Industry, Innovation and Infrastructure

جامعة الأمير سلطان
PRINCE SULTAN
UNIVERSITY

CSC

Research and Innovation

Research at PSU has focused on developing innovative technologies and solutions that promote sustainable industrialization and infrastructure development. These research findings, technological advancements, and innovations have contributed toward SDG 9 achievement by PSU.

Zeinab A. Elhassan, 2023

Raed Bin Sadan, Yusuff Jelili Amuda 2023

Syed Shah Alam et al., 2024

Filippi, L. D., Mazzetto, S. (2024)

Fayez Alanazi, Mamdouh Alenezi, 2024

Silvia Mazzetto, et al, 2024

Rania Al-nawasir, et al. 2024

Mazzetto, S. 2024

Maitha Alghanmi, Yusuff Jelili Amuda 2024

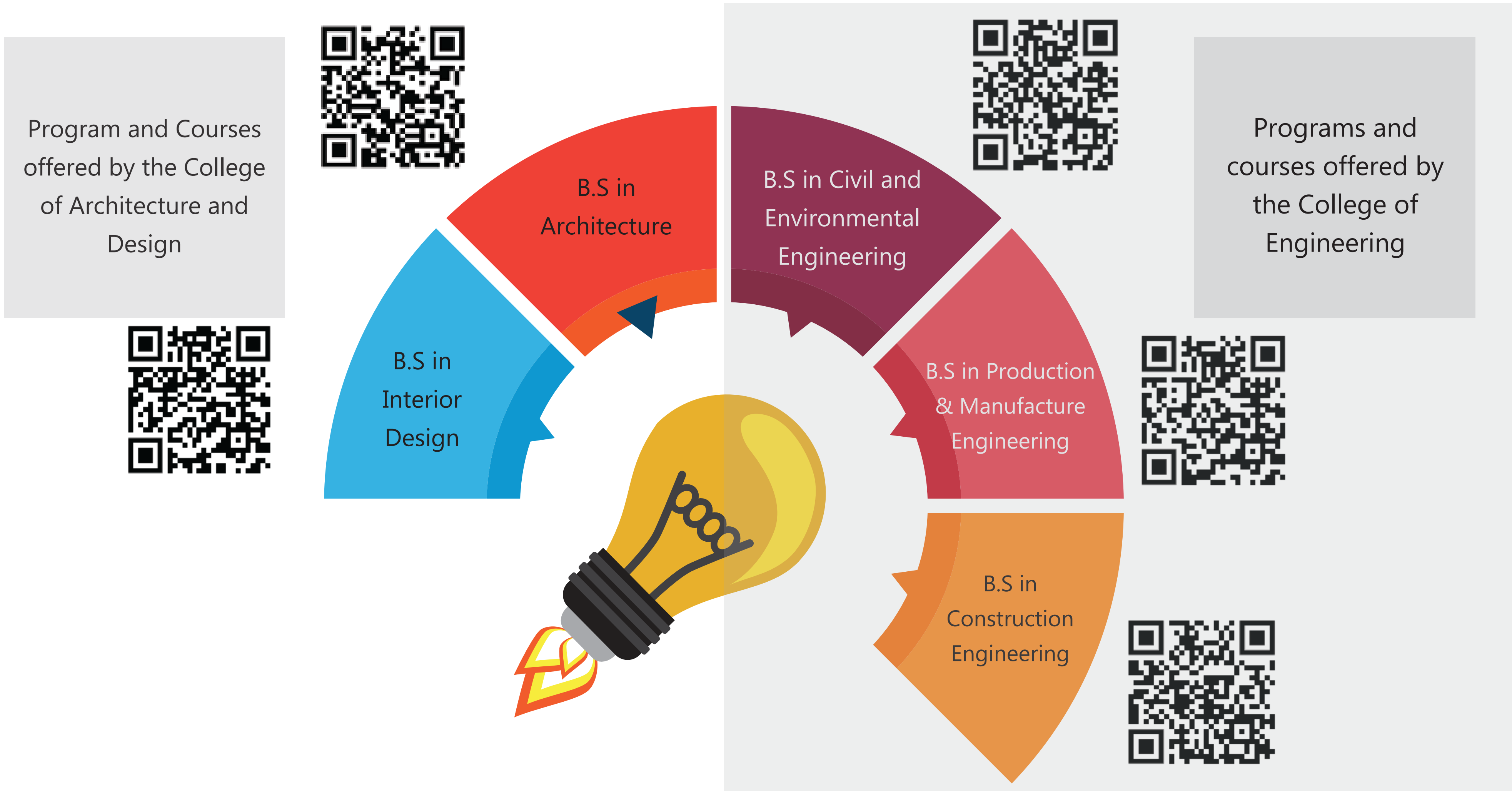
Musrat Gul Bhellar et al., 2024

Mahmud M. Jibril et al., 2024

Dwidar et al., 2023

Education and Capacity Building

PSU offers educational programs and courses related to industrialization, infrastructure development, and innovation.



Partnerships

PSU collaborates with industry, government agencies, international organizations and stakeholders to drive innovation and infrastructure development

Electrical engineering laboratories win funding grants from the Research, Development, and Innovation Authority (RIDA)

The Smart Systems Engineering Laboratory, as well as the Renewable Energy Laboratory in the Electrical Engineering Program at the College of Engineering, won funding grants from the Research, Development, and Innovation Authority (RDIA) on Wednesday, March 27, 2024. These funding grants for the development of research laboratories are a major shift for the college's laboratories and reflect the efforts made by members of the research laboratories in Upgrading these laboratories and improving the quality of their outputs in line with the country's efforts and Vision 2030.

Students from Riyadh Schools Explore Electrical Engineering Laboratories

During their visit to Prince Sultan University, student groups from various schools had the opportunity to explore the university's academic environment. The research laboratories in the Electrical Engineering Program hosted these student groups, providing them with insights into current and future research activities conducted within the university's research centers.

Technology Transfer

PSU is engaged in technology transfer activities, facilitating the adoption of sustainable technologies by industries.

WORKSHOP ON AI TECHNOLOGY IN MEDICAL IMAGING AND ASSISTIVE DEVICES, College of Engineering workshop, January 31 2024.

The Smart Systems Engineering Laboratory (SSEL) in the Electrical Engineering Program at Prince Sultan University is organizing a scientific workshop on artificial intelligence in imaging and assistive devices. The lecture will be held remotely on Wednesday, January 31, 2024, between 12 and 1 PM. Dr. WAHYU RAHMANIAR from Tokyo Technology Institute in Japan will deliver this lecture. The scientific lecture will discuss the revolution of artificial intelligence in healthcare by improving medical imaging and assistive devices. Artificial intelligence enables faster and more accurate analysis of X-rays, MRIs, and CT scans, enhancing the detection and diagnosis of diseases. In addition, artificial intelligence improves assistive devices' functions, adapting to users' needs and improving the patient's overall quality of life.

PLC Wiring and Programming

The goal of this workshop was to introduce the participants to the field of industrial automation and the most popular controller used in this field, which is programmable logic controllers (PLC). The workshop starts first by explaining the motivation behind using PLC over traditional relay logic control circuits. Then, the main components and the principal of operation of PLC will be explained with the focus on Schnieder PLC Modicon M241, which is the available setup for practical training. Finally, the participants will be involved in a hands-on training will they learn how to design a simple PLC program and how to diagnose it and run it on the PLC.

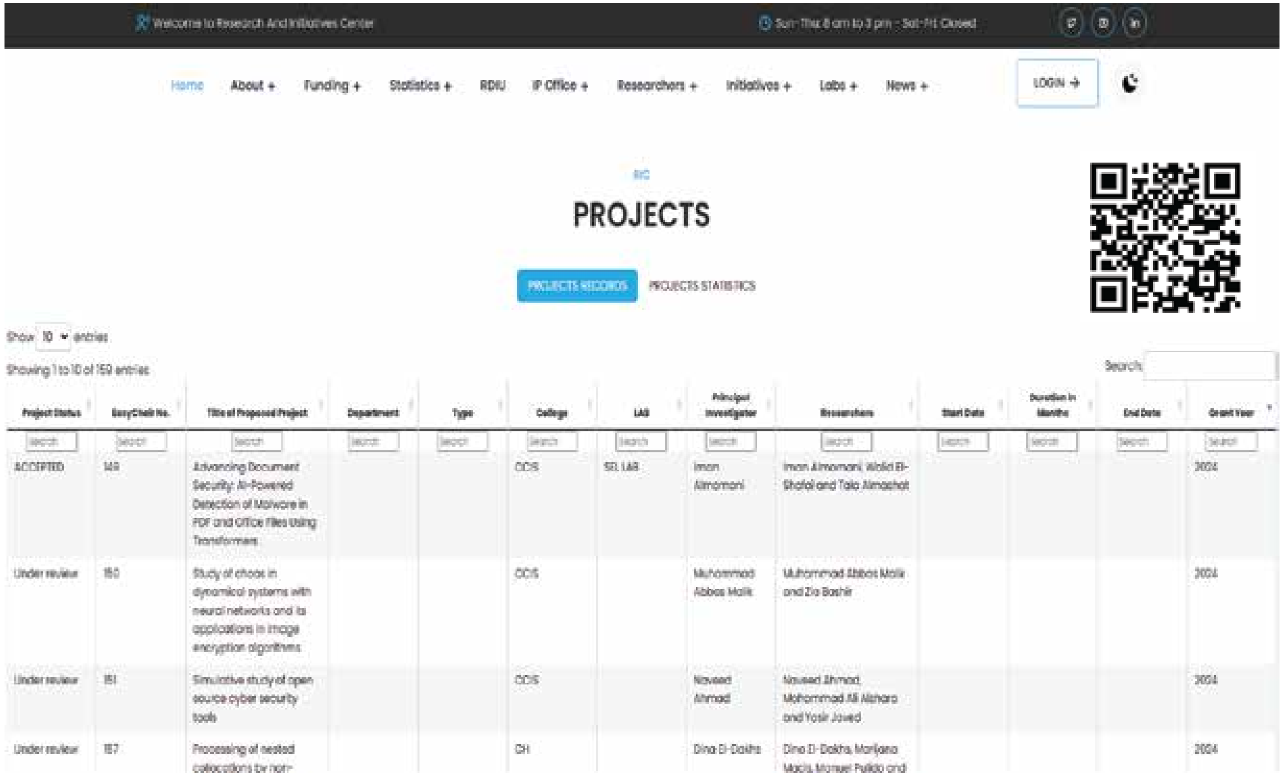
Workshop on soldering/de-soldering,

College of Engineering workshop (28th Feb 2024)

The smart systems engineering laboratory will hold a workshop for students on soldering/de-soldering electronic components. The workshop will cover the fundamental techniques, safety precautions, and troubleshooting methods of soldering.

Research Funding

PSU report on the allocation of research funding to projects and initiatives that align with SDG 9. This includes grants and investments in infrastructure-related research.



Project Status	EasyChair No.	Title of Proposed Project	Department	Type	College	LAB	Principal Investigator	Researchers	Start Date	Duration in Months	End Date	Grant Year
ACCEPTED	149	Advancing Document Security: AI-Powered Detection of Malware in PDF and Office Files Using Transformers			CCIS	SEL LAB	Iman Almomani	Iman Almomani, Walid El-Shafai and Tala Almashat				2024
Under review	150	Study of chaos in dynamical systems with neural networks and its applications in image encryption algorithms			CCIS		Muhammad Abbas Malik	Muhammad Abbas Malik and Zia Bashir				2024
Under review	151	Simulative study of open source cyber security tools			CCIS		Naveed Ahmad	Naveed Ahmad, Mohammad Ali Alzharo and Yasir Javed				2024
Under review	157	Processing of nested collocations by non-			CH		Dina El-Dakhs	Dina El-Dakhs, Marijana Macis, Manuel Pulido and				2024

SUSTAINABLE DEVELOPMENT GOALS

VISION 2030 رؤية
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

جامعة الامير سلطان
PRINCE SULTAN UNIVERSITY

Infrastructure Sustainability

PSU assesses the sustainability of its own infrastructure, such as campus buildings and facilities. These efforts are to reduce energy consumption, increase resource efficiency, and minimize environmental impact.

Architecture Students Shortlisted among the finalists for the "King Salman Charter for Architecture and Urbanism Award" (July 8 2024)

The Architecture Department at the College of Architecture and Design at Prince Sultan University is pleased to announce the nomination of two students in the shortlist of the top ten projects in the Student Design Projects track of the King Salman Charter for Architecture and Urbanism Award in its first edition. The two nominated projects are: 'Co Rise', designed by student Khuloud Al Harthi, and 'Abq Al Marakh', designed by student Huda Saeed Al Qahtani.

Sustainable Architecture LAB ,SEMINAR 07: INTEGRATING CLIMATE RESILIENCE INTO URBAN GREEN REGENERATION (May 19 2024)

Organized and presented by Dr. Monica Moscatelli

SALab Seminar

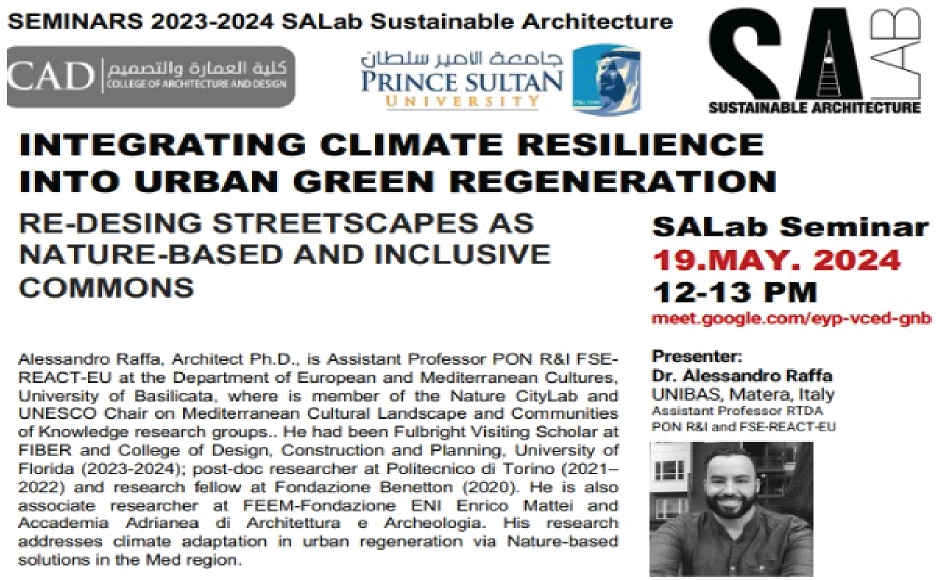
meet.google.com/eyp-vced-gnb

Presenter:

DR. Alessandro Raffa, Assistant Professor PON R&I FSE- REACT-EU at the Department of European and Mediterranean Cultures, University of Basilicata, Italy

INTEGRATING CLIMATE RESILIENCE

INTO URBAN GREEN REGENERATION



SUSTAINABLE DEVELOPMENT GOALS

VISION 2030 KINGDOM OF SAUDI ARABIA

PRINCE SULTAN UNIVERSITY

Architecture Sustainable Lab Seminar : EMPOWERING SAUDI ARABIA: OUR ROLE IN ADVANCING THE SUSTAINABILITY AGENDA TOWARDS CARBON NEUTRALITY BY 2060 (February 14,2024)

Saudi Arabia, a major oil producer, aims to achieve carbon neutrality by 2060 in line with the Paris Agreement, recognizing the necessity of sustainable development. This lecture underscores the pivotal roles of stakeholders – individuals, businesses, and government – in driving sustainability.

SA-LAB Seminar_02: Innovation in Sustainable Housing Design (December 06,2023)

Sustainable Architecture lab invites you to the second SA-Lab seminar, Academic Year 2023-2024. Presenter: Arch. Dina Mohamed Osama Mohamed Ali Hussein Shata Queensland University of Tech (QUT) School of Arch & Built Environment, Brisbane, Australia invites

Architecture Department Students Contributing in Redefining Riyadh's Landscape (January 23,2024)

Architecture students at Prince Sultan University are making waves by participating in a design competition suggested by the Riyadh Region Municipality for a key location in Riyadh, contributing to sustainable urban development. Guided by Dr. Amani Derbali and the Studio Design V instructors' team, the students recently explored the site, capturing crucial insights for their soon-to-come innovative designs.

The Communication and Networks department organized a field trip for its students to visit "The Future Energy Show KSA" exhibition (October 30,2023)

A group of communications and networks engineering embarked on an educational experience to visit the "Future Energy Exhibition in the Kingdom of Saudi Arabia." The event provided a platform for students to explore the latest developments in energy technologies. Students had the opportunity to interact with industry professionals and gain insights into cutting-edge technologies, including renewable energy sources, smart grid systems, and energy management solutions. The students left the exhibition with a vision of a future supported by clean and efficient energy systems.

In summary, PSU has played a crucial role in advancing SDG 9 and has contributed to reporting on the progress toward achieving this goal through its research, education, innovation, partnerships, and advocacy efforts. By actively engaging with SDG 9-related activities and sharing its experiences, PSU has helped drive sustainable industrialization, resilient infrastructure development, and innovation.

PSU's commitment to SDG 2030

Mission

PSU is committed to United Nations Sustainable Development Goals (SDGs) through effective institutional resource management, innovative teaching and learning, research, national and international partnerships, continuous studies, and outreach. PSU shall undertake the following activities: form higher and steering committees, evaluate each SDG, formulate and develop related SDG policies, conduct awareness campaigns to the PSU community, establish a sustainability office, identify the SDGs related to each college, program, and course, and lab centers at PSU, and implement sustainability-related initiatives.

Vision

Prince Sultan University strives to support Saudi Arabia's Vision 2030 and the United Nations Sustainable Development Goals (SDGs) by paving the way for higher education in KSA and Middle East.

Mission

Supporting the Saudi Arabia's Vision 2030 and the PSU's strategic directions, PSU aligns its mission with SDGs by providing quality education, sustainability initiatives, lifelong learning, scientific research, and community service

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