Results of Applications for the 2020 Thematic Projects at Academia Sinica Announced

There is a total of 25 applications for the 2020 Thematic Projects.
14 out of 25 applications were approved in the meetings of the Second-round Review and Budget Review, including 5 from Division of Mathematics and Physical Sciences, 7 from Division of Life Sciences, and 2 from Division of Humanities and Social Sciences. Please refer to the following table for detailed information. Approved projects may not be executed until budget plans are officially approved.

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

Project No.	Title of Thematic Project	(1) Project Director (2) Sub-project PI (3) Co-PI	Institution
AS-TP-109-M02	Development of advanced coherent electron imaging methods	(1) ING-SHOUH HWANG	Institute of Physics, Academia Sinica
AS-TP-109-M02-1	Development of advanced coherent electron imaging methods: Experimental part	(2) ING-SHOUH HWANG	Institute of Physics, Academia Sinica
AS-TP-109-M02-2	Development of advanced coherent electron imaging methods: Theoretical part	(2) CHIEN-CHUN CHEN	Department of Engineering and System Science, National Tsing Hua University
AS-TP-109-M04	Biomimetic & oxygen-biomechanical approach to reconstitute minimalist functional alveoli	(1) CHIN-LIN GUO	Institute of Physics, Academia Sinica
AS-TP-109-M04-1	Modeling approach to study the differentiation process, biological mechanism and biophysical properties of type-1 pneumocyte (AT1) in 2D/3D device	(2) THAI-YEN LING	Department of Pharmacology, National Taiwan University
AS-TP-109-M04-2	Integrated cell culture platform for oxygen-microenvironment manipulation and physiological function characterization for reconstituted biomimetic functional alveolus	(2) YI-CHUNG TUNG	Research Center for Applied Sciences, Academia Sinica
AS-TP-109-M04-3	Dissecting microtubule dynamics in AT1 differentiation and morphogenesis	(2) CHIN-LIN GUO	Institute of Physics, Academia Sinica,
AS-TP-109-M07	Analysis, Structure, Characteristics, Experimentation of Network and Databases (ASCEND)	(1) FREDERICK KIN HING PHOA	Institute of Statistical Science, Academia Sinica
AS-TP-109-M07-1	Generation, Evolution and Partition of the Structure of Network Data	(2) CHEN-HSIANG YEANG	Institute of Statistical Science, Academia Sinica
AS-TP-109-M07-2	Interpretation, Test and Summary of the Characterization of Network Data	(2) WEI-CHUNG LIU	Institute of Statistical Science, Academia Sinica

AS-TP-109-M07-3	Analysis, Modeling and Experimentation of the Network Data	(2) FREDERICK KIN HING PHOA (3) TING-LI CHEN (3) TSO-JUNG YEN (3) MING-CHUNG CHANG	Institute of Statistical Science, Academia Sinica Institute of Statistical Science, Academia Sinica Institute of Statistical Science, Academia Sinica Graduate Institute of Statistics, National Central University
AS-TP-109-M07-4	Presentation, Visualization and Applications of the Analytical Results of Network Data	(2) MING-YUEH HUANG (3) TAI-CHI WANG (3) SHENG-LI TZENG	Institute of Statistical Science, Academia Sinica Innovation Applications Division, National Center for High-performance Computing Department of Applied Mathematics, National Sun Yat-sen University
AS-TP-109-M09	Quantum manipulations of spinor Bose-Einstein condensates	(1) YU-JU LIN (3) MING-SHIEN CHANG	Institute of Atomic and Molecular Sciences, Academia Sinica Institute of Atomic and Molecular Sciences, Academia Sinica
AS-TP-109-M11	Extremely High-resolution Simulation of Climate and Severe Weather	(1) HUANG-HSIUNG HSU	Research Center for Environmental Changes, Academia Sinica
AS-TP-109-M11-1	Development of Taiwan Unified Model for Weather and Climate	(2) HUANG-HSIUNG HSU (3) WEI-LIANG LEE (3) GUO-YUAN LIEN (3) SHIAN-JIANN LIN	Research Center for Environmental Changes, Academia Sinica Research Center for Environmental Changes, Academia Sinica Research and Development Center, Central Weather Bureau Weather and Climate Dynamics, NOAA GFDL, USA
AS-TP-109-M11-2	Evaluation of Tropical Cyclone Activities under Current and Future Climates	(2) CHUN-CHIEH WU	Department of Atmospheric Sciences, National Taiwan University
AS-TP-109-M11-3	Development of a high-resolution cloud-resolving model (TaiwanVVM) to understand the interactions of physical-chemical processes over complex topography in Taiwan	(2) CHIEN-MING WU	Department of Atmospheric Sciences, National Taiwan University

B. Division of Life Sciences：（7 projects）

Project No.	Title of Thematic Project	(1) Project Director (2) Sub-project PI (3) Co-PI	Institution

AS-TP-109-L01	Discovery of novel coding regions in the Arabidopsis genome by proteogenomics	(1) SCHMIDT WOLFGANG	Institute of Plant and Microbial Biology, Academia Sinica
AS-TP-109-L02	Multigenerational physiological acclimation in marine fish to environmental acidification	(1) PUNG-PUNG HWANG	Institute of Cellular and Organismic Biology, Academia Sinica
AS-TP-109-L02-1	Multigenerational environmental acidification effects on body fluid homeostasis in fish	(2) PUNG-PUNG HWANG	Institute of Cellular and Organismic Biology, Academia Sinica
AS-TP-109-L02-2	Multigenerational acidification effects on energy provision in fish	(2) YUNG-CHE TSENG	Marine Research Station, Institute of Cellular and Organismic Biology, Academia Sinica
AS-TP-109-L05	Reactivating anti-tumor immunity by combination cancer immunotherapy	(1) NAN-SHIH LIAO (3) MING-SHEN DAI	Institute of Molecular Biology, Academia Sinica Division of Hematology and Oncology, Tri-Service General Hospital
AS-TP-109-L07	Role and Mechanism of AICD SUMOylation in the Pathogenesis of Alzheimer’s Disease	(1) HSIAO YUAN LEE	Institute of Biomedical Sciences, Academia Sinica
AS-TP-109-LM08	Non-synaptic communications and toxicity in ALS- Spreading of toxic proteins and RNAs	(1) YIJUANG CHERN (3) YI-CHUNG LEE (3) YUH-SHAN JOU	Institute of Biomedical Sciences, Academia Sinica Division of Peripheral Nervous System Disorders, Taipei Veterans General Hospital Institute of Biomedical Sciences, Academia Sinica
AS-TP-109-LM08-1	Elucidating the role and mechanism of ADAR1/2 regulation of NEAT1 transport in Amyotrophic Lateral Sclerosis	(2) HUNG-CHIH KUO	Institute of Cellular and Organismic Biology, Academia Sinica
AS-TP-109-LM08-2	Elucidating pathogenic mechanism of Arg-rich Dipeptide Repeats in ALS carrying C9ORF72 Hexanucleotide Expansions and developing therapeutic potentials	(2) YUN-RU CHEN	Genomics Research Center, Academia Sinica
AS-TP-109-LM08-3	Characterizing the microglia-facilitated spreading of toxicities in ALS	(2) YIJUANG CHERN	Institute of Biomedical Sciences, Academia Sinica
AS-TP-109-L10	Studying the regulation of Kranz anatomy development and rbcS in maize with applications to improve rice productivity	(1) WEN-HSIUNG LI	Biodiversity Research Center, Academia Sinica

AS-TP-109-L10-1	Determining the binding sites of regulators of Kranz anatomy development and rbcS and their regulatory networks in maize	(2) WEN-HSIUNG LI	Biodiversity Research Center, Academia Sinica
AS-TP-109-L10-2	Identifying and characterizing the regulators of early Kranz anatomy development and rbcS in maize	(2) SHIH-LONG TU	Institute of Plant and Microbial Biology, Academia Sinica
AS-TP-109-L10-3	Engineering rice with a Kranz-like leaf anatomy and C4 photosynthesis to increase its photosynthetic	(2) MAURICE S. B. KU	Institute of Bioagricultural Science, National Chiayi University
AS-TP-109-ML12	Diverse-oriented synthesis and functional study of peptidoglycan-related molecules and metabolites	(1) WEI-CHIEH CHENG (3) GUANG-CHAO CHEN	Genomics Research Center, Academia Sinica Institute of Biological Chemistry, Academia Sinica

C. Division of Humanities and Social Sciences: (2 projects)

Project No.	Title of Thematic Project	(1) Project Director (2) Sub-project PI (3) Co-PI	Institution
AS-TP-109-H01	The Material Culture and Natural History Writings of Cultural Images in East Asia.	(1) CHAO-HENG LIAO (3) SHIUH-FENG LIU (3) SHENG-CHIH LIN (3) CHE-CHIA CHANG (3) HUNG-YUEH LAN	Institute of Chinese Literature and Philosophy, Academia Sinica Research Center for Humanities and Social Sciences, Academia Sinica Institute of History and Philosophy, Academia Sinica Institute of Modern History, Academia Sinica Institute of History and Philosophy, Academia Sinica
AS-TP-109-H01-1	The Kyoho Reforms of Yoshimune Tokugawa and the Development of Natural History during the Edo Era — Focusing on Absorbing from Chinese Objects.	(2) SHIUH-FENG LIU	Research Center for Humanities and Social Sciences, Academia Sinica
AS-TP-109-H01-2	Coiling Dragon Paintings by Kyoto Kano School	(2) SHENG-CHIH LIN	Institute of History and Philosophy, Academia Sinica
AS-TP-109-H01-3	Natural history and the Birth of Modern Materia Medica.	(2) CHE-CHIA CHANG	Institute of Modern History, Academia Sinica
AS-TP-109-H01-4	Knowledge, connoisseurship, and images: a comparative study on the flower albums of China and Japan from 18th to 19th century.	(2) LI-YUN HUANG	Department of Fine Arts, Taipei National University of the Arts

AS-TP-109-H01-5	The characteristics of latter Choson's studies on natural history and the Bai Ta school's writing on material culture.	(2) YI-LING HSU	Department of Korean Language and Literature, Chinese Culture University
AS-TP-109-H01-6	Text and Image Studies: Theory of East Asian Cultural Diffusion.	(2) LO- FEN I	Chinese Programme, Nanyang Technological University
AS-TP-109-H02	Egocentric Complete Networks: Integrating Two Traditions from the Contact-based Perspective.	(1) YANG- CHIH FU (3) JING-SHIANG HWANG	Institute of Sociology, Academia Sinica Institute of Statistical Science, Academia Sinica
AS-TP-109-H02-1	Egocentric and complete religious networks: a network research combining contact diaries and social media records	(2) WEI-HSIAN CHI (3) YANG- CHIH FU (3) TA-CHIEN CHAN (3) DE-NIAN YANG	Institute of Sociology, Academia Sinica Institute of Sociology, Academia Sinica Research Center for Humanities and Social Sciences, Academia Sinica Institute of Information Sciences, Academia Sinica
AS-TP-109-H02-2	Reconstructing complete class networks from contact records on social media.	(2) WEI-CHUNG LIU (3) YEN-SHENG CHIANG (3) YANG- CHIH FU (3) KWAN-LIU MA	Institute of Statistical Science, Academia Sinica Institute of Sociology, Academia Sinica Institute of Sociology, Academia Sinica Department of Computer Science, University of California, Davis
AS-TP-109-H02-3	From egocentric to complete networks: Inference designs based on partial and inconsistent contact data	(2) HSUAN-WEI LEE (3) JING-SHIAN HWANG (3) TSO-JUNG YEN	Institute of Sociology, Academia Sinica Institute of Statistical Science, Academia Sinica Institute of Statistical Science, Academia Sinica
AS-TP-109-H02-4	Inferring Ego's complete network structures by tie strength probabilities among alters.	(2) TSO-JUNG YEN (3) JING-SHIAN HWANG (3) HSUAN-WEI LEE	Institute of Statistical Science, Academia Sinica Institute of Statistical Science, Academia Sinica Institute of Sociology, Academia Sinica