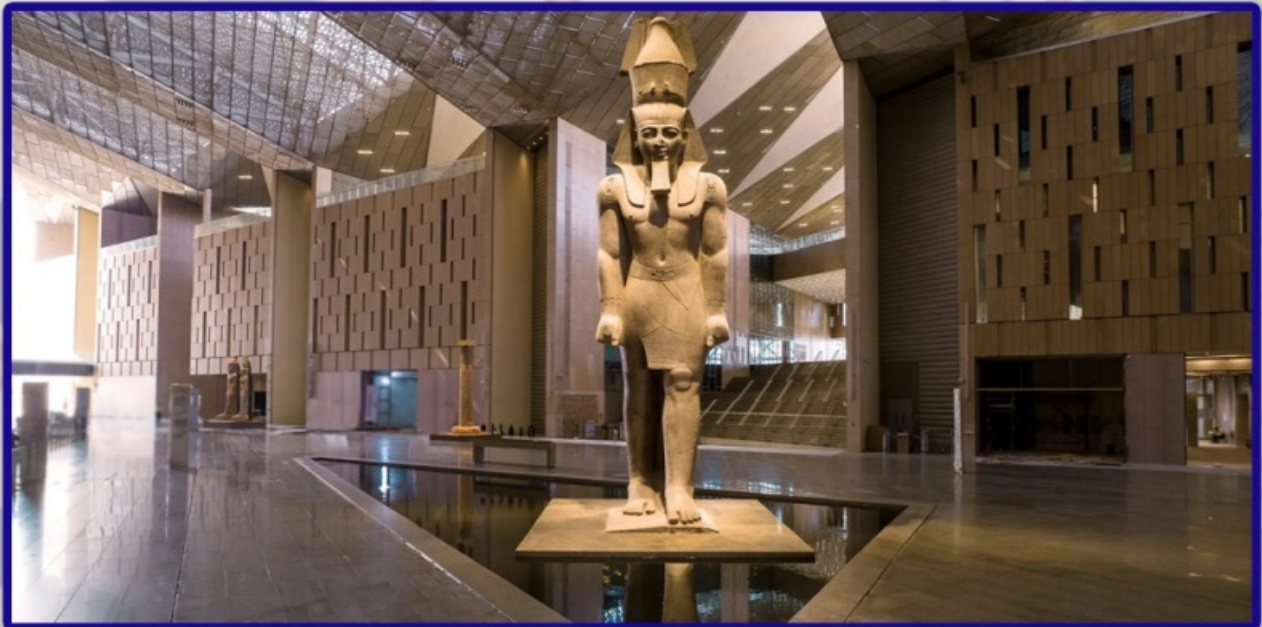


HORUS

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JSPS Alumni Association in Egypt



Newsletter

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The Egyptian Grand Museum, the GME! It's gonna be HUGE, literally! It'll be the largest archaeological museum in the world, covering over 490,000 square meters. Located near the Pyramids of Giza, it's a game-changer for tourism and Egypt's cultural scene. In 2002, the foundation stone was laid, marking the start of a long journey filled with challenges and ambitions. Just one year later, in 2003, the Irish architectural firm Heneghan Peng was selected to design the museum after winning an international architectural competition.

Between 2005 and 2008, construction began, and the project's features began taking shape.

In 2010, the museum's Conservation Center was inaugurated, becoming a global hub for preserving and restoring Egyptian archaeological treasures. That was supported by JICA, Japan. The GEM is opened for the visitors while the official opening will be during 2025.



To all JSPS past fellow in Egypt, we appreciate if you can update your contact information to JSPSAAE as well as JSPS Cairo Research Station for future communication.

You can send your information to any of these mails:

jspscairo-secretary@live.com

<http://jspscairo.com/en/alumni/>



<https://www.facebook.com/JSPSAAE>

Message from the president of JSPSAAE, Prof. Dr. Ibrahim Tantawy

Dear JSPS Alumni Colleagues and friends,

It is my pleasure to present the 12th Issue of Japan Society for The Promotion of Science Alumni Association in Egypt (JSPSAAE) annual Newsletter "Horus" to resume our successful journey that comes as a culmination for over a decade of hope, work and achievements on the ground, during which we were honored to take the responsibility of issuing the newsletter in cooperation with all of you with the intent of maximizing the leading role of the Association in the Egyptian scientific community through various scientific activities, conferences and on-site visits to universities and research centers. The Association's pioneering role was evident in supporting networks among the Alumnis and the Japanese host researchers, encouraging young researchers to benefit from the Alumni activities through the transfer of knowledge and experience across all scientific disciplines from the respected members of JSPSAAE as well as inviting eminent scientists from Egypt and Japan. On this occasion, I would like to express my sincere congratulations to JSPS for celebrating the 40th anniversary of the establishment of JSPS Cairo Research Station. We have the pleasure to work on the ground hand on hand to encourage and supported Egyptian researchers at universities and research centers to promote collaboration between Egypt and Japan. In this occasion, and on behalf of the JSPS Alumni Association in Egypt, we are pleased to warmly welcome Prof. Eiji Nagasawa as the new Director of the JSPS Research Station in Cairo.

We look forward to deepening our cooperation and are confident that, under Prof. Ejii Nagassawa leadership, the ties between the Egyptian and Japanese academic and research communities will grow even stronger. We are ready to embrace this new chapter with great enthusiasm and anticipation to work together under your guidance and vision as one team and unified platform to support Egyptian researchers across universities and research centers in advancing collaboration between our two nations.

Last but not least, we would like to extend our deepest thanks and appreciations to Prof. Naoko Fukami, for the full support during her tenure as director of JSPS Cairo Research Station without which we couldn't have been able to accomplish our mission. Prof. Fukami's leadership, dedication, guidance, commitment, and unwavering support during her tenure have been instrumental in helping us accomplish our mission and in strengthening the bonds of academic and research cooperation between Egypt and Japan. We sincerely hope that the Alumni will continue growth and success in its role as a lighthouse of science, technology and culture in the Egyptian scientific community.

With my best wishes for further progress and prosperity for the Association.

Sincerely,

Prof. Dr. Ibrahim Tantawy,



President, JSPSAAE

Professor of Medicinal Chemistry, Menoufia University



Farewell Party for Prof. Naoko Fukami **Former Director of JSPS Cairo research station.**

The JSPSAAE board member had arranged a farewell party for Prof. Naoko Fukami, considering it is Ramadan time, so that party with Iftar with Alumni members.

Farewell and thank you message, We extend our heartfelt gratitude to Prof. Naoko Fukami, former Director of the JSPS Cairo Research Station, for her exceptional support, guidance, and cooperation throughout her tenure.



Her dedication was especially evident during the COVID-19 pandemic period, when despite the challenges we successfully transformed the Alumni Association's activities into national and international online webinars that raised public awareness and created valuable opportunities for scientific knowledge sharing.

Prof. Fukami's commitment has significantly strengthened scientific collaboration and advanced joint initiatives, and it has been a true privilege to work with her. Her sincere efforts and steadfast support were instrumental in making the Alumni Association a genuine success story. Wishing her continued success and fulfillment in all future endeavors.

Welcome Prof. Eiji Nagasawa, **Director of JSPS Cairo Research station**

Welcome Message to Prof. Eiji Nagasawa, Director of JSPS Cairo Office. On behalf of the JSPS Alumni Association in Egypt, we are pleased to warmly welcome Prof. Eiji Nagasawa as the newly appointed Director of the JSPS Research Station in Cairo starting April 1, 2025. In our ongoing efforts to strengthen and expand cooperation between Egypt and Japan, we are excited to join forces at the institutional level—working as one team and unified platform to support Egyptian researchers across universities and research centers and institutes in advancing collaboration between our two nations. We are equally committed to inspiring young researchers to engage with Alumni activities, benefiting from the wealth of expertise and experience shared by our distinguished members in all scientific fields. We look forward to deepening our cooperation and are confident that, under Prof. Nagasawa's leadership, the ties between the Egyptian and Japanese academic and research communities will grow even stronger. We are ready to embrace this new chapter with great enthusiasm and anticipation for your guidance and vision.

welcome of Prof. Eiji Nagasawa, the new director of JSPS Cairo Research station



Report on JSPS Bridge 2024

The genetic future of food legumes breeding: approaches to developing smart varieties in faba bean and soybean in Egypt

Professor Dr. Walid Mohamed El-Rodeny
The Agricultural Research Center (ARC),
Field Crop Research Institute (FCRI), Food Legumes Research Dept. (FLRD), Egypt

Summary of Research Results

Our host institution KDRI, has made good use of the facility that enables large-scale genome analysis, one of the best of its kind in Japan. Recently, we revealed the genomic structure of a legume plant and its symbiotic nodule bacteria. Our research focus is the analysis of the genetic information in soybean. In Egypt, soybean [*Glycine max* (L.) Merrill] is one of the essential oil crops due to its local consumption in several food and feed industries. Unfortunately, soybean area reached about 88000 Acre., with productivity of seeds/fad of about 1.298 tons (Bulletin of Statistical Cost Production and Net Return, 2022). According to USDA (2022), Egypt's largest supplier of soybeans was the USA, with about 2.788 tons/ha in 2020/21. However, it was expected that Egypt will import more soybeans in 2022/23 (World Grain, 2023). In Egypt, one of the main goals of soybean breeding is to develop lines that combine increased yield with improved quality characteristics. From day one 30 of Aug., and after a discussion with Dr. Kenta the host researcher, we started our research plan by using 51 Soybean DNA samples from Egypt germplasm for genotyping by RAD-Seq. Besides preparing DNA Library using IDT (Integrated DNA Technologies) for two soybean samples. In this study, we genotyped 51 soybean genotypes inbred line (RIL) using a restriction-site associated DNA sequencing (RAD-seq) approach, this technique, considered one of the next generation sequencings (NGS) methods, effectively applied in high-throughput SNP marker discovery and quantitative trait loci (QTL) analysis including the mapping of quality and agronomic trait loci in soybean. In conclusion, with RAD-sequencing

(RAD-Seq), some predicted genes were selected as candidates that likely directly or indirectly influence yield and quality in soybeans. Our findings will help us to understand common genetic control mechanisms of co-localized traits and to select cultivars for further analysis to predictably modulate soybean yield and quality simultaneously. In addition, preparing DNA Library by IDT (Integrated DNA Technologies) for two soybean samples, here, we report a nanopore-based method to map the insertion position of a Ds transposable element originating in the soybean genome. This method uses an oligo probe to capture the DNA fragments containing the Ds element from pooled DNA samples of soybean plants. This method allowed us to rapidly map the Ds insertion positions in 51 soybean lines through a single sequencing run. This strategy is high throughput, convenient, reliable, and cost-efficient. The targeted allele mapping protocol can be easily translated to other eukaryotes with complex genomes. Faba bean (*Vicia faba*) has been known for many years, as the principal meal for more than 75% of the Egyptian families. Broomrapes (*Orobanche* spp.) are parasitic weeds that cause serious damage to several crops in Europe, the Mediterranean region, Central Asia, the Arabian Peninsula, and some African countries. *Orobanche* species parasitize a wide range of economically important hosts, e.g. legumes, sunflower, tomato, and tobacco. Vetches (*Vicia* spp.) are important forage legumes in the Middle East and Mediterranean regions. Regarding the faba bean breeding plan, after discussion with faba bean breeder in Sakata seeds, we are satisfied to cooperate about increasing the faba bean productivity by making a new crossing between some Japanese cultivate with Egyptian cultivate by using speed breeding technology supplied by start-up company (UTokyo). In addition, we start to establish a new research team for the development of *Orobanche*-sensitive Lotus spp. Mutant lines as a trap crop in cooperation with **Kenta SHIRASAWA** (KDRI), **Prof ISOBE Sachiko** at the Univ. of Tokyo, **Dr. Fukai Eigo**, Niigata University, and **Prof Satoko Yoshida** at Nara Institute of Science and Technology and **Professor Shusei Sato** (Tohoku Univ). Also, we arranged to screen some of the mutant lines from Sato-san under infested soil with *Orobanche* seeds under Egyptian conditions. Also, for an assessment of a new substance for *Orobanche* tolerance, Prof Satoko Yoshida suggests testing this new substance to control infection and increase faba bean productivity. Under the supervision of KDRI, all genomic analysis and the generation and analysis of large-scale mRNA and transcriptomic data (RNA-seq) using lotus spp. Groups representing diverse *Orobanche* host-interactions differ in strategies of resistance and susceptibility of infections and iii) transformed the candidate gene from wild resistant *Vicia* spp. to ‘Superroot’ to identify the functions of the candidate as resistance genes of *Orobanche* spp. Indeed, very few genomic and transcriptomic resources have been available so far for *Orobanche* host-interaction. So, the main target of the research plan is to discover novel genes related to *Orobanche* resistance in *Vicia faba* and lotus spp. for improvement faba bean for *Orobanche* tolerance.

Remarks

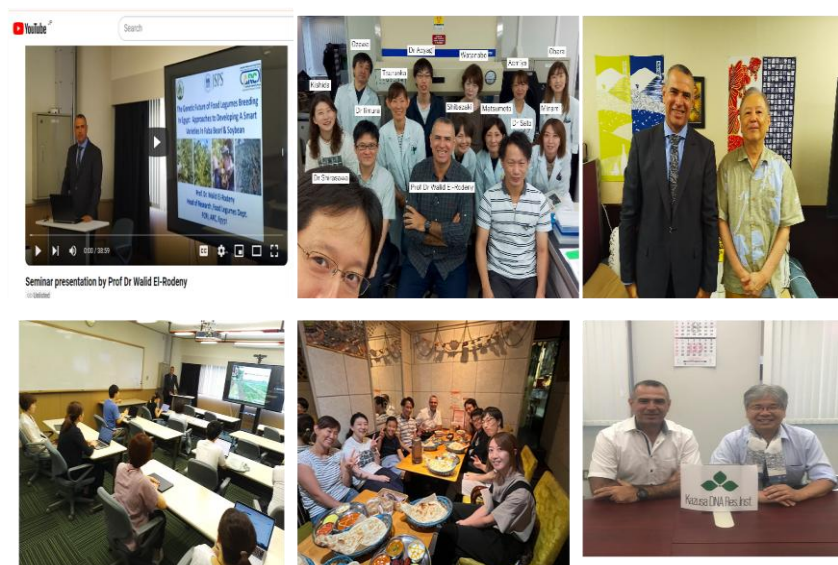
The objective of the JSPS Bridge Fellowship is to build strong networks among researchers in Japan and other countries through different activities. My host researcher Kenta Shirasawa, Ph.D. was very distinguished in preparing a schedule of meetings, and foreign visits to different Japanese universities (TOKYO, WASEDA & Hiroshima Univ.), Agricultural Research Station, agricultural companies (Sakata Seed), and international and local conferences specialized in plant breeding. On the other hand, we attend many Online meetings (zoom) with Japanese Professors. This distinguished planning of the schedule of visits played an important, and effective role in

achieving the best impact for Egypt and Japan, for example: -

- 1- On 30 of Aug. I attend four oral presentations of progress reports by Dr Sato and Dr. Yok Otani (KDRI staff).
- 2- I presented an oral presentation in the seminar room on Sep 2, to KDRI members entitled: The genetic future of food legume breeding: approaches to developing smart varieties in faba bean and soybean in Egypt.
- 3- Brainstorming Meeting with Dr. Tabata, The Director of Kazusa DNA Research Institute on Sep 2.
- 4- From Sep 3 to Sep 4: I participate in a Research discussion with oral presentation with Dr Sato, Dr. Iimura, Dr. Aoyagi: and Dr. Ichihara KDRI members.
- 5- From 5 to 6 Sept., attend the International Symposium on One Health by Sustainable Bio-ecosystem at Waseda Univ. One of the main objectives of this conference is to develop crops that can adapt to environmental changes.
- 6- Sep 10: I had an Interview for my mission in KDRI and the importance of JSPS Bridge Fellowship for developing my career by Dr. Nakano (KDRI)
- 7- Sep 11: Visiting Prof ISOBE Sachiko at the Graduate School of Agricultural and Life Sciences at the Univ. of Tokyo, regarding future cooperation in genome editing as a new approved method for breeding soybean.
- 8- Sep 12: visit Sakata Seed Company in Kisarazu and present an Oral presentation on the faba bean breeding program in Egypt, and have a field visit to the farm Sakata Seed Company with the Japanese faba bean breeder. Also, have a round table discussion with Sakata breeding staff for future cooperation between ARC, Egypt, and Sakata Seed Company in Japan, about faba bean improvement breeding techniques. In this round table discussion, to improve the broad bean in Japan by using some of the new faba bean recommended varieties named Giza 66 with high-yield potential, long pod shape, and seed number per pod reaching 6 with broad seeded shape.
- 9- 13 Sept. online discussion with Dr. Fukai Eigo, Niigata University, Division of Plant Sciences, National Institute of Agrobiological Sciences, Tsukuba about focus on developing Orobanche -sensitive Lotus spp. lines as a trap crop to reduce the seed bank of broomrape in Egypt.
- 10- 18 Sept. round table discussion with Professor Shusei Sato (Tohoku Univ), a former member of KDRI and interested in working on a new strain for supper Root nodules number to testing in Egypt with faba bean and soybean variety depending on the period duration from seed treatment by strains of Bradyrhizobium japonicum <https://dsoil.jp/en/project/summary/>). With other missions to Elucidate superior traits of high N₂O removal soybean Rhizobial strains and select superior wild-type strains. To evaluate the effects of Rhizobial inoculation on soil microbiota and horizontal gene transfer.

- 11- From 19-20 Sept. we participate in the 146th Meeting of the Japanese Society of Breeding (JSB), 500 plant breeders attend. Program of Breeding Meeting Dr. Kenta made an appointment with Dr Okamoto, a researcher at Takii Seed Company. Also, attending Oral Presentation #112: Dr Ogiso - developed DNA markers for soybean breeding programs and evaluated the genetic diversity of Japanese lines. Besides that, we attended Oral Presentation #113: Dr Yamaguchi - who tried to develop a new breeding strategy for soybean, and Poster Presentation #P109: Dr Kato - who bred a new high-yield soybean cultivars using USA lines.
- 12- Sep 25: Visiting the Peanut Plant Laboratory of Chiba Prefectural Agriculture and Forestry Research Center, we had a presentation on peanut production in Japan from Dr. Taneaki Tsugane the director of the lab. And make a field visit and glass house for crossing. We share information about the differences between Egyptian peanut cultivars and Japanese in quantity and quality traits.
- 13- Sep 26: Visiting National Agricultural Research Organization (NARO).
- 14- Sep 27: Departure to Egypt.

Summary of Research Results with KDRI Staff





Green hydrogen as a source of renewable energy

Salah Salman, Dr. Eng.
 Professor of Materials Science and Metallurgy
 Mining and Petroleum Engineering Department
 Faculty of Engineering, Al-Azhar University

I spent one month participating in the Bridge Fellowship at Prof. Mitsushima's lab., Department of Chemistry and Life Science at Yokohama National University.

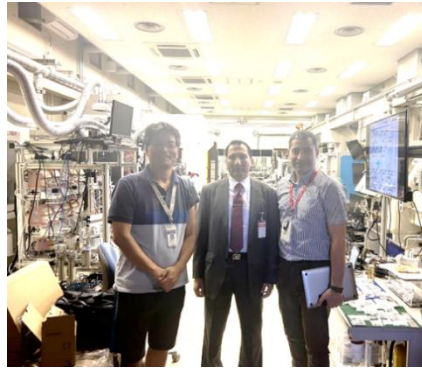
I began with the laboratory tour to observe the facilities and the recent research at the laboratory. Later, I conducted some experiments on hydrogen generation through alkaline water electrolysis with the assistance of Dr. Ashraf Abdelhaleem, who works as an assistant professor at Yokohama National University.

I attended several lectures at a summer school organized by Yokohama National University in Japan with collaboration with Graz University, Austria. During this summer school, we also visited DENORA, a company that manufactures electrodes. It was fascinating to observe the examination processes of electrode materials at an industrial scale.



I also went on a one-week research trip to visit the following various institutions in Japan.

At the beginning, I visited the National Institute of Advanced Industrial Science and Technology (AIST) in Tsukuba, where



I had the opportunity to meet Dr. Mohamed Shahien, a researcher at the Global Zero Emission Research Center, specifically in the Hydrogen Production and Storage Research Team. He guided me on a tour of the lab, showcasing the facilities used for various plasma coatings. Dr. Shahien meticulously walked me through the entire process, starting from powder preparation and continuing through to the coating application and various characterizations. He also presented an exhibition of coated materials and demonstrated the industrial-scale aspects of the process. Additionally,

I met also Dr. Hirose Shingo, Chief Senior Researcher, who specializes in surface treatment, additive manufacturing, and information engineering. He introduced us to the concept of metal formation through Laser Directed Energy Deposition (Laser DED), which includes multielement powder deposition in the form of 3D printing. Dr. Shingo also shared insights about a database of phase diagrams and how artificial intelligence (AI) can be utilized to select the appropriate alloys while minimizing the number of experiments needed.



later, I visited Nagoya University, where I engaged in an in-depth discussion with Professor Takahiko Kato from the Institute of Innovation for Future Society about our previous research on lithium batteries. Additionally, I met with Professor Hikaru Nakamura from the Graduate School of Engineering and Professor Tomio Nakano, Chief of the Liaison Committee at Nagoya University. We explored the possibility of establishing a Nagoya University Alumni Association in Egypt.



I also visited my supervisor, Professor Masazumi Okido, who is currently the Chairman of Tokai Polytechnic College in Gifu.



Additionally, I met with Professor Kuniaki Murase at the Electrochemistry and Hydrometallurgy

Lab within the Materials Science and Engineering Department at Kyoto University. He explained the recent research being conducted in his lab and introduced me to Dr. Kazuhiro Fukami, an Associate Professor who further elaborated on their research work. I also attended a meeting of the Electrochemical Society of Japan, which was held at Kyoto University.

I truly appreciate this wonderful opportunity, as it has allowed me to build valuable connections with Japanese professors

Highlights from the Twelfth World Urban Forum in Egypt

Dr. Muhammad Salem

Lecturer of Urban and Regional Planning
Cairo University



From November 4 to 8, 2024, Egypt proudly hosted the Twelfth Session of the World Urban Forum (WUF12), one of the most significant events on the United Nations agenda. Convened by the United Nations Human Settlements Programme (UN-Habitat), this landmark gathering revolved around the theme "It All Starts at Home: Local Actions for Sustainable Cities and Communities". WUF12 witnessed a record-breaking attendance, drawing over 37,000 participants from 182 countries. The forum brought together diverse stakeholders, including representatives from national, regional, and local governments, academics, business professionals, community leaders, urban planners, and civil society organizations.

Among the international participants, Japan stood out for its active engagement in the forum's discussions and events. Notably, the Ministry of International Cooperation of Egypt met with Yuriko Koike, the Governor of Tokyo, underscoring the significance of international collaboration in addressing urban challenges.

Governor Koike shared Tokyo's experiences in tackling issues such as urban density, public transportation, and disaster preparedness, offering valuable insights to inspire global cities facing similar challenges

In addition, Japanese organizations contributed valuable perspectives on sustainable urban development, offering innovative solutions to pressing global challenges, such as affordable housing, climate adaptation, and the provision of essential public services. Their participation highlighted Japan's unwavering commitment to fostering sustainable urban environments and promoting global cooperation for the betterment of cities and communities worldwide.



As a proud member of JSPSAAE and an expert in land management for peri-urban areas, I had the honor of contributing to the session titled "Beyond & Between - Launching the Global Compendium of Peri-Urban-Rural Linkages" on the second day of WUF12.

During my presentation, I delved into the complexities of peri-urban-rural linkages, highlighting the dynamic interactions and inherent challenges in these transitional zones. I discussed key issues such as land use conflicts, resource allocation, and the socio-economic dynamics that shape peri-urban areas. By focusing on these challenges within the broader context of sustainable urban development, I emphasized the need for innovative strategies that promote resilience, equity, and harmony between urban and rural spaces.

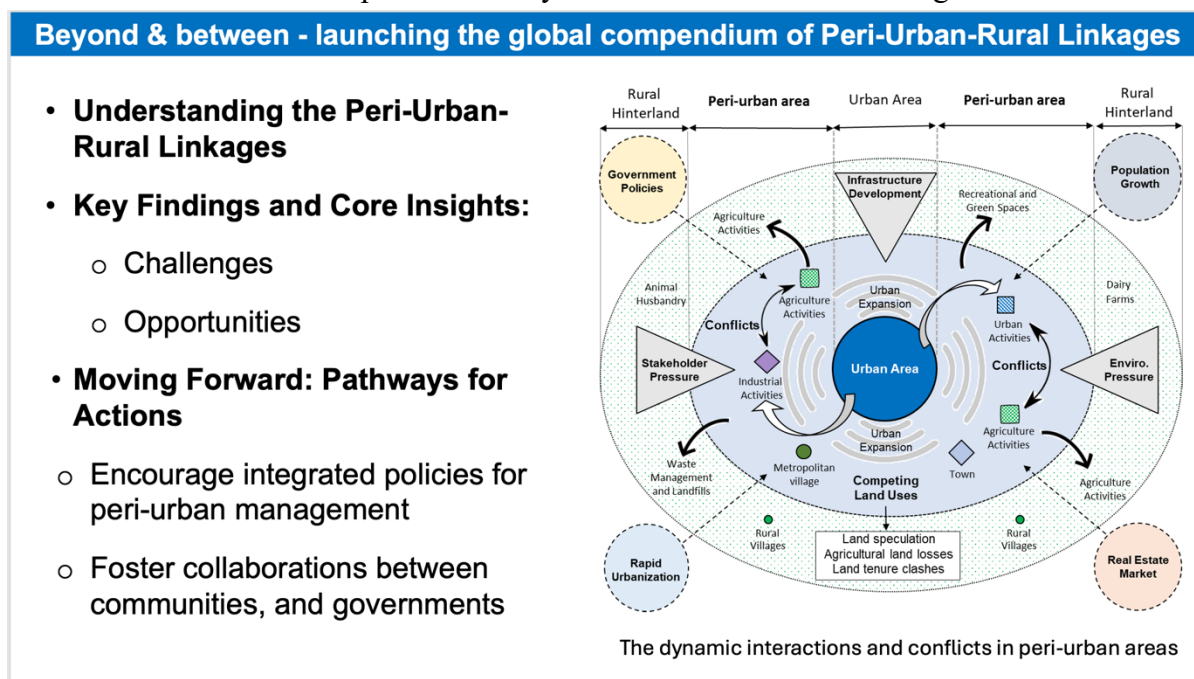
Discussion of peri-urban linkages
issues at WUF12



UN-Habitat and the Japanese Delegation

On November 7, 2024, Anacláudia Rossbach, Executive Director of UN-Habitat, held a bilateral meeting with the Japanese delegation. This delegation included representatives from the National Spatial Planning and Regional Policy Bureau, the City Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, and the Japan International Cooperation Agency (JICA). The discussions highlighted Japan's commitment to advancing urban resilience, integrated spatial planning, and fostering international cooperation. By engaging in this dialogue, Japan reaffirmed its dedication to contributing to sustainable urban development and addressing global urban challenges through collaborative efforts.

Part of the presentation by Dr. Muhammad Salem during the session



Participation of JICA-Egypt Office in WUF12

The Japan International Cooperation Agency (JICA) made a notable impact at WUF12 through its active engagement in various sessions and discussions. JICA's contributions focused on key themes such as sustainable urban development, climate change adaptation, and international cooperation. JICA participated in dialogues addressing diverse urban issues, including affordable housing, digital transformation, and social inclusivity. This active involvement underscored JICA's commitment to providing practical and scalable solutions for urban challenges, while strengthening partnerships to improve cities worldwide.

One particularly noteworthy session explored experiences and challenges in developing metropolitan areas across different regions. Case studies included Egypt (Greater Cairo), Uganda (Greater Kampala), and Indonesia (New Capital: East Kalimantan and Two Cities). The session emphasized innovative approaches for achieving sustainable metropolitan development and facilitated a valuable cross-regional exchange of strategies and best practices.





Session “Challenging the integrated urban development in greater metropolitan regions”

Participation of Sōichirō Takashima, Mayor of Fukuoka City, at WUF12

Sōichirō Takashima, the Mayor of Fukuoka City, presented Fukuoka’s innovative approaches to urban sustainability and resilience. He highlighted the city’s successful initiatives in areas such as smart city development, climate adaptation, and community-centered urban planning.

Mayor Takashima emphasized how Fukuoka has leveraged advanced technology to enhance urban services, promoted green infrastructure, and cultivated international collaborations to tackle shared urban challenges. His participation not only reinforced Fukuoka City’s commitment to sustainable urban development but also inspired discussions on replicating these strategies in cities worldwide.



Participation of Sōichirō Takashima, Mayor of Fukuoka City, in WUF12

Egypt and Japan Academic Collaboration Day at Heliopolis University, Cairo, Egypt, 16th December 2024

The Egypt and Japan Academic Collaboration Day at Heliopolis University on December 16th was a resounding success with great impact after culminating two months of dedicated planning.

It was a privilege to cooperate with a team of experts and JSPS alumni and Japanese institutions to implement this event that fostered academic collaboration and cultural understanding in addition to present different ways of cooperation and opportunities for the students and staff members of HU

with Japanese partners. It had been highlighted the different opportunities for academic collaboration between Japan and Egypt, and introduce Japanese culture and initiatives.

This event was under the auspices of Heliopolis University President, Professor Gouda Helal, and the administration of the Faculty of Organic Agriculture, led by the Dean of the Faculty, Professor Ayman Hafiz Eissa, and Professor Reham Fathey Aly, Head of the Organic Crop Production Department and Vice Dean for Postgraduate Studies and Scientific Research.

Heliopolis University is a pioneering institution in Egypt dedicated to sustainable development through its five faculties: Pharmacy, Physical Therapy, Business Administration, Engineering, and Organic Agriculture. The university actively promotes efforts to achieve the Global Sustainable Development Goals (SDGs) through its diverse educational programs and multiple international projects.

Distinguished joint Egyptian-Japanese research projects were also presented by: Professor Gad El-Qady, Professor of Geophysics at the National Research Institute; Professor Adel El-Beltagy, Professor of the Faculty of Agriculture, Menoufia University; Professor Ibrahim Tantawi, Professor of the Faculty of Science, Menoufia University; and Professor Tamer Nasr, Professor of the Faculty of Pharmacy, Helwan University.

The Egypt and Japan Academic Collaboration Day witnessed broad participation from institutions supporting grants and research projects, such as MEXT grants provided by the Japanese Embassy, JSPS alumni association in Egypt, the JSPS Cairo Research Station, Kyushu University alumni association - Cairo Office, JICA, and the Japanese Foundation by featured presentations from leading researchers and highlighted commitment to sustainable development advanced approaches of collaboration in science.



We were particularly pleased by the strong engagement of students, post-graduates, researchers, and faculty staff members at Heliopolis University and their interest in Japanese universities and culture, as evidenced by the vibrant atmosphere and full of energy at the outdoor booths! Despite being busy with exams approaching of the visited students. We are optimistic about the future of the partnership between Japan and Heliopolis university and build a fruitful relationship.



JSPSAAE Annual conference in Collaboration with the National Research Centre (NRC), Cairo, Egypt in Celebration of 40th Anniversary of JSPS Cairo Research Station.

By Prof. Ibrahim Tantawy

On February 18-19, 2025 the JSPS Alumni Association in Egypt held its annual international conference and general assembly Meeting at the National Research Centre in collaboration with NRC, Advanced Materials Technology and Mineral Resources Research Institute. This year's conference was particularly special, celebrating the 40th anniversary of the JSPS Cairo Research Station. The event was honored by the presence of Prof. Mizumoto Tetsuya, Executive Director of JSPS Tokyo Headquarters; Ms. Akie Hoshino, Director of the International Program Department at JSPS Headquarters, Tokyo; and Mr. Yusuke Suzuki, representative of the Embassy of Japan in Egypt. Their attendance underscored the strong spirit of academic collaboration and the pivotal role played by the JSPS Cairo Research Station and the JSPS Alumni Association in Egypt (JSPSAAE) in fostering Japan–Egypt scientific and research ties. At the opening ceremony, welcome Speeches

by Prof. Sherif Zain El-Abedin, Conference Chairman and Prof. Ibrahim El Tantawy, JSPSAAE President were given. Then, the following three distinguished guests gave congratulatory remarks:

Prof. Mamdouh Moawad, President of the National Research Centre (NRC), Prof. Mizumoto Tetsuya, Executive Director, JSPS, Tokyo Headquarters and Mr. Yusuke Suzuki, Embassy of Japan in Egypt. The conference focused on the theme: "Advanced Materials and Mineral Resources for Future Industries" with more than 300 distinguished scientists and participants from Egypt and abroad.

More than a hundred research papers were presented at the conference that discussed advanced materials and their several applications in the fields of energy, environment, electronics, glass, ceramics, biomaterials and medicine. Additionally, a special session was held on geological and geophysical applications. Furthermore, a training course was held in cooperation with the International Center for Diffraction Data (ICDD) and presented by its director; Professor Thomas Blanton, USA. Representatives from the JSPS Tokyo Headquarters, Prof. Mizumoto Tetsuya, Executive Director, Japan Society for the Promotion of Science, Tokyo along with Ms. Akie Hoshino, Director of International Program Department, JSPS Headquarters. The conference served as a platform for students, researchers, academic scientists, and industry experts to exchange knowledge and expertise in materials science and natural resources. A highlight of the event was the participation of three distinguished professors from Japan as well as eminent scientists from Egypt, US and Saudi Arabia. The following three eminent professors were invited by JSPS to the event:

- ◆ Prof. Yasushi Nishihara (Okayama University)
- ◆ Prof. Masaru Tanaka (Kyushu University)
- ◆ Prof. Shigenori Mitsushima (Yokohama National University)

They delivered insightful lectures and engaged in meaningful discussions with young researchers and students. Also they visited Egypt-Japan University of Science and Technology (EJUST), National Institute of Standards (NIS), NRC and delivered lectures, expressing their gratitude for the fruitful research exchanges, emphasized their enthusiasm for further advancing international collaborations between Egypt And Japan.

Additionally, a special opening session introduced the JSPS programs by Ms. Akie Hoshino, Director of International Program Department, JSPS Headquarters Tokyo, providing valuable insights into available funding opportunities international collaborations, and academic exchange programs. In this special session Prof. Eiji Nagasawa, Director of JSPS Cairo Research Station presented a successful model of bilateral cooperation between Egypt and Japan through the "SATREPS Project in the New Valley," followed by Prof. Gad El Qady, vice president of the alumni and a former director of The National Research Institute of Astronomy and Geophysics (NRIAG) who introduced the "JSPS Alumni in Egypt: Objectives and Activities. At the conclusion of the conference, the annual General Assembly of the alumni was held to review the year's activities and the leading role of the association in the Egyptian scientific community, fostered closer ties among alumni, promote the research collaboration network as a platform for exchanging ideas, sharing research outcomes, and planning future collaborative activities such as on-site visits to universities and research centers to disseminate the JSPS programs, encourage young researchers to benefit from the Alumni activities to transfer of knowledge and experience across all scientific disciplines from specialized members of the Association. In addition, facilitating networks among Alumni members and their Japanese host Professors and implementing the annual JSPS BRIDGE Fellowships Program for the benefit of their members.

support STEM projects of creative and innovative ideas for high school students, publishing annual newsletters, Horus, highlighting activities and achievements of the alumni along the year.

Last but not least, We extend our deepest thanks and appreciation to NRC for hosting our event, JSPS and Prof. Naoko Fukami former Director of JSPS Cairo research station for support and to all those who contributed to the successful planning and realization of this symposium. Hopefully, the Alumni will continue growth and success in its role as a lighthouse of science, technology and culture in the Egyptian scientific community.





JSPS Cairo station and JSPSAAE Activities

During the fiscal year 2024, JSPS Cairo research station and JSPS AAE had enjoyed hosting different activities between seminars, academic visits, here we are reporting these activities.

During Feb 2024, Prof Masaru Tanaka pay Visit to Egypt where he visited Badr University, and made presentation entitled: Control of cell /protein / materials interactions by interfacial water states.



During the visit, he also visited Future University and gave a talk entitled: Design of Multi-Functional Medical Materials Based on the Intermediate Water Concept. Then he visited Cairo Museum and enjoyed the lunch on a Nile cruise in Cairo.





On February 17th, Prof. Shigenori Mitsushima attended the Japan–Egypt Academic Symposium at Future University immediately upon his arrival from the airport, where he delivered a speech titled “Challenge Toward Carbon Neutrality of the ACERC at Yokohama National University.”

On February 18th, he participated in The 5th International Conference of the Advanced Materials Technology and Mineral Resources Research Institute, held in collaboration with JSPS, and delivered a speech entitled “Carbon Neutral Future – Outlook for Japan and the Importance of Electrolytic Hydrogen Production.”

On February 19th, he delivered a lecture at the Egypt–Japan University of Science and Technology (E-JUST) in Borg Al-Arab, where he also visited several laboratories and research facilities. On February 20th at 11:00 AM, Prof. Mitsushima gave a speech titled “A Techno-Economic Analysis of a Carbon-Neutral



Energy System for Japan Using Hydrogen Technologies” at the Conference Hall, Faculty of Engineering Administration Building, Al-Azhar University. After the lecture, he visited a number of laboratories and held discussions with research groups working on energy storage materials and hydrogen energy.

During July 24, We held the 40th-anniversary event of the JSPS Cairo Research Station at the Ambassador's residence. where Dr. Naoko Fukami, Director of the JSPS Cairo Research Station gave speech as follow:

"Thank you all for gathering here today. I will begin the history of the JSPS Cairo Station.

JSPS is a government academic promotion organization that has existed since before World War II. After it, aiming to internationalize academics through area studies, we established our first overseas branches in Nairobi and Tehran in 1965. This legacy is reflected in the word "Station."

Following the Iranian Revolution in 1979, we moved to Ankara and then Cairo. Initially, the Cairo Station utilized a hotel in Dokki during the first and the second director. The current Zamalek office started in 1986. Using the third floor, the reception room as the office.

In 1999, we established the independent office at the ground floor. Also in 1999, we obtained official

status for the Station through an academic agreement with ASRT, although it is regrettable that it became ambiguous due to subsequent circumstances on the Japanese side. Since the first director, the director was appointed almost yearly until 2005, when we transitioned to a

long-term dispatch system. In 2007, we established the Egypt Alumni Association. And in 2009, we signed an MOU with the Egyptian Ministry of Higher Education. Egypt has faced significant challenges since 2011, but the JSPS Cairo Station has continued its activities by Director Hasegawa.

My assignment began in April 2015. Despite political turmoil postponing the 30th-anniversary symposium, we managed to hold it at Cairo University in January 2016.



Over the past ten years, we have organized and supported various symposiums, visited universities from Aswan to Alexandria for JSPS program briefings, and deepened our interactions with many researchers.

Today, thanks to the kindness of Ambassador Oka, we are able to hold this 40th-anniversary reception and meet all of you.

Furthermore, in October, we will co-host a workshop with Kyushu University, and in February, an international conference with NRC, both positioned as part of the 40th-anniversary projects.



I would like to extend my heartfelt thanks to Ambassador Oka,

First Secretary Hara, who is leaving today, and Information and Culture Center Director Ito.

I hope to seek your support to ensure that the Cairo Research Station continues to fulfill its role in promoting academic exchanges for many years to come."

JSPSAAE message for the 40th Anniversary of JSPS Cairo office:

Good evening,

Your Excellency, Ambassador, Oka Hiroshi, the Japanese Ambassador to Egypt,

Dear Prof. Naoki Fukami, Director of Japan Society for the Promotion of Science (JSPS) Cairo Research Station.

Dear honorable guests, distinguished Alumni colleagues,

On behalf of the Japan Society for the Promotion of Science Alumni Association in Egypt (JSPSAAE)

I extend my thanks and appreciation to His Excellency Ambassador Oka Hiroshi for his invitation and hospitality.

On this occasion, I would like to express my sincere congratulations to Prof. Naoko Fukami for celebrating the 40th anniversary of the establishment of JSPS Cairo Research Station. The Station was established in 1984 while the JSPSAAE was established in 2008. Since these dates, we have encouraged and supported Egyptian researchers at universities and research centers to promote collaboration between Egypt and Japan to transfer and localize Japan's expertise and technology. We hereby recognize that scientific and technological innovation is the key to Egypt economic revitalization.

The Alumni obtained formal recognition by the Egyptian government as a legally chartered Non-Governmental Organization (NGO) under the umbrella of the Ministry of Social Solidarity. The association's executive body and board of directors have been elected via regular general assembly in free, fair, and transparent elections.

The leading role of the Association in the Egyptian scientific community is being boosted through various scientific activities, conferences and on-site visits to universities and research centers to disseminate the JSPS programs. Also, we encourage young researchers to benefit from the Alumni

activities. This is to be accomplished through the transfer of knowledge and experience across all scientific disciplines from specialized members of the Association. Also, eminent scientists are invited annually from Japan and Egypt to the regular annual Alumni International Conference. The Association has played a pioneering role in facilitating networks among Alumni members and their Japanese host Professors. This comes in addition to implementing the annual JSPS BRIDGE Fellowships Program for the benefit of their members. We also support STEM projects of creative and innovative ideas for high school students and empower young women and girls in STEM. Finally, we publish regular Alumni annual newsletters, Horus, highlighting activities and achievements of the alumni.

We are looking forward to more collaboration and hope to see the cooperation of Egyptian-Japanese academic and research communities grow even stronger!

Last but not least, I would like to extend my deepest thanks and appreciations to His Excellency Ambassador Oka Hiroshi for his support for the Alumni. We are also grateful to Prof. Naoko Fukami for the continued financial support without which we couldn't have been able to accomplish our mission. Hopefully, the Alumni will continue growth and success in its role as a lighthouse of science, technology and culture in the Egyptian scientific community. It is really a means of fostering friendship, collaboration, and understanding between Egypt and Japan.

Thank you very much for your kind attention!

On July 28, together with a JICA expert, Kyushu University Office we visited Suez Canal University to participate in an event organized by Dr. Gamal El Masry, a JSPS alumni member. The event was focused on introducing various scholarships and programs for research and study in Japan. Before the event, we had a meeting with the university's president Dr. Nasser Said Mandour and vice-president Dr. Mohamed Saad Zaghloul, where they told us that many members of Suez Canal University have had experiences in Japan and they expressed their strong desire to further deepen cooperation with Japan. Located in Ismailia, Suez Canal University is an important institution situated at a global crossroads. Moving forward, we will continue to actively promote the collaboration between researchers in Japan and Suez Canal university through various events.





Sept 12: at Theodor Bilharz Research Institute, a workshop on "Endoscopic Submucosal Dissection for Early Gastrointestinal Lesions" took place. Director of JSPS Cairo Research Station, Dr. Fukami, gave a presentation about JSPS and its programs, while Prof. Gad El-Qady, Former President of the National Research Institute of Astronomy and Geophysics, Vice President of JSPSAAE, spoke about the activities of the JSPS Alumni Association in Egypt.

Before the workshop, a meeting was held with Acting Director, Prof. Mohamed A. Shemis, who expressed that many young researchers are keen to pursue training and research opportunities in Japan. Dr. Fukami introduced JSPS fellowship programs as a pathway for this.

Dr. Ohata Ken, Head of Endoscopy at NTT Medical Center in Japan, was invited to the workshop, where he emphasized the immense potential for Japan's medical expertise to contribute globally. Through its various international programs and conferences, JSPS remains committed to spreading Japanese technologies and knowledge worldwide.





On September 19th, the JSPS Cairo Research Station hosted a special commemorative symposium in celebration of its 40th anniversary, titled "Archaeological Project by Japanese Teams in Egypt," co-organized with the Embassy of Japan in Cairo. We had the honor of welcoming three distinguished scholars, Dr. Sakuji Yoshimura, Dr. Akiko Nishizaka, and Dr. Hiromasa Kurokouchi, who have all been leading archaeological research and excavation in Egypt for many years.

Thanks to the gracious hospitality of Ambassador Oka, the symposium was held at the Ambassador's residence. The speakers reflected on the vast history of ancient Egypt from the academic perspective of archaeology, sharing their experiences and challenges in carrying forward their work into the future.

While the Japanese archaeological team has been active in Egypt for nearly 60 years, the JSPS Cairo Research Station is marking its own milestone of 40 years this year. With renewed commitment, we aim to continue strengthening academic exchanges between Japan and Egypt, as well as the broader MENA region, for the future.

On September 28th, JSPS Cairo Research Station was invited to the 3rd International Conference of Pharmaceutical Sciences at Misr University for Science and Technology (ICPS-MUST) Egypt, themed "Industrial Pharmacy: From Bench to Market," held at the MUST Opera House. We had the opportunity to introduce JSPS and its programs to many researchers and young students who participated in the conference. It was a lively event, with



poster presentations running in parallel and Professors including those from AUC and GUC showcasing their cutting-edge research. Special thanks to Prof. Maha Ali Eissa, the vice dean for postgraduate studies and research, College of Pharmacy, and the Vice Chair of the conference for the kind invitation, and Prof. Marwa Mohanad, Head of the Biochemistry Department at the College of Pharmaceutical Sciences and Drug Manufacturing-MUST. We look forward to further collaborations!



On October 12, 2024, Kyushu University hosted the KYUDAI NOW Forum in Cairo, in collaboration with JSPS Cairo Research Station and JSPS Alumni Association's in Egypt. The forum was honored by the attendance of H.E. Oka Hiroshi, the Ambassador of Japan to Egypt, This was the first KYUDAI NOW event held in Egypt or the MENA (Middle East and North Africa) region. It was organized as part of the Japan-Egypt Academic Cooperation Forum, co-hosted by Kyushu University's International Affairs Division's J-MENA Project, the Cairo Office, and the Japan Society for the Promotion of Science (JSPS) Cairo Research Station. The forum brought together over 100 participants, including Kyushu University and JSPS alumni, as well as individuals who have studied in or are interested in studying in Japan.

During the morning's opening ceremony, the event began with a welcome address by Vice President Shuji Shimizu of Kyushu University, followed by guest addresses from His Excellency Hiroshi Oka, Ambassador of Japan to Egypt; Professor Hany Helal, former Egyptian Minister of Higher Education and Scientific Research; and Professor Mahmoud Sakr, Cultural and Scientific Counsellor at the Embassy of Egypt in Japan. Following this, the JSPS Cairo Center celebrated its 40th anniversary with a commemorative event that included remarks and an introduction to the center by Director Naoko Fukami, along with research presentations by Professors Gad El-Qady, Mohamed Abulhassan, and Ibrahim Tantawy, who are involved in JSPS-funded research projects.

We highly appreciate the support of Prof. Shimizu Shuji, Vice president of Kyushu University and Prof. Fukami Naoko, the director of the JSPS Cairo Research Station. We also thank the academic community of Kyushu University especially Cairo office for their efforts to make this forum successful!



The 1st "JSPS Cairo Research Station- Soft Skills and Bridging Cultures Session"

Unlike traditional sessions introducing JSPS programs or research presentations, this session is designed for undergraduate students, graduate students, and early-career researchers who aim to study or conduct research in Japan. In a more casual setting, this event will focus on essential soft skills for researchers beyond your specialized knowledge, as well as personal experiences of studying and researching in Japan. We warmly invite everyone interested to join!

This session will be held in a hybrid format, with both in-person attendance and online streaming via Zoom. Please note that in-person attendance is limited. Those unable to attend in person will receive a Zoom link to join the session virtually.



Nov 2024 NRC successfully held the 2nd international symposium in cooperation with JSPS Cairo Research Station under the theme Artificial Intelligence, Virtual Reality, and Promising Applications in Health sectors.

We would like to express our sincere gratitude to everyone involved in the symposium. We are especially grateful to Dr. Walaa, a JSPS Alumnus and the special coordinator of the symposium. We look forward to everyone's success.



On December 3rd, two representatives from the Tokyo Headquarters, along with the Director of the JSPS Cairo Research Station, held fruitful discussions with JSPS Alumni members in Egypt. The meeting focused on exploring ways to further enhance bilateral joint research in the future. We sincerely

appreciate the participation and valuable contributions of everyone involved in this meaningful exchange.





At the end of January, we successfully held the 2nd and 3rd sessions of the Soft Skills Module workshops. These workshops aimed to introduce JSPS to young students and researchers who will lead the future, while also deepening their understanding of Japanese academic culture, systems, and practices through inspiring lectures by Prof. Terano and Prof. Kikuchi.

We hope that these young researches and students will contribute to the further development of academic exchange between Egypt and Japan through their future studies and research in Japan.

Our sincere gratitude goes to Director Dr. Fukami and Dr. Walaa for their dedication and support in making this project a success.



March 2025: Today, as the Cairo Tōmonkai event, Professor Fukami shared her experiences and reflections on her 10-year journey as the researcher and Director of the JSPS Cairo Research Station.



تدعوكم لجنة الثقافة العلمية
بالمعهد القومي للمعايرة إلى حضور سيمينار بعنوان:

**Novel Organic Semiconducting Materials
for Precise Device Applications**

ويلقي السيمينار

Prof. Dr. Yasushi Nishihara
Research Institute for
Interdisciplinary Science,
Okayama University



12:00 PM
20/02/2025
قاعة مبنى شعبية
مترولوجيا الأطوال
وهندسة الدقة
بالدور الأرضي



The lecture will explore advanced methodologies for the synthesis of innovative organic semiconducting materials. Furthermore, it will cover their applications, with a focus on precise metrological techniques for accurate measurement.

سجل الآن



Register now to secure your spot.

Editorial

Dear our respected readers, it is with very great honor to present this new issue, Vol 12, of JSPSAAE newsletter “HORUS” covering broad of activities of JSPSAAE as well as JSPS Cairo research station. During the fiscal year 2024 a numerous of activities been published on our social media and covered in this new issue of HORUS. During this period of time, many topics been discussed.



This issue comes with the change of the director of JSPS Cairo research station where Prof. Naoko Fukami, the former director had achieved a lot of activities during her term of directorship to the office. She supported the Alumni activities tremendously during her stay. The editorial board of hours as well as JSPSAAE wish her a very successful future in her academic and social life. In addition, a lot of activated had been witness by H.E. Oka Hiroshi, the former Ambassador of Japan to Egypt,

who are very sincerely encourage our alumni to tackle the bi-lateral cooperation between Japan and Egypt in science and technology and he usually support and stand behind our meetings. Much appreciation are due to Ambassador Oka Hiroshi for his continuous support. We would also welcome H.E. Ambassador Fumio Iwai, the new ambassador of Japan to Egypt, and will keep sincere cooperation and discussion with H.E. to assure a wonderful, successful and rich bi-lateral relation between the two nations.

I acknowledge the cooperation of the new board of JSPSAAE and all fellow who participate in our activities which reflect our good intention of extending the joint cooperation with all Japanese institutions.

Best regards and looking forward a new venue for future activities to be published in HORUS.

Gad El-Gady



During JSPSAAE board meetings

JSPSAAE Board Members (2023-2026)



Prof. Ibrahim Tantawy
President of JSPSAAE
Prof. of Organic & Medicinal chemistry, faculty of Science, El-Menoufia University.



Prof. Abdel-Hamid Kamel Osman, Prof. of Cell and Tissue Biology, Faculty of Veterinary Medicine, Suez Canal University.



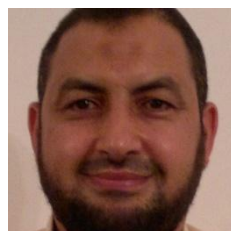
Prof. Gad El-Qady,
Vice President of JSPSAAE
Editor of JSPSAAE Newsletter.
Prof. of Geophysics,
National Research Institute of Astronomy & Geophysics (NRIAG).



Prof. Ahmed Saleh,
Prof. of Applied Geophysics,
National Research Institute of Astronomy & Geophysics (NRIAG).



Prof. Adel Abdel-Rahman,
General Secretary of JSPSAAE,
Prof. of Organic Chemistry, Fac. Of Science, El-Menoufia University.



Prof. Samir ABDELGALEIL
Prof. of Agriculture,
Alexandria University.



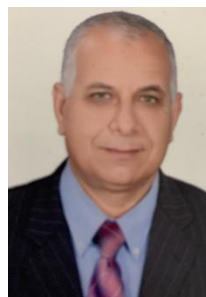
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Treasurer of JSPSAAE
Geology Department, Faculty of Science, El-Menoufia University, Egypt.



Prof. Salah Salman
Faculty of Engineering in Cairo
Mining and petroleum
Engineering Department
Al-Azhar University



Prof. Mohamed S. El-Deab
Professor of Physical Chemistry,
Department of Chemistry,
Faculty of Science, Cairo University



Prof. Hussain Sorour
Prof of Food Engineering and Postharvest Technology, Faculty of Agriculture, Kafrelsheikh University,



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