National Central University

	College of Sciences		
	Name	**Department**	**Research interests**
1	Fa-Kuen Shieh	Chemistry	Metal-organic Frameworks (MOFs) using green synthetic systems, i.e., water-based method or mechanochemical approach, in order to generate biocomposites such as enzymes@MOFs. Recently, we are developing a new filed of “MOF chemical biology” which is studying on behaviors and structural changes etc. of embedded biomolecules in MOFs.

	College of Engineering		
	Name	**Department**	**Research Interests**
2	Min-Chun Pan	Mechanical Engineering	1) sensing technology; 2) mechanical/biomedical signal processing; 3) condition monitoring/diagnostics and prognostics of mechanical systems; 4) medical devices design (diffuse optical imaging system, dental implant osseointegration assessing devices IMU-based rehab eng)
3	Li-Gang Lin	Mechanical Engineering	Nonlinear analysis (control, optimization, functional, and computational), state-dependent (differential) Riccati equation (SDRE, SDDRE), intelligent automation and system, fault detection and diagnosis, and robust and reliable control; with applications to aerospace (guidance, unmanned aerial vehicle), robotics (two-wheeled), circuit, bio-medicine (cancer treatment), and marine (autonomous underwater vehicle).
4	Chun-Jen Huang	Chemical and Materials Engineering	Polymer chemistry, biomaterials, antifouling materials, biocompatible materials, self-assembled monolayers, surface chemistry, surface analysis

	College of Electrical Engineering and Computer Science		
	Name	**Department**	**Research Interests**
5	Timothy K. Shih	Computer Science and Information Engineering	Deep Learning, HCI, Video Processing
6	Shih-Ching Yeh	Computer Science and Information Engineering	● IoT Tele-healthcare/medicine ● E- healthcare/medicine ● Neuro motor/cognitive rehabilitation engineering ● Intelligent Assessment/Diagnosis ● XR (VR/AR/MR) ● Wearable Multi-model Neuro Sensing
7	Yen-Wen Chen	Communication Engineering	● Wireless Communication Networks and Services ● Software Defined Networks (SDN) ● Machine Learning for Resource Allocation in LTE/5G/6G for Internet of Things (IoT) ● Cloud Computing
8	Chih-Lin Hu	Communication Engineering	● Data dissemination and network resource management in Mobile and Opportunistic Computing ● Consumer Communications & Networking (Home Networking/HomeCare) ● Internet/Web of Things (Traffic Engineering)

	College of Earth Sciences		
	Name	**Department**	**Research Interests**
9	Sheng-Hsiang Wang	Atmospheric Sciences	Aerosol and Radiation: • Aerosol radiative forcing/effect • Radiative transfer theory • Aerosol and radiation interaction • Aerosol optical and microphysics properties • Regional weather/climate modifications through aerosol effects Air Quality Remote Sensing: • Study of dust, haze, biomass-burning aerosols by using remote sensing technology • Ground-based lidar and sun-photometry measurements and data interpretation • Satellite remote sensing for air quality applications • Aerosol retrieval algorithm • Satellite data visualization Atmospheric Observation and Instrumentation: • Principle, error uncertainty, and data quality assessments of atmospheric observations

			• Field deployment and measurement planning • Instruments design • UAV relevant
10	Ping-Yu Chang	Earth Sciences	Geothermal resources, Groundwater, electrical resistivity imaging, electromagnetic geophysics, magnetotelluric method, tectonics, groundpenetrating radar
11	Li-Wei Kuo	Earth Sciences	Experimental Rock Physics, Tectonophysics, Geometrical Science
12	Chun-Hsiang Kuo	Earth Sciences	site effect, strong ground motion, engineering seismology
13	Loren C. Chang	Space Science and Engineering	■ Upper atmospheric physics ■ Space environment ■ Small satellites ■ Space system engineering ■ Space embedded systems ■ Spacecraft avionics
14	Cheng-Ling Kuo	Space Science and Engineering Atmospheric Electricity Lab	(1) The coupling process between lower atmosphere and upper atmosphere (2) Ground sprite campaign and space missions -- Low-light level CCD at NCU/Lulin observation site -- Low cost lightning detector

			-- High speed camera system for ground campaign Space Optics Lab: The development of scientific payloads for space missions (1) Airglow profile detector (2) Airglow imager (3) Hyperspectral imager (4) Proposed FUV instrument for Moon orbiter

	College of Health Sciences & Technology		
	Name	**Department**	**Research Interests**
15	Shu-Dan Yeh	Life Sciences/Health Sciences & Technology	Evolutionary Genetics—Genetic mechanisms underlying trait evolution; Sexual Selection—Trait evolution related to courtship behavior and female preference; Functional Genomics—Genes and regulatory changes for trait evolution
16	Yu-Hsiang Lee	Biomedical Sciences and Engineering	[1] Biomaterials [2] Nanomedicine [3] Drug Delivery/Controlled Release
17	Nianhan Ma	Biomedical Sciences and Engineering	Noncoding RNA functions in diseases
18	Shu-Chen Liu	Biomedical Sciences and Engineering	1. EBV in NPC progression 2. Single cell genomics (head and neck cancers) 3. Tumor microenvironment
19	Hui-Yin Chang	Biomedical Sciences and Engineering	proteomics, metabolomics, mass spectrometry, machine learning, data mining, multi-omics
20	Chi-Hung Juan	Institute of Cognitive Neuroscience	1. The neural mechanisms of vision, attention, working memory and cognitive control. 2. The development of cognitive functions in preschoolers/schoolers

			and its intervention. 3. The functional roles of exercise and cognitive training in cognitive development, decline and intervention. 4. The application of noninvasive brain stimulation (NIBS; e.g. TMS, tDCS, tACS etc) in Cognitive Neuroscience and Clinical Neuroscience (e.g. Depression, ADHD, AD and PD). 5. Dynamic and nonlinear analytical method (e.g. Hilbert-Huang Transform, HHT; Holo-Hilbert Spectrum Analysis, HHSA) and its applications in time-series brain signal analysis (e.g. EEG; MEG) 6. The integration of nonlinear analytical methods and EEG/NIBS in prevention, early detection and adaptive intervention in neuropsychiatric disorders (e.g. Depression, ADHD, AD and PD).
21	Chin-An Josh Wang	Institute of Cognitive Neuroscience	Eye movement control, pupillometry, arousal