



SCHOOL OF ENVIRONMENTAL STUDIES 环境学院



中国地质大学(武汉)



CONTENTS

目录



01
学院简介
INTRODUCTION



02
学科建设
DISCIPLINES



03
科研实践平台
SCIENTIFIC & PRACTICAL
PLATFORM



04
师资队伍
FACULTY AND STAFF



05
科学研究
ACADEMIA



06
人才培养
EDUCATION



07
国际合作与交流
INTERNATIONAL
COOPERATION & EXCHANGES



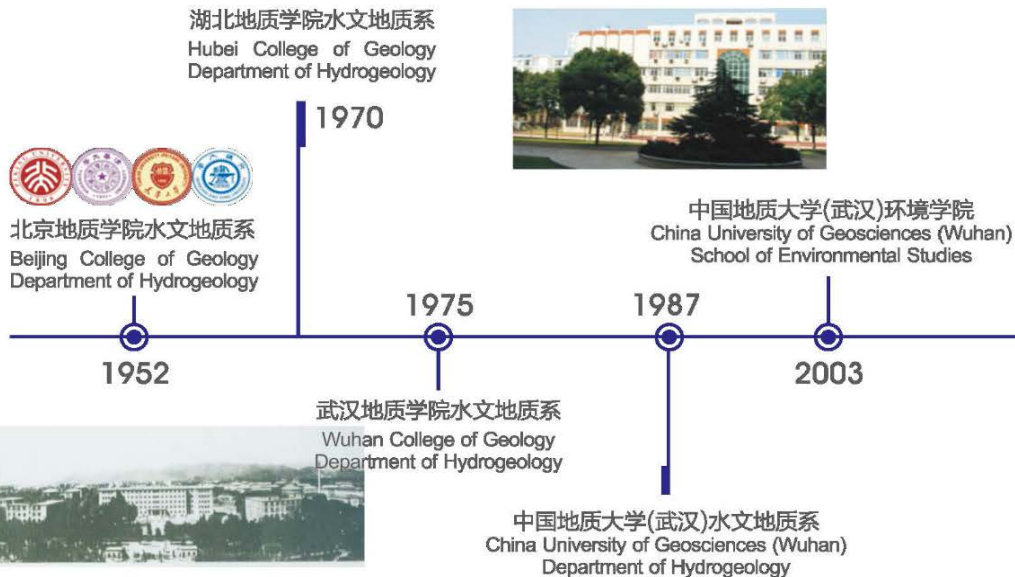
01

INTRODUCTION

学院简介

历史沿革

EVOLUTION TREE OF SES



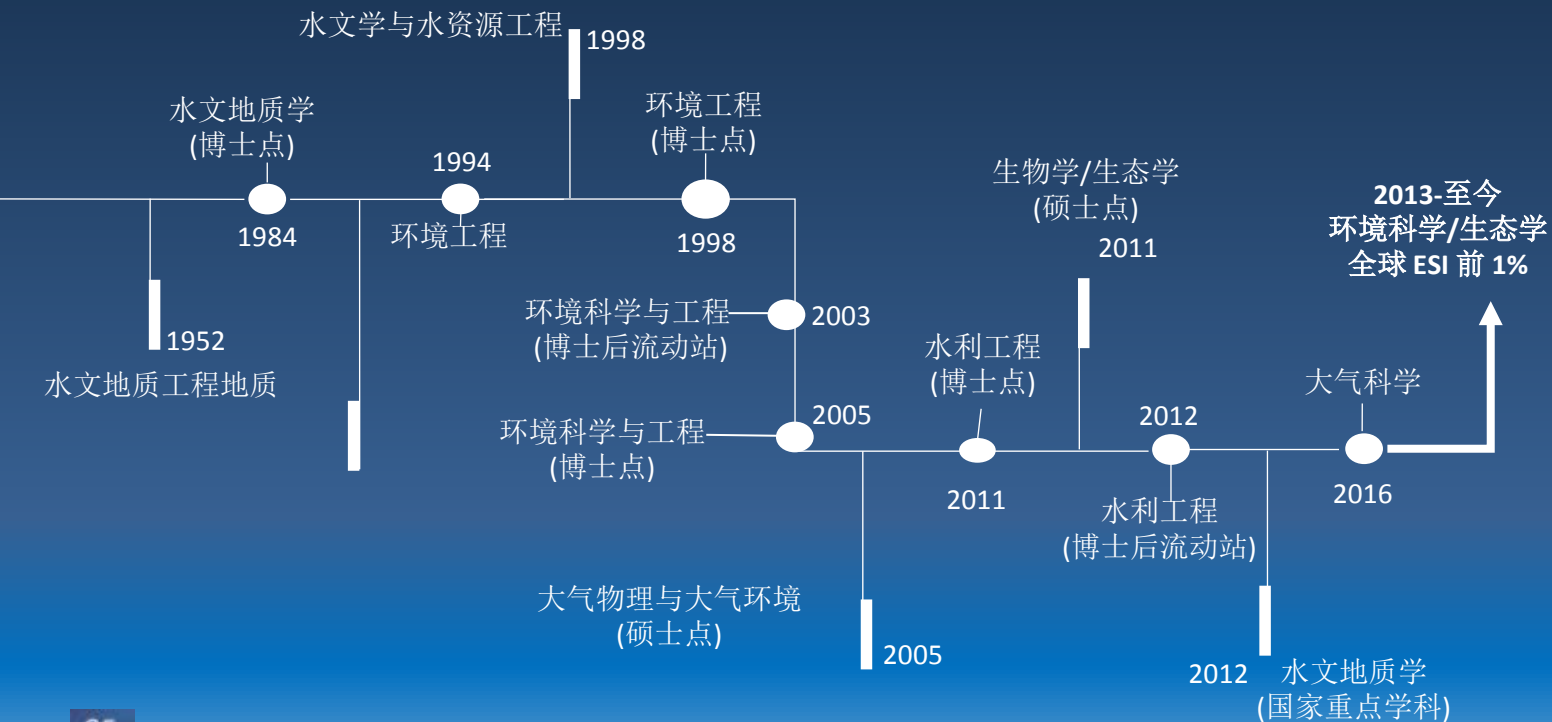


02

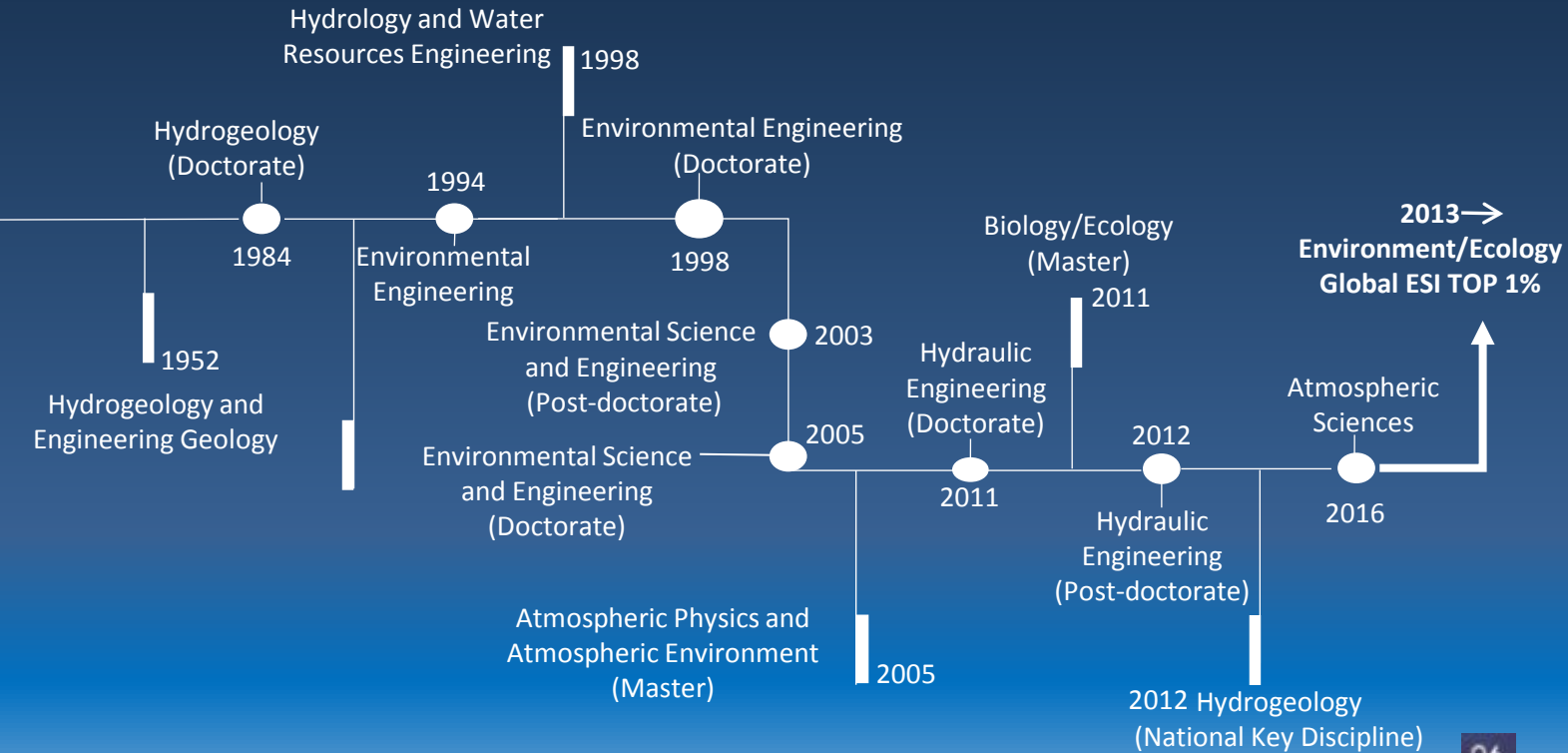
DISCIPLINES

学科建设

学科发展历程



Evolution Tree of Disciplines in SES



学科门类

CATALOGUES OF DISCIPLINE



国家重点学科

National Key Disciplines

- 水文地质(二级学科)
Hydrogeology (Sub-discipline)

全日制学生

Full-time Students

- 本科生1100
Undergraduate 1,100
- 研究生1100
Postgraduates 1,100

硕士点学科

Master Disciplines

- 生物学(一级学科硕士点)
Biological Sciences(Level I)
- 大气科学(一级学科硕士点)
Atmospheric Science(Level I)

博士点学科

Doctoral Disciplines (Provincial Key)

- 环境科学与工程(省重点、一级学科博士点)
Environmental Science and Engineering (Level I)
- 水利工程(省重点、一级学科博士点)
Hydraulic Engineering (Level I)
- 水文气候学(二级学科博士点)
Hydroclimatology(Level II)
- 地下水科学与工程(二级学科博士点)
Groundwater Science and Engineering(Level II)

本科专业

Undergraduate Disciplines

- 水文与水资源工程(国家特色专业)
Hydrology and Water Resources Engineering (National Specialty)
- 环境工程(国家特色专业)
Environmental Engineering (National Specialty)
- 地下水科学与工程
Groundwater Science and Engineering
- 生物科学
Biological Science
- 大气科学
Atmospheric Science

学科门类 CATALOGUES OF DISCIPLINE

强化核心研究方向和主题，
扩展学科范围和视野，
淡化学科差异与界限，
建立生态系统和环境主题的研究集群。

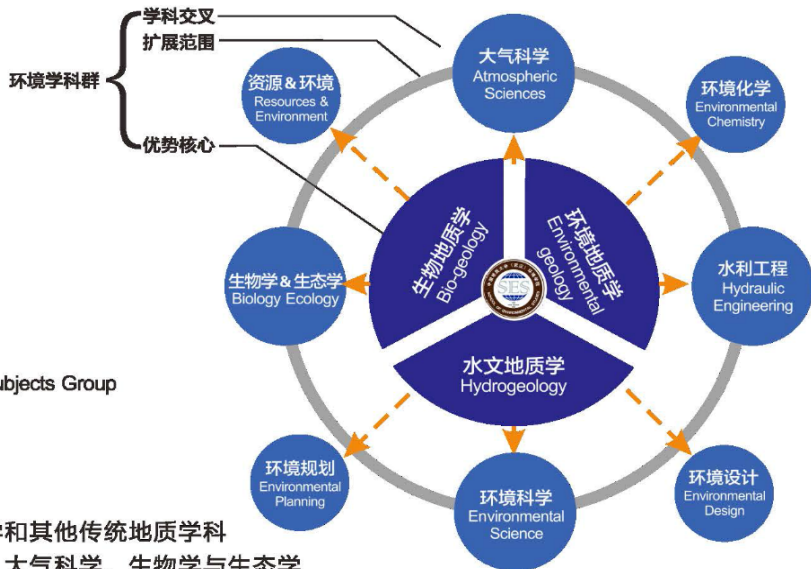
Strengthen core subjects,
expand the scope of discipline,
obscure disciplinary boundaries,
and establish an Ecosystem of Environmental Subjects Group

优势核心: 水文地质，环境地质，生物学和其他传统地质学科
扩展范围: 环境科学与工程，水利工程，大气科学，生物学与生态学
学科交叉: 资源与环境化学，环境规划与设计

Preponderant Core: Hydrogeology, environmental geology, biology and other traditional disciplines of geology


Expanded Scope: Environmental science and engineering, hydraulic engineering, atmospheric sciences, biology and ecology

Cross Boundary: two doctoral disciplines "Resources and Environmental Chemistry", "Environmental planning and design" established by cross-college cooperation



大环境学科群：研究方向交叉矩阵

Grand environmental science: interdisciplinary research direction

	地质学 Geology	环境科学 Environmental Science	水利工程 Hydraulics	大气科学 Atmospheric Science	生物科学 Biological Science
地质学 Geology	水文地质学 Hydrogeology	地质环境保护与生态修复 Geological environmental protection and ecological remediation	地下水科学与工程 Groundwater engineering and science	古气候记录与模拟 Paleoclimate record and modelling 极端天气与地质灾害 Extreme weather and geological disaster	地质微生物 Geological microorganism
环境科学 Environment Science		多界面过程与环境管理 Multiple interface and environmental management	水环境化学与水污染控制 Aqueous environmental chemistry and pollution control	大气化学与大气环境 Atmospheric chemistry and environment	环境毒理学与人体健康 Environmental toxicology and human health
水利工程 Hydraulics		<div style="border: 2px dashed black; padding: 5px;"> 岩溶水文地质学 冻土与地热水文地质学 低渗透介质中的水-岩相互作用 Karst hydrogeology Permafrost and geothermal hydrogeology Water-rock interaction in low permeability media </div>	水文学及水资源 Hydrology and water resource	水文学气候学 Hydrology and climatology	生态水文学 Ecological hydrology
大气科学 Atmospheric Science				大气动力学与天气气候 Atmospheric dynamics and Weather climate	大气生物生态学 Atmospheric bioecology
生物科学 Biological Science	一流学科建设方向：水文地质学 (ESI≤1‰) 一级学科博士点：环境科学 (ESI≤1‰& B ⁺)，水利工程(B) First level discipline development direction (ESI≤1‰) First level discipline doctor: Environmental Science (ESI≤1‰& B ⁺)，Hydraulics(B)			生物化学与分子生物学 Biological chemistry and molecular biology 生物多样性与生态演化 Biological diversity and ecology evolution	

备注：一级博士点：4-6个方向；二级博士点：3-4个方向；一级硕士点：3个方向

Note：First level doctoral Program：4-6 directions；Second level doctoral Program：3-4 directions；first level master: 3 directions



03

SCIENTIFIC & PRACTICAL PLATFORM

科研实践平台

大平台体系 LARGE PLATFORM SYSTEM



生物地质与环境地质国家重点实验室
State Key Laboratory of Biogeology and
Environment Geology



教育部长江三峡库区地质灾害研究中心
Three Gorges Research Center for Geohazards,
Ministry of Education



中国地质大学(武汉)地质调查研究院
Geological Survey of CUG



自然资源部地质环境修复技术创新中心
Technology Innovation Center of Geo-Environmental
Restoration, Ministry of Natural Resources



武汉地质资源环境工业技术研究院
Institute of Geological Resources and
Environment Industrial
Technology Co.,Ltd.(wuhan)



地下水与环境湖北省重点实验教学示范中心
地下水与环境湖北省虚拟仿真实验教学中心
Experimental Teaching Center of Virtual Simulation
for Groundwater and Environment



湖北省水环境污染系统控制和治理工程技术
研究中心
Hubei Provincial Engineering Research Center of
Systematic Pollution Control and Treatment
Technology in Water Environment



极端天气气候与地质灾害研究中心
Center for the Study of Extreme Weather
Climate and Geological Hazards

大平台体系的特点: Features of Large Platform System:

- 四个圈层(水、土、气、生)
Four spheres of Water & Soil & Air & Organism
- 为不同产业服务
Serving different industries
- 国际合作
International cooperation
- 室内和野外研究
In laboratory and field
- 研究与商业化
Research and business

地质资源环境工业技术研究院

ESTABLISHMENT OF IGE

武汉市人民政府 中国地质大学(武汉)



Advantage of CUG and IGE

1. World's leading technology on hydrogen storage at normal pressure and temperature(NPT).
2. Geothermal resources exploration, drilling and integrated utilization.
3. School of Automation: TOP level of R&D in China.

New Energy

Advantage of CUG and IGE

1. Advantages on the disciplines of groundwater and soil pollution restoration.
2. Top experts and scholars in the field of national trenchless technology.
3. Largest data center in central China.

Environment and Underground Space Engineering Technology

Advantage of CUG and IGE

1. Gemological Institute ranks the 1st in Asia.
2. Jewelry appraisal and evaluation.
3. Alumni resources in Jewelry industry.

Jewelry Cultural Tourism

与武汉市政府共建“武汉地质资源环境工业技术研究院”(IGE), 成立学校知识产权与技术转移中心, 搭建包含专利管理、成果转化、技术转移、产品测试、产业孵化、技术支持、研发服务等功能于一体的、政产学研用相结合的协同创新平台。我院主要承担“地热资源勘探、开采与利用”、“地下水污染防治、土壤污染修复”两方面建设任务。

野外实习基地 FIELD PRACTICE BASES

秉承重视实践教学的优良传统，我院环境工程、水文与水资源工程、生物科学等专业已经拥有了众多教学实训基地和产学研基地。如：三峡基地，北戴河基地，周口店基地和庐山基地等。通过实践与理论相结合，提升学生的动手能力和专业技能。

In adherence to the good traditions of attaching importance to practical education, the specialties in environmental engineering, hydrology & water resources engineering and biochemistry & molecular biology in our school already have many professional teaching bases and bases of production, learning & research such as The Three Gorges, Beidaihe, Zhoukoudian and Lushan Mountain. The handing ability and professional accomplishment of students in combining theories and practice have been greatly improved.



三峡实习基地 Base in Three Gorges



北戴河实习基地
Beidaihe Field Training Center



周口店实习基地
Zhoukoudian Field Training Center

仪器设备 EQUIPMENT



FT-ICR MS

傅立叶变换离子回旋共振
质谱仪



HPLC-ICP-MS

高效液相色谱-电感耦合
等离子体质谱联用仪



Ultra low level liquid
scintillation spectrometer

超低本底液体闪烁能谱仪



TOC Analyzer

有机碳分析仪



TOC-CRDS

固-气-液多相碳同位素
分析系统



GC-MS

气相色谱-质谱联用仪



GC

气相色谱仪



IC

离子色谱仪



AAS

原子吸收分光光度计



ICP-OES

电感耦合等离子发射光谱仪



ICP-MS

电感耦合等离子体质谱仪



Laser Particle Sizer

激光粒度仪



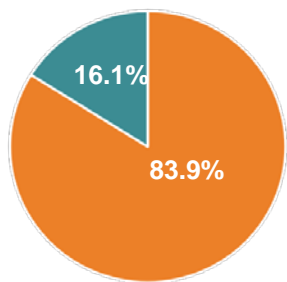
04

FACULTY AND STAFF

师资队伍

人员比例

PROPORTION OF EXCELLENT RESEARCHERS IN SES

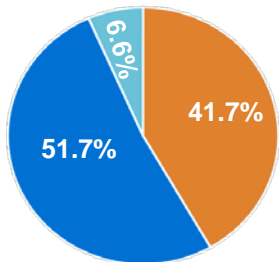


83.9%

专任教师
faculty

16.1%

行政及教辅人员
administrative staff, academic
& service professional



41.7%

教授 Professor

51.7%

副教授 Associate
Professor

6.6%

讲师 Lecturer

环境学院拥有一支由中青年博导、教授、博士为骨干的师资队伍。现有专任教师113人，98.3%以上教师拥有博士学位。拥有国家教学团队1个、国家自然科学基金创新研究群体1个、自然资源部高层次创新型科技人才培养工程科技创新团队1个、湖北省创新团队1个。学院师资队伍结构合理、素质优良、具有较强的人才培养和科学研究实力。

The faculty in the School of Environmental Studies is composed of young and middle-aged doctoral supervisors, professors, and PhDs. There are currently 113 full-time teachers, more than 98.3% of which have doctoral degrees. There are 1 national teaching team, 1 national natural science innovation research group, 1 high-level innovative scientific and technological talent training engineering innovation team of the Ministry of Natural Resources, and 1 innovation team of Hubei Province. The faculty of the school has a reasonable structure and high quality, which demonstrates it strengthened capabilities in talent training and scientific research.

学术带头人

ACADEMICIAN & PROFESSORS

王焰新教授

- 中国科学院院士 ●
- 中国地质大学(武汉)校长 ●
- 环境水文地质国家自然科学基金创新研究群体项目负责人 ●
- 地下水与环境国家级教学团队带头人 ●
- 自然资源部高层次创新型科技人才培养工程科技创新团队负责人 ●

Dr. Yanxin Wang

- Academician of Chinese Academy of Sciences
- President of CUG, Wuhan
- Leader of National Natural Science Innovation Research Group on Environmental Hydrogeology
- Leader of National Level Teaching Team on Groundwater and Environment
- Leader of the scientific and technological innovation team of the ministry of natural resources for the cultivation of high-level innovative scientific and technological talents



吴振斌教授

湖泊与人工湿地水文学
Dr. Zhenbin Wu
Limnetic & Constructed
Wetland Hydrology



靳孟贵教授

水文地质学
Dr. Menggui Jin
Hydrogeology



王红梅教授

生物科学
Dr. Hongmei Wang
Biology



马腾教授

水文地质学
Dr. Teng Ma
Hydrogeology Geological
Environment and Human Health



袁松虎教授

环境科学
Dr. Songhu Yuan
Environmental science



詹红兵教授
水文地质学
Dr. Hongbing Zhan
Hydrogeology



石良 教授
生物学
Dr. Liang Shi
Biological Science



周爱国教授
水文地质学
Dr. Aiguo Zhou
Hydrogeology



刘慧 教授
环境科学
Dr. Hui Liu
Environmental Science



成建梅教授
水文地质学
Dr. Jianmei Cheng
Hydrogeology



李双林教授
大气科学
Dr. Shuanglin Li
Atmospheric Science



马瑞 教授
水文地质学
Dr. Rui Ma
Hydrogeology



蒋宏忱教授
生物学
Dr. Hongchen Jiang
Biological Science



张仲石教授
大气科学
Dr. Zhongshi Zhang
Atmospheric Sciences



文章 教授
水文地质学
Dr. Zhang Wen
Hydrogeology



董依然教授
生物学
Dr. Yiran Dong
Biological Science



黄维雄研究员
环境科学
Dr. Weixiong Huang
Environmental Science



曾宪春教授
生物学
Dr. Xianchun Zeng
Biology



郭益铭教授
环境科学与水科学
Dr. Yi-Ming Guo
Environmental Science
and Hydrologic Science



余欢 教授
大气化学
Dr. Huan Yu
Atmospheric chemistry



05

ACADEMIA

科学研究

跨学科研究

INTERDISCIPLINARY RESEARCH

环境学院依托大项目、大平台建设，创建大型研究团队，实现多学科交叉研究。

We rely on large-scale projects and large platform to form a large team, implementing interdisciplinary research.

依托生物地质及环境地质国家重点实验室，促进生物学、水文地质学、环境科学学科交叉研究，建立环境水文地质创新研究群体，创建地质生物新学科。

We rely on State Key Laboratory of Biogeology and Environmental Geology, promoting the intersection of biology, Hydrogeology and environmental science, establishing the environmental hydrogeology innovation research team, creating a newborn discipline: geo-biology.

依托盆地水文过程与湿地生态恢复学术创新基地，促进水利工程、生态学、生物学和大气科学学科交叉，建立地球关键带科学研究团队，创建地球关键带科学。

We rely on Basin Hydrology and Wetland Eco-restoration, promoting the intersection of hydraulic engineering, ecology, biology and atmospheric sciences, establishing the Critical Zone research team, creating a newborn discipline: critical zone sciences.



大项目 & 研究方向

IMPORTANT PROJECT & RESEARCH FIELDS

以“地质调查-重点基金-国家专项”为支撑，以自由探索的自然科学基金项目群为辅，集“调查、研究、转化”于一体。

建设涵盖“水、土、气、生”、面向不同行业、国际合作-国家-省部级-校级等不同级次、室内与野外、研究与商用的大平台体系。

Large-scale project system is supported by "geological investigation-National Natural Science Foundation of China (Key Program)-national special project", freely exploring for National Natural Science Foundation of China. It unify the actions of investigation, research and transformation.

Environment/Ecology Discipline Group:Structure and water circulation of the Critical Zone, groundwater circulation and water quality evolution, geological and biological processes of microbial resources.

研究方向(Research Fields)

- 地下水污染与防治
Groundwater Pollution, Prevention & Control
- 水、岩（土）相互作用及技术方法
Water-Rock/soil Interaction & Technical Methods
- 水-土界面污染物化学行为
Water-soil Surface Pollutant Chemical Behavior
- 沉积物环境记录与全球变化
Sediment Environment Record & Global Changes
- 环境系统评价与管理
Environmental System Evaluation & Management
- 湿地生态学与湿地环境保护技术
Wetland Ecology & Wetland Environmental Protection Technology
- 环境微生物学与地球生物学
Environmental Microbiology & Terrestrial Biology
- 地下水资源开发与利用与生态环境保护
Groundwater Resource Development and Exploitation & Ecological Environmental Protection
- 大型工程水文地质问题研究与应用
Large Engineering Hydrogeological Problem Studies & Application
- 岩溶水文学与岩溶水预报预测方法
Karst Hydrology & Karst Water Prediction and Forecast Method

科教协同 SYNERGY OF RESEARCH AND EDUCATION



中科院大气物理研究所
Institute of Atmospheric
Physics (IAP), CAS

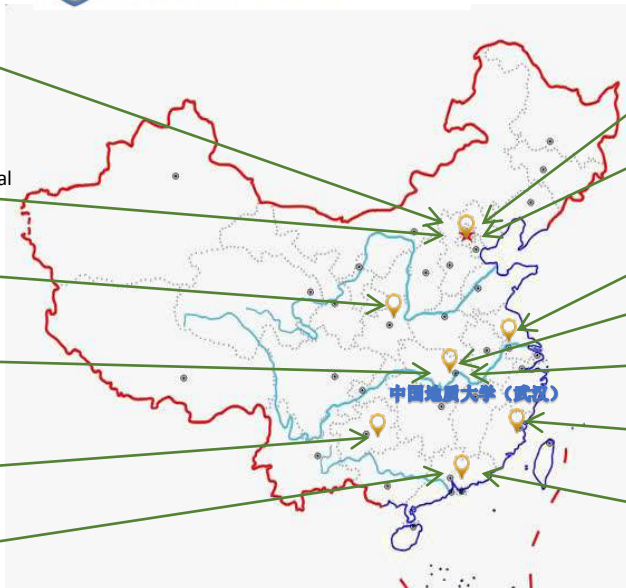
中国气象科学研究院
Chinese Academy of Meteorological
Sciences

中科院地球与环境研究所
The Institute of Earth
Environment (IEE)

中科院水生生物研究所
Institute of Hydrobiology, CAS

中科院地球化学研究所
Institute of Geochemistry, CAS

华大基因研究院
BGI



中科院微生物研究所
Institute of Microbiology, CAS

中科院生态环境研究中心
Research Center for Eco-
Environmental Sciences

中科院南京地理湖泊研究所
Nanjing Institute of Geography &
Limnology, CAS

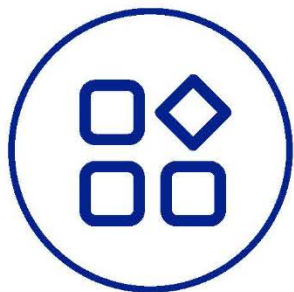
国家气象局武汉暴雨研究所
Institute of Heavy Rain, CMA

中科院城市植物园
The Wuhan Botanical
Garden, CAS

中科院城市环境研究所
The Institute of Urban
Environment, IUE

中科院广州地球化学研究所
Guangzhou Institute of
Geochemistry, CAS





06

EDUCATION

人才培养

国际级教材及精品课程 NATIONAL LEVEL TEXTBOOK & EXCELLENT COURSE

国家级教材(National level textbook)



地下水动力学
Groundwater Dynamics



水文地质学基础
Fundamentals of Hydrogeology



环境地质学
Environmental Geology



地下水污染与防治
Groundwater Contamination

精品课程(National level excellent course)



地下水污染与防治
Groundwater Contamination



地下水动力学
Groundwater Dynamics



水文地质学基础
Fundamentals of Hydrogeology



教育战略联盟 EDUCATION STRATEGIC ALLIANCE

2012年，中国地质大学联合中科院研究生院及其8个地质科学类研究院建立了“C²教育战略联盟”，并在此基础上建立了李四光学院和地球科学菁英班。

CUG, graduate school of Chinese Academy of Sciences and its eight geological graduate school establish the "C² Education Strategic Alliance" in 2012. Based on the alliance Li Siguang School and Earth Sciences Elite class have been established.

教育战略联盟

EDUCATION STRATEGIC ALLIANCE

卓越工程师教育培养计划：环境工程（地质环境调查方向）

Environmental Engineering (Geological Environment Survey),
Excellence Program Engineer in Ministry of Education



生物学菁英班（2013）：中科院微生物研究所；中科院生态环境科学研究中心；中科院城市环境研究所；中科院植物研究所；中科院水生生物研究所；深圳华大基因研究院

Biology Elite Squad(2013) : The Institute of Microbiology (IM,CAS)+Research Center for Eco-Environmental Sciences(RCEES ,CAS)+Institute of Urban Environment (IUE,CAS), +Institute of Botany (IB,CAS)+Institute of Hydrobiology(IHB,CAS), +BGI Shenzhen



大气科学精英培训联盟(2016):
中科院大气物理研究所；中国气象科学院；中国气象局武汉暴雨研究所；

Atmospheric Sciences Elite Training Alliance(2016):
Institute of Atmospheric Physics, CAS + Chinese Academy of Meteorological Sciences + Institute Heavy Rain, CMA, Wuhan



环境科学菁英班（2014）：中科院南京地理与湖泊研究所；中科院水生生物研究所

Environmental Sciences and Engineering Elite Squad(2014): Nanjing Institute of Geography and Limnology (NIG,CAS)+Institute of Hydrobiology(IHB,CAS)



创新创业团队 INNOVATION AND ENTREPRENEURSHIP TEAM

大学的第二课堂: 交叉学科创新及创业团队

The Second Classroom of undergraduate students: Interdisciplinary Innovation and Entrepreneurship Team

初始阶段(Innovation and EInitial Stage)



- 学生科研团队“水石团队”创建于2010年(Established in 2010)
- 来自四个学院七个专业的150名成员
150 members come from 4 schools and with 7 different majors
- 本-硕-博(Doctor-Master-Bachelor)
- 10余篇学术论文、19个专利
Over 10 pieces of paper, 19 pieces of patents

课外研究团队(Extracurricular research team)

现阶段(Current stage)



- 创建于2014年(Established in 2014)
- 2015年湖北省高新技术企业
High-tech enterprises in Hubei Province (2015)
- 水净化领域的里程碑: 弱碱性过滤
Weak Alkaline Filter is considered as the milestone of water purification field

环保科技公司(Environmental technology company)

杰出校友

EDUCATION OUTSTANDING ALUMNI

自1952年以来，环境学院已培养2万多名毕业生，3人当选为院士。

Since 1952, SES has trained nearly 20 thousand graduates. 3 of them have been elected academicians.



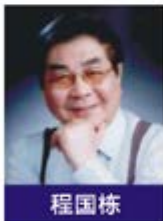
1956年水文地质与工程地质专业毕业生合影留念



汪民



李久林



程国栋



汪集暘



卢耀如



李致新



王勇峰



焦赳赳



郝义国

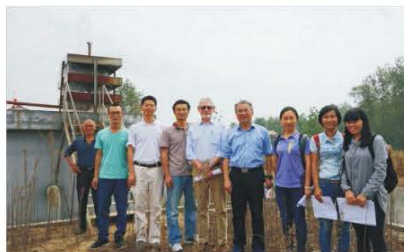
OUTSTANDING ALUMNI



07

INTERNATIONAL COOPERATION & EXCHANGES

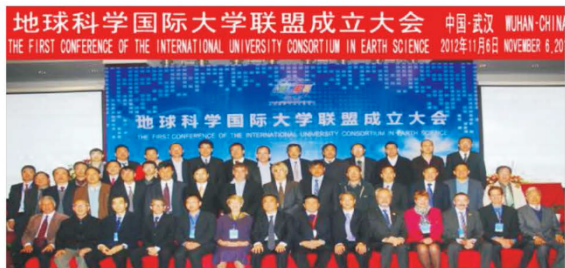
国际合作与交流



► 2006年起

我院在原有接收外国留学生教育的基础上，开始成班建制地承担教育部委托的环境科学与工程、水文地质学、水利工程等专业的硕士及博士留学生教育。目前在校生规模已经超过100多名。

Since 2006, on the basis of the education of original receiving foreign students, it has initiated classes and builds systems to take tasks of education for master and doctoral overseas students in majors of environmental science, environmental engineering, hydrology, and water resources entrusted by Ministry of Education. Now the students here are more than 100.



► **2012年地球科学国际大学联盟成立大会**
The First Conference of The International University of Consortium in Earth Science

中国地质大学（武汉）与斯坦福大学、莫斯科国立大学、皮埃尔和玛丽居里大学(巴黎第六大学)、卡尔斯鲁厄理工学院、昆士兰大学的劳伦斯伯克利国家实验室(伯克利实验室)等11所世界知名大学及科研机构合作，建立“地球科学国际大学联盟”。它为国际进修、访问学者及国际联合培养构建一个新平台。

In 2012, CUG cooperation with 11 World-renowned universities and research institutions, including Stanford University, Moscow State University, Pierre and Marie Curie University (University of Paris VI), Karlsruhe Institute of Technology, The University of Queensland and Lawrence Berkeley National Laboratory (Berkeley Lab), to establish the "Earth Sciences International University Alliance". It builds a platform for international joint training, academic visitor, international science and technology cooperation education.



► **2011国际地下水论坛**
International Groundwater Forum

注重对外交流与国际合作，包括引进国外学者、鼓励学院教员出国、联合培养研究生、校际合作办学、各种访问学术交流与项目合作等，在学术及办学思想等方面密切与国外先进思想的交流融合，极大地促进了学院的发展。

The school pays much attention to foreign exchanges and international cooperation, including the introduction of foreign scholars, encouraging teachers to go abroad, the joint training of graduate students, inter-school cooperation in running schools, all kinds of academic exchanges & project cooperation and etc. In terms of academy and school-running thoughts, it closely absorbs the foreign advanced ideas and communicates intimately with these ideas and this has greatly promoted the development of our school.

▶ 2000年

水文地质与环境地质国际会议
Hydrogeology and the Environment, 2000

▶ 2007年

12th水岩相互作用国际会议(WRI-12)
12th Water-Rock Interaction (WRI-12), 2007

▶ 2011年

第一届地球微生物生态毒理学国际会议
First International Conference on Geomicrobial Ecotoxicology, 2011

▶ 2015年

水文生物地球化学过程:机制、耦合和影响
Hydro-Biogeochemical Processes: Mechanisms, Coupling, and Impact, 2015

▶ 2018年

第十一届国际植硅体学术研讨会
Remediation and The 11th International Meeting on Phytolith Research, 2018

▶ 2003年

水资源与城市环境国际会议
Water Resources and the Urban Environment, 2003

▶ 2011年

国际地下水论坛
International Groundwater Forum, 2011

▶ 2012年

深层地热系统国际研讨会
International Workshop on Deep Geothermal System, 2012

▶ 2015年

矿区污染修复会议
Remediation and Restoration of Polluted Mining Areas, 2015

▶ 2019年

第五届“地下水科学青年论坛”
Fifth Groundwater Science Youth Forum, 2019

Twelfth International Symposium on Water-Rock Interaction, 31 July-5 August, 2007, Kunming, P. R. China



Welcome to SES

