

Application Results for 2023 Academia Sinica TYPE I & II Grants

A total of 96 applications were submitted for the 2023 Academia Sinica Type I and Type II grants: 34 from the Division of Mathematics and Physical Sciences; 51 from the Division of Life Sciences; 11 from the Division of Humanities and Social Sciences. Of these, 36 were selected for funding, including 14 from Division of Mathematics and Physical Sciences, 16 from Division of Life Sciences, and 6 from Division of Humanities and Social Sciences. Please refer to the following lists for detailed information.

2023 Academia Sinica Career Development Award

A total of 20 applications were submitted for the 2023 Career Development Award: 9 from the Division of Mathematics and Physical Sciences; 11 from the Division of Life Sciences; 0 from the Division of Humanities and Social Sciences. Of these, 10 were awarded, including 4 from the Division of Mathematics and Physical Sciences, 6 from the Division of Life Sciences and 0 from the Division of Humanities and Social Sciences.

A. Division of Mathematics and Physical Sciences: (4 Projects)

Project No.	Project Title	Project PI	Affiliation
AS-CDA-112-M01	Specialization and microlocalization in derived algebraic geometry	Adeel Khan	Institute of Mathematics, Academia Sinica
AS-CDA-112-M02	What is the origin of the Cosmic Infrared Background at its peak?	Chian-Chou Chen	Institute of Astronomy and Astrophysics, Academia Sinica
AS-CDA-112-M03	Nearly atomic-scale structural analysis and electroluminescence imaging in the ambient condition.	Chi Chen	Research Center for Applied Sciences, Academia Sinica
AS-CDA-112-M04	Research of High Ionic-Conductivity Solid-State Battery	Mu-Huai Fang	Research Center for Applied Sciences, Academia Sinica

B. Division of Life Sciences : (6 Projects)

Project No.	Project Title	Project PI	Affiliation
AS-CDA-112-L01	Using shallow-water hydrothermal vent as a proxy to discover the adaptive physiological mechanisms of sulfide tolerance in a marine holobiont	Yung-Che Tseng	Institute of Cellular and Organismic Biology, Academia Sinica
AS-CDA-112-L02	Epitranscriptomic regulation of Influenza A virus replication and immune evasion by RNA cytidine methylation	Kevin Tsai	Institute of Biomedical Sciences, Academia Sinica

AS-CDA-112-L03	Investigation of the oncogenic role of KMT2D/MLL4 chromatin-modifying enzyme in leukemia and its potential as a therapeutic target for anticancer therapy	Shu-Ping Wang	Institute of Biomedical Sciences, Academia Sinica
AS-CDA-112-L04	Harnessing macrophage function to promote cardiac repair and regeneration	Shih-Lei (Ben) Lai	Institute of Biomedical Sciences, Academia Sinica
AS-CDA-112-L05	Bacterial Immune Response Against Interbacterial Antagonism	See-Yeun Ting	Institute of Molecular Biology, Academia Sinica
AS-CDA-112-L06	Genetic dynamics of coral cells and microbiome at single-cell level	Yi-Jyun Luo	Biodiversity Research Center, Academia Sinica

2023 Academia Sinica Investigator Award

A total of 32 applications were submitted for the 2023 Academia Sinica Investigator Award: 10 from the Division of Mathematics and Physical Sciences; 21 from the Division of Life Sciences; 1 from the Division of Humanities and Social Sciences. Of these, 12 were awarded, including 5 from the Division of Mathematics and Physical Sciences, 7 from the Division of Life Sciences and 0 from the Division of Humanities and Social Sciences.

A. Division of Mathematics and Physical Sciences: (5 Projects)

Project No.	Project Title	Project PI	Affiliation
AS-IA-112-M01	Arithmetic of Supersingular Abelian Varieties and Applications to Geometry	Chia-Fu Yu	Institute of Mathematics, Academia Sinica
AS-IA-112-M02	SEA-ACT & Beyond: Asian Orogeny and Continental Evolution (SEA: South East Asia; ACT: Accretionary & Collisional Tectonics)	Sun-Lin Chung	Institute of Earth Sciences, Academia Sinica
AS-IA-112-M03	Design, Analysis and Optimization of Supersaturated Experiments and Applications to Biomedical Sciences, Industrial Processes and Business Intelligence	Frederick Kin Hing Phoa	Institute of Statistical Science, Academia Sinica
AS-IA-112-M04	Testing the Collisionless Nature of Dark Matter in Galaxy Clusters	Keiichi Umetsu	Institute of Astronomy and Astrophysics, Academia Sinica
AS-IA-112-M05	Discovery of Stable Highly-distorted Complex Materials for Energy and Structure Applications	Chun-Wei Pao	Research Center for Applied Sciences, Academia Sinica

B. Division of Life Sciences : (7 Projects)

Project No.	Project Title	Project PI	Affiliation
AS-IA-112-L01	Coupling clock gene expression specificity and periodicity by LWD1 biomolecular condensates	Shu-Hsing Wu	Institute of Plant and Microbial Biology, Academia Sinica
AS-IA-112-L02	Dendritic Development and Synaptic Specification in Drosophila Visual Neurons	Chi-Hon Lee	Institute of Cellular and Organismic Biology, Academia Sinica
AS-IA-112-L03	Structural studies of bacterial cell biology	Chung-I Chang	Institute of Biological Chemistry, Academia Sinica
AS-IA-112-L04	The role of WDR4-mediated PTPN23 ubiquitination in coordinating lysosomal degradation and exosomal secretion to impact on lung cancer progression and therapy	Ruey-Hwa Chen	Institute of Biological Chemistry, Academia Sinica
AS-IA-112-L05	Molecular mechanisms underlying centrosome maturation, required for mitotic spindle assembly and cell division	Kuo-Chiang Hsia	Institute of Molecular Biology, Academia Sinica
AS-IA-112-L06	Molecular mechanism regulating fate de novo shoot assembly of Phalaenopsis orchids	Su-Chiung Fang	Agricultural Biotechnology Research Center, Academia Sinica
AS-IA-112-L07	Molecular mechanism and therapeutic potential of TDP-43 in protein misfolding for Alzheimer's disease TDP-43	Yun-Ru Chen	Genomics Research Center, Academia Sinica

2023 Academia Sinica Thematic Research Program

A total of 28 applications were submitted for the 2023 Thematic Research Program: 8 from the Division of Mathematics and Physical Sciences; 11 from the Division of Life Sciences; 9 from the Division of Humanities and Social Sciences. Of these, 9 were awarded, including 2 from the Division of Mathematics and Physical Sciences, 1 from the Division of Life Sciences and 6 from the Division of Humanities and Social Sciences.

A. Division of Mathematics and Physical Sciences: (2 Projects)

Project No.	Project Title	(1) Project PI (2) Project Co-PI	Affiliation
AS-TP-112-M01	Experimental Gravitational Physics – Instrumentation in LIGO Gravitational Wave Observatory &	(1) Henry Tsz-King Wong	Institute of Physics, Academia Sinica

	Research Programs in Preparation for Next-Generation Projects	(2) Yuki Inoue	Department of Physics, National Central University
AS-TP-112-M02	Proton Induced Prompt Gamma Tomography	(1) Yuan-Hann Chang (2) Shih-Chang Lee (2) Ei-Fong Chen (2) Cheng-Ying Chou (2) Chih-Hsun Lin (2) Ming-Lee Chu (2) Tsi-Chian Chao (2) Hsin-Hon Lin	Institute of Physics, Academia Sinica Institute of Physics, Academia Sinica Department of Physics, National Central University Department of Biomechanics Engineering, National Taiwan University Institute of Physics, Academia Sinica Institute of Physics, Academia Sinica Department of Medical Imaging and Radiological Sciences, Chang Gung University Department of Medical Imaging and Radiological Sciences, Chang Gung University

B. Division of Life Sciences : (1 Project)

Project No.	Project Title	(1) Project PI (2) Project Co-PI	Affiliation
AS-TP-112-L01	CryoEM and time-resolved cryoEM to determine structure and function of RAD51 protein and protein cofactor complexes governing error-free double-stranded DNA repair	(1) Meng-Chiao Joseph Ho	Institute of Biological Chemistry, Academia Sinica

C. Division of Humanities and Social Sciences: (6 Projects)

Project No.	Project Title	(1) Project PI (2) Project Co-PI	Affiliation
AS-TP-112-H01	Political Ecology and the Diversity of Chinese Social Networks: A Case Study of the Lianzuoshan Guanyin Temple in Daxi, Northern Taiwan	(1) Paul R. Katz	Institute of Modern History, Academia Sinica

AS-TP-112-H02	In Search of Western Modernity from "Japanese Learning": A History of Reading in Modern China, 1894-1919	(1) Kuang-Che Pan	Institute of Modern History, Academia Sinica
AS-TP-112-H03	Major Transitions in Social Network Formation: Cross Species and over Life	(1) Yen-Sheng Chiang (2) Ta-Chien Chan (2) Sheng-Feng Shen (2) Hsuan-Wei Lee (2) Wei-Chung Liu (2) Tso-Jung Yen (2) Yi-Chien Liu	Institute of Sociology, Academia Sinica Research Center for Humanities and Social Sciences, Academia Sinica Biodiversity Research Center, Academia Sinica Institute of Sociology, Academia Sinica Institute of Statistical Science, Academia Sinica Institute of Statistical Science, Academia Sinica Department of Neurology, Cardinal Tien Hospital
AS-TP-112-H04	Literary Visions of Cities in East Asian Cultural Exchange	(1) Chao-Heng Liao (2) Siao-Chen Hu (2) Shiuh-Feng Liu (2) Che-Chia Chang (2) Hung-Yueh Lan (2) Lo-Feng I	Institute of Chinese Literature and Philosophy, Academia Sinica Institute of Chinese Literature and Philosophy, Academia Sinica Research Center for Humanities and Social Sciences, Academia Sinica Institute of Modern History, Academia Sinica Institute of History and Philology, Academia Sinica Department of Chinese, Nanyang Technological University, Singapore

		(2) Li-Yun Huang (2) Kuei-Ju Lin	School of Fine Arts, Taipei National University of the Arts Department of Chinese Literature, National Chengchi University
AS-TP-112- H05	Media Market and Cultural Politics in Colonial Taiwan during the 1930s and 1940s: An In-depth Interpretation Project of the Newly Found Daily <i>Taiwan Shin Minpao</i>	(1) Sheng-Chuan Chuang (2) Rwei-Ren Wu (2) Wei-Chi Chen	Institute of Taiwan History, Academia Sinica Institute of Taiwan History, Academia Sinica Institute of Taiwan History, Academia Sinica
AS-TP-112- H06	Well-being and Major Life Events: A Comparative Study of Taiwan, South Korea, Australia, the US, the UK and Germany	(1) Ming-Chang Tsai (2) Ruoh-Rong Yu (2) Fengbin Chang (2) Hung-Lin Tao (2) Pei-Shan Liao	Research Center for Humanities and Social Sciences, Academia Sinica Research Center for Humanities and Social Sciences, Academia Sinica Department of Sociology, National Chengchi University Department of Economics, Soochow University Research Center for Humanities and Social Sciences, Academia Sinica

2023 Academia Sinica Grand Challenge Program

A total of 16 applications were submitted for the 2023 Grand Challenge Program: 7 from the Division of Mathematics and Physical Sciences; 8 from the Division of Life Sciences; 1 from the Division of Humanities and Social Sciences. Of these, 5 were awarded, including 3 from the Division of Mathematics and Physical Sciences, 2 from the Division of Life Sciences and 0 from the Division of Humanities and Social Sciences.

A. Division of Mathematics and Physical Sciences: (3 Projects)

Project No.	Project Title	(1) Project PI (2) Project Co-PI	Affiliation	Grant Period
AS-GCP-112-M01	Innovating cQED Architecture for High-Performance Qubits	(1)ChiiDong Chen (2)Chung-Ting Ke (2)Cen-Shawn Wu	Institute of Physics, Academia Sinica Institute of Physics, Academia Sinica Department and Graduate Institute of Physics, National Changhua University of Education	4+1
AS-GCP-112-M02	Harnessing the energy of the Kuroshio Current	(1)Chau-Ron Wu (2)Fuh-Kwo Shiah (2)Yi-Chia Hsin (2)Jen-Hua Tai	Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica	4+1
AS-GCP-112-M03	Development of digital twin for climate change	(1)Huang-Hsiung Hsu (2)Wei-Liang Lee (2)I-Chun Tsai (2)Chia-Ying Tu (2)Chein-Jung Shiu	Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica	2

		(2)Yi-Chi Wang	Research Center for Environmental Changes, Academia Sinica	
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B. Division of Life Sciences : (2 Projects)

Project No.	Project Title	(1) Project PI (2) Project Co-PI	Affiliation	Grant Period
AS-GCP-112-L01	The stochastic storm in the brain	(1)Ya-Hui Chou (2)Wen-Liang Hwang (2)Su-Yun Huang	Institute of Cellular and Organismic Biology, Academia Sinica Institute of Information Science, Academia Sinica Institute of Statistical Science, Academia Sinica	4+1
AS-GCP-112-L02	Unlocking the mystery of coral spawning synchronization: molecular mechanisms and implications for the effect of light pollution on coral sustainability	(1)Yoko Nozawa (2)Benny Chan (2)John Wang (2)Yin-Ru Chiang	Biodiversity Research Center, Academia Sinica Biodiversity Research Center, Academia Sinica Biodiversity Research Center, Academia Sinica Biodiversity Research Center, Academia Sinica	4+1

2023 Grand Challenge Program Seed Grant

2 Grand Challenge Program applications were additionally funded as Grand Challenge Program seed grant.

A. Division of Mathematics and Physical Sciences: (2 Projects)

Project No.	Project Title	(1) Project PI (2) Project Co-PI	Affiliation	Grant Period
AS-GCS-112-M01	Unveil the mystery of breath: how facilitated oxygen transport occurs in the alveolus	(1)Chin-Lin Guo (2)Yi-Chung Tung (2)Huei-Wen Chen (2)Sheng-Fang Su	Institute of Physics, Academia Sinica Research Center for Applied Sciences, Academia Sinica Graduate Institute of Toxicology, National Taiwan University College of Medicine Graduate Institute of	2

		(2)Poling Kuo (2)Thai-Yen Ling	Oncology, National Taiwan University College of Medicine Department of Electrical Engineering, National Taiwan University Graduate Institute of Pharmacology, National Taiwan University College of Medicine	
AS-GCS-112-M02	Cellular logic gate and cellular memory device	(1)Ji-Yen Cheng (2)Pei-Kuen Wei (2)Peilin Chen (2)Yi-Chung Tung (2)Jung-Hsin Lin (2)Bi-Chang Chen (2)Fu-Liang Yang	Research Center for Applied Sciences, Academia Sinica Research Center for Applied Sciences, Academia Sinica Research Center for Applied Sciences, Academia Sinica Research Center for Applied Sciences, Academia Sinica Research Center for Applied Sciences, Academia Sinica Research Center for Applied Sciences, Academia Sinica Research Center for Applied Sciences, Academia Sinica	2