

## Results of Applications for the 2017 Integrated Thematic Projects at Academia Sinica Announced

There is a total of 27 applications for the 2017 Thematic Projects (7 from Division of Mathematics and Physical Sciences; 15 from Division of Life Sciences; 5 from Division of Humanities and Social Sciences). The applications require a budget of NT\$277,255,000 in total (NT\$84,785,000 for Division of Mathematics and Physical Sciences; NT\$168,049,000 for Division of Life Sciences; NT\$24,421,000 for Division of Humanities and Social Sciences).

15 out of 27 applications were approved in the meetings of the Second-round Review and Budget Review, including 5 from Division of Mathematics and Physical Sciences, 6 from Division of Life Sciences, and 4 from Division of Humanities and Social Sciences. The total approved budget amounts to NT\$101,451,000 (NT\$32,500,000 for Division of Mathematics and Physical Sciences; NT\$58,500,000 for Division of Life Sciences; NT\$10,451,000 for 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 (4) Associate PI	Institution
AS-106-TP-A01	Study of Novel Superconducting and Lithium-ion Battery Materials	(1) Maw Kuen Wu	Institute of Physics, Academia Sinica
	A01-1 Study of Novel Superconducting Materials	(2) Maw Kuen Wu	Institute of Physics, Academia Sinica
	A01-2 Investigating the Physical Properties and Application of Fe-Chalcogenide based Superconductors	(2) Ming-Jye Wang	Institute of Astronomy and Astrophysics, Academia Sinica
	A01-3 Novel materials for high power lithium ion battery	(2) Horng Yi Tang	Department of Applied Chemistry, National Chi Nan University
AS-106-TP-A02	Development of advanced low-voltage electron spectromicroscopy for characterization of two-dimensional materials and organic molecules	(1) Ing-Shouh Hwang	Institute of Physics, Academia Sinica
	A02-1 Low-voltage coherent electron imaging	(2) Ing-Shouh Hwang	Institute of Physics, Academia Sinica
	A02-2 Atomic-Resolution Image Reconstruction from Single-Atom-Tip Diffraction Patterns	(2) Chien-Chun Chen	Department of Physics, National Sun Yat-sen University

	A02-3 Proximity scanning transmission electron spectromicroscopy	(2) Tien-Ming Chuang	Institute of Physics, Academia Sinica
AS-106-TP-A03	Nanoscale optofluidics and bioinformatics enabled aptamer and decoy oligonucleotide screening system	(1) Chia-Fu Chou	Institute of Physics, Academia Sinica
	A03-1 Nanofluidics and bioinformatics enabled aptamer and decoy oligonucleotide screening system	(2) Chia-Fu Chou (3) I-Ping Tu	Institute of Physics, Academia Sinica Institute of Statistical Science, Academia Sinica
	A03-2 Epitope specific aptamer and decoy oligonucleotide screening design and functional validation.	(2) Lin-Chi Chen	Department of Bio-Industrial Mechatronics Engineering, National Taiwan University
	A03-3 Aptamer and decoy oligonucleotide screening using nano-optical sensors	(2) Pei-Kuen Wei	Research Center for Applied Sciences, Academia Sinica
AS-106-TP-A06	Socially Accountable Privacy Framework for Secondary Data Usage	(1) Bow-Yaw Wang	Institute of Information Science, Academia Sinica
	A06-1 The Privacy Protection Dilemma in the Age of Big Data: Differential Privacy as a Solution?	(2) Shin-Cheng Mu (3) Chuan-Feng Wu (3) Bow-Yaw Wang	Institute of Information Science, Academia Sinica Institutum Iurisprudentiae, Academia Sinica Institute of Information Science, Academia Sinica
	A06-2 Testing of Anonymized Big Data	(2) Bo-Yin Yang (3) Yuh-Jye Lee (3) Der-Tsai Lee (3) Chen-Mou Cheng	Institute of Information Science, Academia Sinica Department of Applied Mathematics, National Chiao Tung University Institute of Information Science, Academia Sinica Department of Electrical Engineering, National Taiwan University
	A06-3 Methods and Frameworks for Communal Sharing of Sensitive Data	(2) Tyng-Ruey Chuang (3) Kung Chen (3) Chih-Hsing Ho	Institute of Information Science, Academia Sinica Department of Computer Science, National Chengchi University Institute of European and American Studies, Academia Sinica

	A06-4 Transparent Data Sharing for Privacy Protection	(2) Bow-Yaw Wang (3) Wen-Tsong Chiou (3) Yu-Fang Chen	Institute of Information Science, Academia Sinica Institutum Iurisprudentiae, Academia Sinica Institute of Information Science, Academia Sinica
AS-106-TP-A07	Computational Investigations of Novel Properties of Two-Dimensional Materials	(1) Ching-Ming Wei (3) Mei-Yin Chou	Institute of Atomic and Molecular Sciences, Academia Sinica Institute of Atomic and Molecular Sciences, Academia Sinica
	A07-1 Heterostructures of Two-Dimensional Materials	(2) Mei-Yin Chou (3) Ching-Ming Wei	Institute of Atomic and Molecular Sciences, Academia Sinica Institute of Atomic and Molecular Sciences, Academia Sinica
	A07-2 Charge Density Waves and Superconductivity in Two-Dimensional Materials	(2) Ching-Ming Wei (3) Mei-Yin Chou	Institute of Atomic and Molecular Sciences, Academia Sinica Institute of Atomic and Molecular Sciences, Academia Sinica
	A07-3 Magnetism and Nonlinear Optical Properties of Two-Dimensional Materials	(2) Guang-Yu Guo	Department of Physics, National Taiwan University

**B. Division of Life Sciences : ( 6 projects )**

Project No.	Title of Thematic Project	(1) Project Director (2) Sub-project PI (3) Co-PI (4) Associate PI	Institution
AS-106-TP-B04	Tracking down cell wall biosynthesis and remodeling in bacterial growth, morphogenesis and division	(1) Yu-Ling Shih	Institute of Biological Chemistry, Academia Sinica
	B04-1 Development of In-vitro Platforms to Isolate Divisomes and Elongasome Complexes in Their Native Lipid Bilayer Environment	(2) Ling Chao	Department of Chemical Engineering, National Taiwan University
	B04-2 Design, synthesis, and evaluation of chemical probes for bacterial peptidoglycan studies	(2) Wei-Chieh Cheng (4) Ting-Jen Cheng	Genomics Research Center, Academia Sinica Genomics Research Center, Academia Sinica
	B04-3 Probing the dynamics of cell wall synthesis, divisome, elongasome, and flagellar motor during cell growth	(2) Chiu-Jung Lo	Department of Physics, National Central University

	B04-4 Characterization and live-cell imaging of the cell wall synthesis complexes and the peptidoglycan	(2) Yu-Ling Shih (3) Ching-Hao Teng (4) Shu-Yu Lin	Institute of Biological Chemistry, Academia Sinica Institute of Molecular Medicine, National Cheng Kung University Institute of Biological Chemistry, Academia Sinica
AS-106-TP-B08	Reactivating immunogenic tumor microenvironment in anti-cancer therapy	(1) Nan-Shih Liao	Institute of Molecular Biology, Academia Sinica
	B08-1 Mechanistic and application study of natural killer cell function in anti-tumor immunity	(2) Nan-Shih Liao	Institute of Molecular Biology, Academia Sinica
	B08-2 Polarized macrophages in modulation of NK cell anti-tumor immunity	(2) Ming-Shen Dai	Hematology/Oncology, Tri-Service General Hospital
	B08-3 Molecular and metabolic basis of tumor-associated macrophage activation	(2) Chih-Hao Lee	Department of Genetics and Complex Diseases, Harvard T.H. Chan, USA
AS-106-TP-B09	A molecular genetic study of bipolar I disorder among Taiwanese Han	(1) Andrew Tai Ann Cheng	Institute of Biomedical Sciences, Academia Sinica
	B09-1 Overlapping heritability of bipolar I disorder and schizophrenia: genetic determinants of delusions and hallucinations	(2) Chih-Ken Chen	School of Medicine, Chang Gung University
	B09-2 Overlapping heritability of bipolar I disorder and major depression: genetic determinants of attempted suicide	(2) Andrew Tai Ann Cheng (3) Shu-I Wu	Institute of Biomedical Sciences, Academia Sinica Department of Psychiatry, MacKay Memorial Hospital
	B09-3 Molecular genetic and mechanism studies of lithium-responsive bipolar I disorder subtype	(2) Shih-Hsin Wu	Institute of Medical Sciences, Tzu Chi University
AS-106-TP-B11	Activation and assembly of NLRP3 inflammasome: lysosomal pathways and role of novel NLRP3-interacting molecules	(1) Shie-Liang Hsieh (3) Chwan-Deng (David) Hsiao	Genomics Research Center, Academia Sinica Institute of Molecular Biology, Academia Sinica
	B11-1 Exploring the molecular mechanisms to regulate inflammasome activation by dengue virus	(2) Shie-Liang Hsieh (3) Wan-Wan Lin	Genomics Research Center, Academia Sinica Institute of Pharmacology, National Taiwan University

	B11-2 Functional and mechanistic study of TAPE endolysosomal adaptor in regulating NLRP3 inflammasome	(2) Pin Ling  (3) Chen Huan Yuan	Department of Microbiology & Immunology, National Cheng-Kung University Institute of Biomedical Sciences, Academia Sinica
	B11-3 Dissecting molecular activation of NLRP3 inflammasome: using ASC specs and Candida albicans	(2) Ming-Zong Lai  (3) Chwan-Deng (David) Hsiao	Institute of Molecular Biology, Academia Sinica Institute of Molecular Biology Academia Sinica
	B11-4 The functional role of DDX27 in the regulation of NLRP3 inflammasome activation	(2) Li-Chuang Hsu	Institute of Molecular Medicine, National Taiwan University
AS-106-TP-B13	Elucidating Pathogenic Mechanism of RNA/Protein Mislocalization for Developing Potential Therapeutic and Early Diagnostic Strategies in ALS	(1) Jen-Tse Huang  (3) Yi-Chung Lee	Institute of Chemistry, Academia Sinica Department of Neurology, Taipei Veterans General Hospital
	B13-1 Elucidating the Functional Role of Paraspeckle-associated Long Non-coding RNAs in ALS with Human Induced Pluripotent Stem Cells	(2) Hung-Chih Kuo	Institute of Cellular and Organismic Biology, Academia Sinica
	B13-2 Investigation of the interaction between abnormal energy metabolism and impaired nuclear-cytoplasmic shuttling in amyotrophic lateral sclerosis	(2) Yijuang Chern	Institute of Biomedical Sciences, Academia Sinica
	B13-3 Investigating the effects of NEAT1-mediated aberrant gene expression on TDP-43 mislocalization in Amyotrophic Lateral Sclerosis	(2) Tzu-Hao Cheng	Institute of Biochemistry and Molecular Biology, National Yang-Ming University
	B13-4 Establish a novel platform to induce photocontrollable TDP-43 amyloidogenesis and characterize its influence on the nucleocytoplasmic transport in ALS model	(2) Jen-Tse Huang	Institute of Chemistry, Academia Sinica
AS-106-TP-B14	Identifying regulators of maize leaf Kranz leaf anatomy and their regulatory networks	(1) Wen-Hsiung Li	Biodiversity Research Center, Academia Sinica
	B14-1 Predicting regulators of Kranz anatomy development and their regulatory networks in maize	(2) Wen-Hsiung Li (4) Shin-Han Shiu (4) Mei-Yeh Jade Lu	Biodiversity Research Center, Academia Sinica Department of Plant Biology, Michigan State University, USA Biodiversity Research Center, Academia Sinica

	B14-2 Functional studies on candidate regulators of Kranz anatomy development	(2) Shih-Long Tu (4) Shu-Hsing Wu (4) Hsin-Hung Yeh (4) Choun-Sea Lin	Institute of Plant and Microbial Biology, Academia Sinica Institute of Plant and Microbial Biology, Academia Sinica Agricultural Biotechnology Research Center, Academia Sinica Agricultural Biotechnology Research Center, Academia Sinica
	B14-3 Functional studies of key candidate regulators of maize Kranz anatomy in rice	(2) Maurice S. B. Ku (3) Kin-Ying To	Bioagricultural Science, National Chiayi University Agricultural Biotechnology Research Center, Academia Sinica

**C. Division of Humanities and Social Sciences: (4 projects)**

Project No.	Title of Thematic Project	(1) Project Director (2) Sub-project PI (3) Co-PI (4) Associate PI	Institution
AS-106-TP-C01	The Experience of the West in Modern China and Japan: An Approach from the Perspectives of the Intellectual Link	(1) Kwang-Che Pan	Institute of Modern History, Academia Sinica
	C01-1 J. S. Mill's Liberal Ideas in Modern Japan and China: A Comparative Study on the Different Translations of his On Liberty and Other Writings	(2) Kwang-Che Pan	Institute of Modern History, Academia Sinica
	C01-2 The Construction of Sun Yat-sen's "Principle of Minsheng": The Practice of Western Scholarship on East Asia Society	(2) Tzu-Chin Huang	Institute of Modern History, Academia Sinica
	C01-3 The Western Experiences and Modern Sino-Japanese Cultural Exchange: The Formation and Dissemination of Modern Concepts	(2) Rikiei Chin	Department of Economics, Seijo University, Japan
	C01-4 Chinese Writings of Protestant Missionaries and the Foundation of Modern Sino-Japanese Literary Styles	(2) Jianhui Liu	International Research Center for Japanese Studies, Japan
	C01-5 Port-Town English Newspapers and the Inter-port Discursive Sphere in Nineteenth-century East Asia	(2) Marlon Zhu	Institute of Modern History, Academia Sinica

AS-106-TP-C02	Taiwanese Philosophy and the Existential Movement, the Japanese Era	(1) Tzu-Wei Hung (3) Wan-Chuan Fang (3) Wen-Hong Huang	Institute of European and American Studies, Academia Sinica Department of Philosophy, Soochow University Graduate Institute of Philosophy, National Tsing Hua University
	C02-1 A Preliminary Study of the Existential Movement	(2) Tzu-Wei Hung (3) Duen-Min Deng (3) I-Chi Wang (4) Peng-Hsiang Wang	Institute of European and American Studies, Academia Sinica Department of Philosophy, National Taiwan University. Department of Philosophy, National Chung Cheng University. Institutum Iurisprudentiae, Academia Sinica
	C02-2 The subjectivity of Taiwan philosophy and review of Taiwanese philosophers' thought across the period of Japan-ruling	(2) Ruey-Lin Chen (3) Cheng-Hung Tsai (3) Hsing-Chien Tsai	Department of Philosophy, National Chung Cheng University Department of Philosophy, Soochow University Department of Philosophy, National Chung Cheng University
	C02-3 Civilization, History, and Community--The Possibility of a History of Taiwanese Political Thought	(2) Rwei-Ren Wu	Institute of Taiwan History, Academia Sinica
	C02-4 History and Impact of Japanese Philosophy to Philosophy in Taiwan under Japanese Occupation	(2) Chin-ping Liao (3) Ching-Yuen Cheung (3) Wei-Hung Yen (4) Mayuko Uehara  (4) Yoshinobu, Shino	Department of Philosophy, Sun-Yat Sen University, Guangzhou Department of Japanese Studies, The Chinese University of Hong Kong, Hong Kong Department of Philosophy, Tunghai University. Graduate School of Letters, Department of Japanese Philosophy, Kyoto University, Japan School of Arts and Letters, Meiji University, Japan
AS-106-TP-C04	Monks, Merchants, and Diplomats: Transmitters of Cultural Images in Early Modern East Asia	(1) Chao-Hen Liao (3) Sheng-Chih Lin (3) Shiuh-Feng Liu	Institute of Chinese Literature and Philosophy, Academia Sinica Institute of History and Philology, Academia Sinica Research Center for Humanities and Social Sciences, Academia Sinica
	C04-1 Visions of Home: Life Writing and Experiences of Foreignness in the Works of Late Ming and Early Qing Chinese Monks in Japan	(2) Chao-Hen Liao	Institute of Chinese Literature and Philosophy, Academia Sinica

	C04-2 An Alternative Exchange under the “Seclusion” System: The Image of China as Reflected in the Overseas Drifting Accounts and Inquiries by Writing in the Edo Japan	(2) Shiuh-Feng Liu	Research Center for Humanities and Social Sciences, Academia Sinica
	C04-3 Kyoto Kano School and the Confucian Scholars in Edo Period	(2) Sheng-Chih Lin	Institute of History and Philology, Academia Sinica
	C04-4 The Exhibition of Products and the Encounter of Chinese and Dutch Materia Medica: Especially Focusing on Hiraga Gennai's Activities	(2)Che-Chia Chang	Institute of Modern History, Academia Sinica
	C04-5 Confucian Scholars of Shoheizaka School and Diplomacy in Late Tokugawa Period: Focusing on Koga Seiri and Koga Douan	(2)Hung-Yueh Lan	Institute of Social Research and Culture Studies, National Chiao Tung University
	C04-6 From Shen Quan to the Nanhin style: Transmission and Acceptance of Bird-and-Flower Paintings Between China and Japan in the Eighteenth Century	(2) Li-Yun Huang	Department of Fine Arts, Taipei National University of the Arts
	C04-7 A Research on the Activities of Bookstores and Dissemination of Chinese Books in Osaka during the Edo Period Based on Slang Dictionaries and Novels	(2) Kuei-Ju Lin	Department of Chinese Literature, National Chengchi University
	C04-8 A study on the journey to Qing dynasty and object description by Korean scholars : Focused on the chinese social circles and influences in Korea by Bai Ta Pai	(2) Yi Ling Hsu	Department of Korean Language and Literature, Chinese Culture University
	C04-9 Celebratory Activities in Late Qianlong Period and East Asian Cultural Interaction: Case Study of Qiansouyan and Baxun Wanshou Shengdian	(2) Lo-Fen I	Division of Chinese, Nanyang Technological University, Singapore
	C04-10 The Border-Transgression of Buddhists' Belief in Budai : Basic research on Shaping and Transmission of The Image of Budai Monk in East Asia	(2) Ji-Dong Chen	School of International Politics, Economics and Communication, Aoyama Gakuin University, Japan



AS-106-TP-C05	Tracking Digital Footprints of Network Diversity and Well-being	(1) Yang-Chih Fu (3) Hwai-Chung Ho (3) Jing-Shiang Hwang	Institute of Sociology, Academia Sinica Institute of Statistical Science, Academia Sinica Institute of Statistical Science, Academia Sinica
	C05-1 Changing Network Diversity and Well-being in Young Adulthood: Recent College Graduates and Newlyweds	(2) Yang-Chih Fu (3) Yen-Hsin Alice Cheng (3) Kwan-Liu Ma (4) Jing-Shiang Hwang (4) De-Nian Yang (4) Ray-May Hsung (4) Hwai-Chung Ho	Institute of Sociology, Academia Sinica Institute of Sociology, Academia Sinica Computer Science, University of California at Davis, USA Institute of Statistical Science, Academia Sinica Institute of Information Science, Academia Sinica Department of Sociology, National Chengchi University Institute of Statistical Science, Academia Sinica
	C05-2 The Spread of Health Behaviors and Information through Diversified Network Structures: ClickDiary 2.0	(2) Jing-Shiang Hwang (3) Ta-Chien Chan  (3) Tso-Jung Yen (4) Yang-Chih Fu	Institute of Statistical Science, Academia Sinica Research Center for Humanities and Social Sciences, Academia Sinica Institute of Statistical Science, Academia Sinica Institute of Sociology, Academia Sinica
	C05-3 Diversity-based Detection and Network Intervention for Social Media Addiction: A Machine Learning Approach	(2) De-Nian Yang (4) Yang-Chih Fu (4) Chyi-In Wu (4) Yen-Sheng Chiang (4) Wei-Chung Liu (4) Chih-Ya Shen (4) Hong-Han Shuai	Institute of Information Science, Academia Sinica Institute of Sociology, Academia Sinica Institute of Sociology, Academia Sinica Department of Sociology, The Chinese University of Hong Kong, Hong Kong Institute of Statistical Science, Academia Sinica Department of Computer Science, National Chiao Tung University. Department of Electrical and Computer Engineering, National Chiao Tung University