

GERMAN JORDANIAN UNIVERSITY  
SCHOOL OF NATURAL RESOURCES ENGINEERING AND MANAGEMENT  
SNREM  
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING



## Up-date From SNREM



**Dr. Arwa Abdelhay**

Vice Dean, School of Natural  
Resources Engineering and  
Management



# Schools and programs

- School of Computer Engineering and Information Technology
- School of Applied Medical Sciences
- School of Architecture and Built Environment
- **School of Natural Resources Engineering and Management**
- School of Applied Technical Sciences
- School of Languages
- School of Basic Sciences and Humanities
- School of Management and Logistic Sciences
- Talal Abu Ghazaleh Graduate School of Business Administration



# School Structure



## Natural Resources Engineering and management



### Bachelor Programs

Civil and Env. Eng

Energy Eng.

Civil Eng

Water and Env. Eng

Power Eng

Renewable Energy Eng

### Master Programs

Env. & Renewable Energy Eng.

Traffic Safety Eng.

Humanitarian WaSH

# MSC, Environmental and Renewable Energy Engineering

■ **Compulsory**

■ **Elective**

■ **Basic Courses**

- Advanced Renewable Energy Systems
- Advanced Energy Conversion

- Energy Efficiency
- PV – Photovoltaics
- Techno Economical Feasibility
- Wind Energy Systems
- Concentrated Solar Power (CSP)

Modeling, Simulation and Optimization of Energy and Environmental Systems

- Energy, Environmental and Water Laws and Policies
- Special Topics

**-Applied Mathematics for Engineers**

**-Special Topics**

- Meteorology and Climate Phenomenology

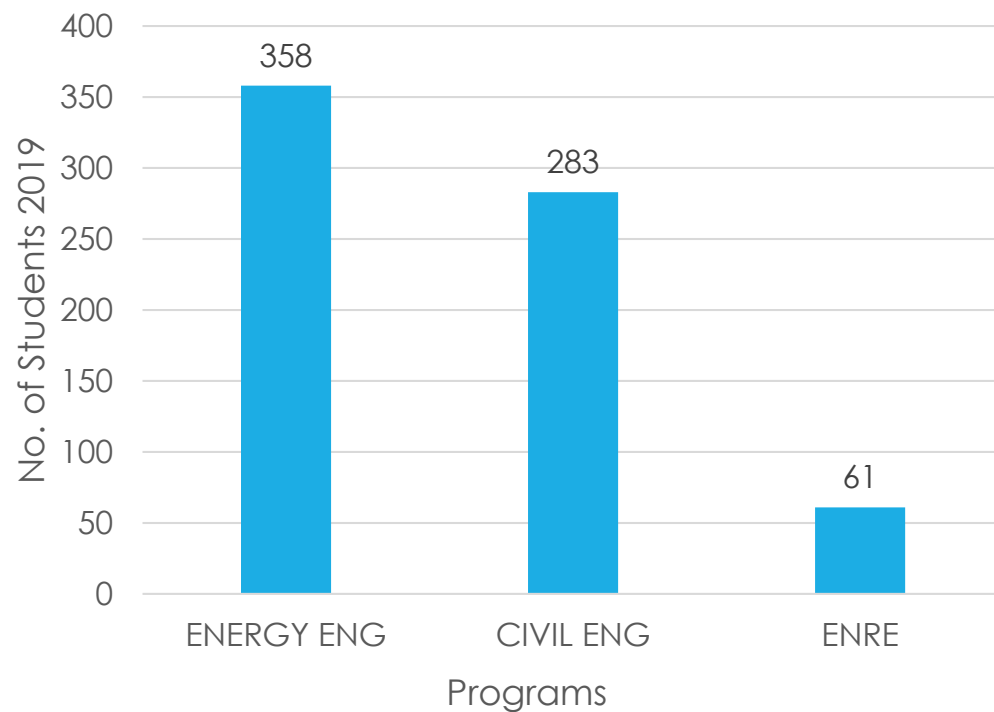
- Sustainability

- Environmental Biotechnology and Bioenergy
- Climate change and Predictability
- Advanced water and Wastewater Treatment
- Water, Energy, and Environment Management



# Statistics

## Students 2018/2019

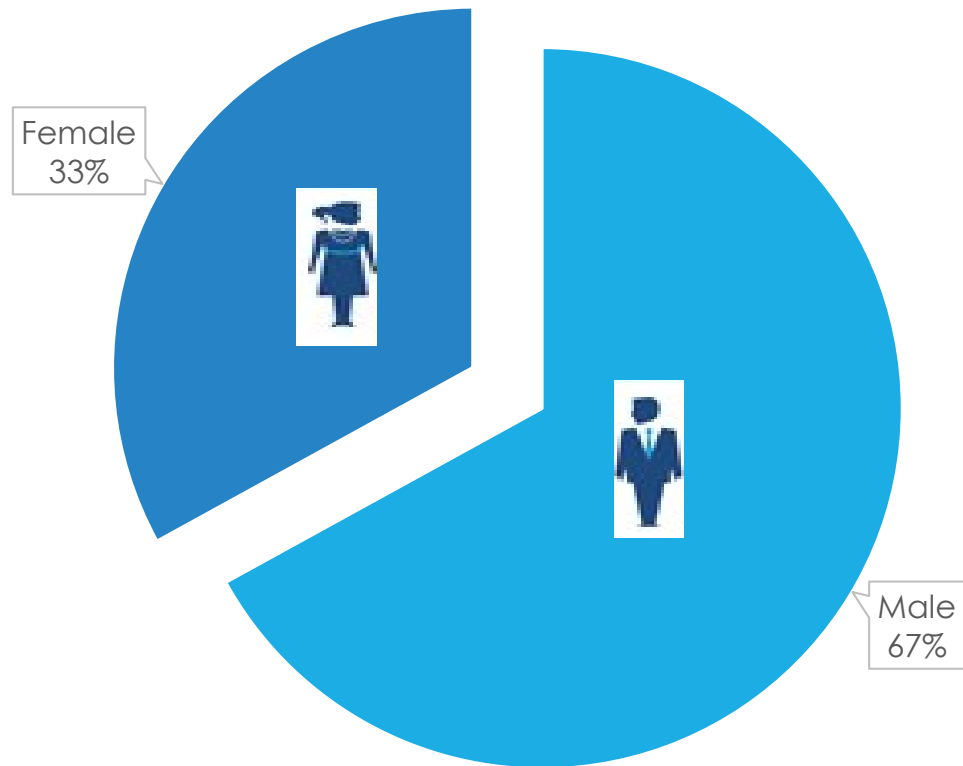


## Academic Staff 2018/2019

Number of Academic staff	PhD	Master s	Bachelor	
	21	1	1	
PhD Holders	Full Professor	Associ ate profess or	Assista nt Profess or	Industrial Professor
	4	6	11	1
Number of TA's	9			

<b>Total Number of newcomers</b>	<b>106</b>	<b>12</b>	<b>118</b>
Number of Graduates in the last Academic Year	32	25	57

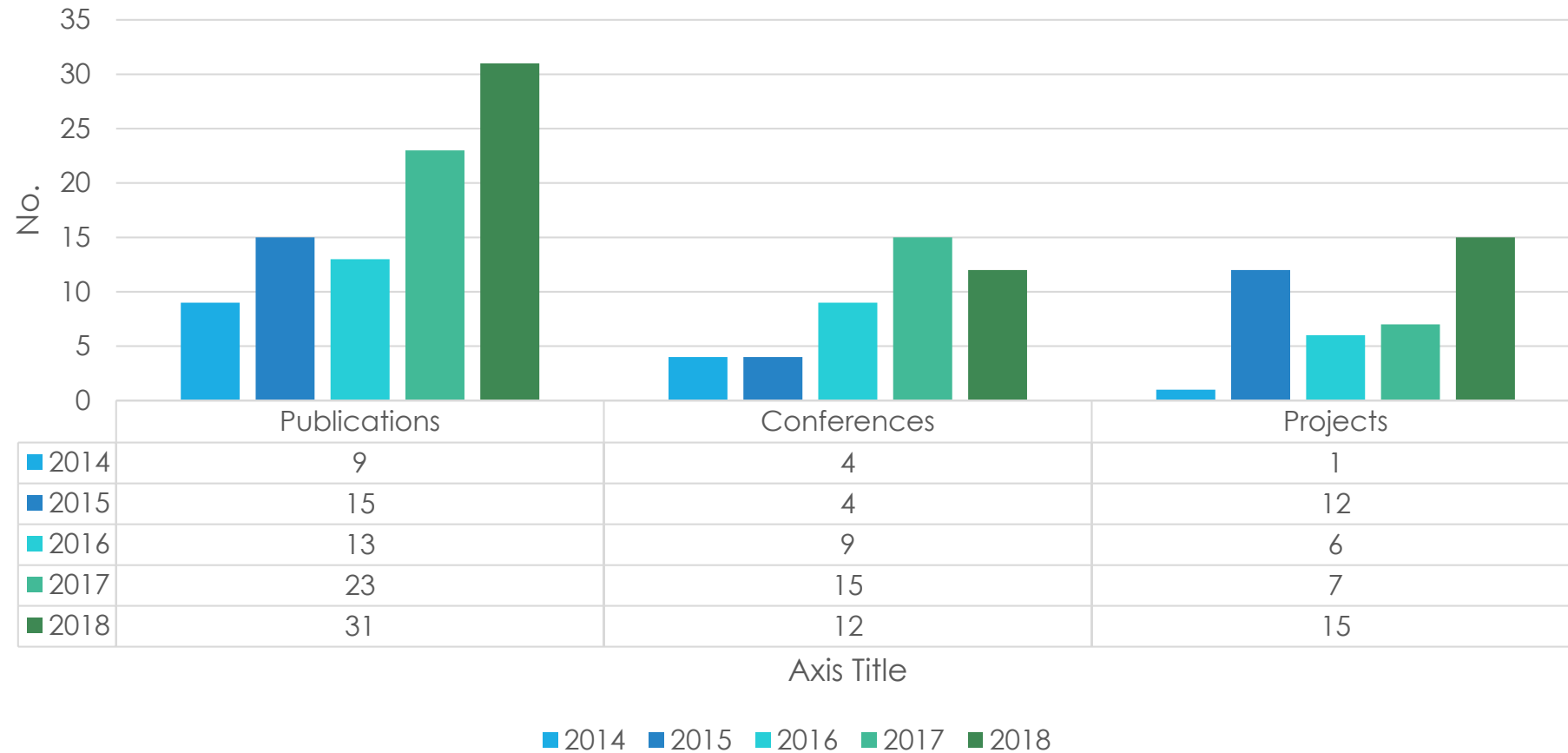
## Gender



■ Male ■ Female



# Academic contribution





# Applied projects at a glance

## MW PV power system – On campus

- Green campus
- Photo Voltaic System for Renewable Energy
- Micro-grid System
  - Load demand compensation
  - Smart load sharing
  - Islanding protocols under weak grid conditions



# SNREM PROJECTS

Projects	Total Number	Total Projects Budget	GJU share
International Projects	8	436818.6 € 820000\$	<b>436818.6 €</b> <b>360036\$</b>
National Projects	1	42956	
SEED fund Projects	4	187050	

# New Academic Programs/Projects

## **Project #1: Humanitarian WaSH Master Program**

Partners: GJU, Action Against Hunger (ACF), Bioforce Institute, Global Wash Cluster (GWC)  
Funding Agencies: OFDA/USAID, UNICEF

## **Project #2: Traffic Safety Master Program**

Partners: GJU, Gdansk politechnique, Valecial politichnique university, and Swedish university of science and technology  
Funding Agencies: ERASMUS+/MENS SAFE project

## **Project # 3: Integrated Water Resources Management Exchange program**

Partners: GJU, Koln Applied Science University, Germany  
Funding Agencies: DAAD

# Research Projects

## **Project #1: Water Security: Data to Decision (D2D)**

Partners: GJU, TH Koln, Technical University of Munich, Inter-Islamic Network on Water Resources Development and Management (INWRDAM), Freie Universität Berlin, Jordan University, Water, Energy and Environment Center

Funding Agencies: German Federal Ministry of Education and Research.

## **Project # 2: Petra flood management project**

Funding Agencies: The US Ambassadors Fund

## **Project # 3: Development and Utilization of Solar Driven Water Pumping and Desalination Units for Applications in Remote Areas of Jordan.**

Funding Agencies: Scientific Research Fund of the Ministry of Higher Education and Scientific Research of Jordan & German Jordanian University





# Research Projects

## **Project # 4: Waste To Positive Energy**

Partners: GJU, Rostock University, TU Hamburg, TU Dresden, Muta'a University, University of Jordan, Jordan University of Science and Technology.

Funding Agencies: Federal Ministry for Economic co-operation and Development (BMZ) through grant contract GIZ



## **Project # 5: Treatment of Olive Mill Wastewater Using DAF technology in Jordan**

Partners: GJU, Rostock University, TIA Company

Funding Agencies: DAAD





	Sponsor/Fund	Staff in GJU working in the area	Title
1	Seed Grant	Dr. Mohammad Smadi Dr. Nizar Abu Jaber and Dr. Qasem Abdelal	Setting up an experimental watershed hydrologic monitoring network in the Zarqa-Ma'in watershed
3	Seed Grant	Dr. Arwa Abdelhay	Destruction of Persistent Organic Pollutants (POPs) in wastewater using ultrasonic irradiation
4		Dr. Zakariya Dalalah	Power Electronics Group
5	Scientific Research Fund of Jordan	Dr. Nizar Abu Jaber	Base level and paleo-climate change in Petra: Management of a dynamic hydrological system
6		Dr. Mohammad Addous	Solar Cooling- Field Test German Jordan University (GJU)
7	DAAD/ Koln University	Dr. Munjed Alsharif Dr. Arwa Abdelhay	Network of Centers for Natural Resources and Development CNRD
8		Dr. Mohammad Addous	Biogas Production in Local Communities in Jordan
9	Research center in Julich, Germany	Dr. Qasem Abdelal	Model based development of strategies for sustainable water resources management in Jordan
10	Uand and (GJU)	Dr. Qasem Abdelal	Hyperspectral imaging utilization for water quality evaluations
11	European union	Dr. Qasem Abdelal	The hydrological impacts of ancient terracing practices in Jordan

# School Facilities/Infrastructure

## New Established labs

- **Civil Eng. Lab Complex: Construction Lab, Road Lab**
- **Simulation Lab: (16 seats)**

## Labs in process:

- **Solid Waste Lab: Sieves, Cutting mill, Composting kits**
- **DAF UNIT: Industrial Scale**
- **WaSH Lab**



EVERY ENDING IS REALLY JUST A NEW  
BEGINNING

