of data evaluations. While the first assessment covered a period of time until the end of the year 2021 which showed a long-term career performance indicator of senior researchers in which 24 members of our university were enlisted, the second evaluation analyzed data solely in 2021 and 39 faculty members were able to secure a position.

Department of Materials Engineering with 11 members, followed by Department of Chemistry with 9 scholars were ranked first and second respectively among all faculties at IUT.



### 3 Young Faculty Members Among the Country's Scientific Elites



Prof. M. Kharaziha



Prof. M. Abdi



Prof. M. Silani

With regard to publications in top journals over a period of 2019-2021, Iran Scientific Elite Federation, which is supported and managed by Science and Technology Vice-Presidency, has published its list of 100 Scientific Elites as well as 15 Young Scientific Elites. Isfahan University of Technology is honored to have secured three positions on the list.

The nominees must be under 45 years old and hold a scientific rank above 100. The university obtained 1163 points which secured us the 18th rank on the list. The chosen scientists are supported through research funds, lab services grants and a privilege for admission of postdoctoral researchers.

**Prof. Mohammad. Silani**, an associate professor at the Department of Mechanical Engineering, **Prof. Mahshid Kharaziha**, an associate professor at the Department of Materials Engineering and **Prof. Mehdi Abdi**, an assistant professor at the Department of Physics, were chosen from IUT.

### Opportunities:



#### Call for Wenhui Award 2022 "Educational Innovations for Learning Recovery"

The Call for Nominations for **Wenhui Award 2022 "Educational Innovations for Learning Recovery"** has been issued. The Award will be conferred on two individuals or institutions in UNESCO Member States in the Asia-Pacific region for their outstanding efforts and achievements in educational innovation focusing on the specific theme of the current edition. The two winners will each receive a prize of USD20,000. Honorable Mentions will also be granted to individuals or institutions that have demonstrated commendable innovative educational practices. Since the inception of the Wenhui Award, there have been 22 Winners and 34 Honorable Mentions from 19 different countries.

Deadline: January, 24, 2023

The full information is available on : <https://english.iut.ac.ir/node/1385>



**Call for Participation In Winter School On "Industry 4.0"**

**Isfahan University of Technology (IUT)** hosts a winter school on Industry 4.0. It is a two-day course lecture as well as discussion forums.

- The course will be held on January 3-4, 2023.
- Deadline for Registration: January 1, 2023

The course addresses graduate students, professors and industrial experts in various fields including but not limited to mechanical engineering, industrial engineering, electrical engineering as well as computer engineering. It does not require detailed knowledge of Industry 4.0 technologies, but an excellent knowledge of operational processes and relationships in enterprises could be useful.

For further information and registration please visit: <https://english.iut.ac.ir/node/1386>



# Industry 4.0

## Winter

# School



A winter school on Industry 4.0  
January 3-4, 2023

TO BE HELD BY ISFAHAN UNIVERSITY OF TECHNOLOGY

ELECTRICAL ENGINEERING, COMPUTER ENGINEERING, MECHANICAL ENGINEERING,  
INDUSTRIAL ENGINEERING AND FOR ALL INTERESTED IN INDUSTRY 4.0

A Certificate of Attendance Will Be Awarded to All Participants

This course provides a comprehensive overview of the role of digitization, big data, cyber-physical manufacturing systems, robots, human robot collaboration, artificial intelligence and all relevant Industry 4.0 technologies. In particular, we focus on applications and case studies in order to make the audience understand the new technologies and demonstrate the benefits of Industry 4.0. We also include contributions from researchers and industry to the opportunities and challenges of Industry 4.0. One of the greatest challenges in upgrading to Industry 4.0 is education, without young academics the transition to Industry 4.0 won't be sustainable.

Registration:

English.iut.ac.ir/industry-4.0

ENGLISH.IUT.AC.IR  
INTERNATIONAL.IUT.AC.IR

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ISFAHAN UNIVERSITY OF TECHNOLOGY



In order to expand the university's international scientific interactions with overseas academic institutions, the IUT International is publishing this electronic Newsletter on international relations in line with the IUT mission toward a Green University.

You are invited to register your email here to receive every new issue of the Newsletter upon its publication. You can also correspond with the editorial board from here to convey your valuable comments and suggestions, and send materials related to IUT to be published in future issues of the Newsletter.

To see the previous issues and more information on the newsletter, please click [here](#).

In addition to being distributed via social networks, this Newsletter will also be available through the following QR code. Your constructive participation in this path will guide us toward our goals.



## **Volume 4, Issue No. 2**

### **November 2022**

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Your constructive and valuable comments and suggestions are most welcome.

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