

Outputs Arising from Dean's Research Fund

Fifth Round

Individual Research Scheme (IRS)	
Project Leader	Dr MAN Yu Bon, SES
Project Title (<i>RefNo.</i>)	Uptake of Persistent Toxic Substances by Marine Fish Fed with Food waste-Based Feed: The Role of Fish Gut Microbiota (<i>IRS-1</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> 1. Man, Y. B., Mo, W. Y., Zhang, F. & Wong, M. H.*, Health risk assessment based on polycyclic aromatic by hydrocarbons in freshwater fish cultured using food waste-based diets. <i>Environmental Pollution</i>, 113380. <u>(2019)</u> 2. Zhang, F., Man, Y. B., Mo, W. Y., Wong, M.H.*, Application of Spirulina in aquaculture: a review on wastewater treatment and fish growth. <i>Review in Aquaculture</i>, 11, 1-18. <u>(2019)</u> 3. Mo, W. Y., Man, Y.B., Zhang, F. & Wong, M.H.*, Fermented food waste for culturing jade perch and Nile tilapia: Growth performance and health risk assessment based on mental/loids. <i>Journal of Environmental Management</i>, 236, 236-244. <u>(2019)</u> 4. Mo, W. Y., Man, Y.B. & Wong, M.H.*, Evaluation of Nutritional Value s of Food Waste-Based Feed Pellets and Common Feeding Materials for Culturing Freshwater Fish In So, W. Chow, C., Lee, J. (eds) <i>Environmental Sustainability and Education for Waste Management, Education for Sustainability</i>. Springer, Singapore <u>(2019)</u> 5. Man, K. Y., Chow, K. L., Man, Y. B., Mo, W. Y., & Wong, M. H. *, Use of biochar as feed supplements for animal farming. <i>Critical Review s in Environmental Science and Technology</i>. <u>(2019)</u> <p>External Grant</p> <ol style="list-style-type: none"> 1. GRF Coffee grounds-biochar as feed supplements, to reduce residues of antibiotic s and spread of antibiotic resistance genes in fish (Sabah grouper) (Date of application: Nov 2019)
Project Leader	Dr CHOW Cheuk Fai, SES
Project Title (<i>RefNo.</i>)	Investigation of a New Technology for Plastic Wastes Treatment Using Solid-phase Process with Ball Milling System (<i>IRS-2</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> 1. Chow, C. F.* & Chan C.S., A Study on Fenton Technology for

	<p>Polypropylene Waste Degradation and recovery of High-Value Chemicals (In press). In So, W. M. W., Chow, C. F. & Lee, J. C. K. (Eds.), Environmental Sustainability and Education for Waste Management (169-180). Singapore: Springer Nature. <u>(Accepted, but not yet published)</u></p> <p>External Grant</p> <ol style="list-style-type: none"> GRF From Plastic Wastes to Resources: The C-H Bond Activation of Polyethylene, Polypropylene and Polyvinyl chloride by High Valent Manganese Catalysts (Date of application: Nov 2018)
Project Leader	Dr CHAN Man Ho, SES
Project Title (<i>Ref No.</i>)	A Comprehensive Study of Multiverse: Perspectives from Science and Philosophy (<i>IRS-3</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Chan, M. H*, Kalam cosmological Argument. Soochow Journal of Philosophical Studies, 38, 1-28. <u>(2018)</u> Chan, M. H*, Is the History of our Universe Finite?. Finite Theology, 17, 248-2567. <u>(2019)</u> Chan, M. H*, Are Multiverse Theories Conventionally Scientific? <u>(Under Review)</u> <p>Conference:</p> <ol style="list-style-type: none"> The 8th Asia Pacific Conference on Philosophy of Science Title: Is the History of our Universe Finite? <p>External Grant</p> <ol style="list-style-type: none"> The Humanities and Social Sciences Prestigious Fellowship Scheme A Comprehensive Study of the Multiverse Hypothesis: A Philosophical Perspective (Date of application: Feb 2019)
Project Leader	Dr SUN Fenghua, HPE
Project Title (<i>Ref No.</i>)	Reliability and Validity of the Modified Chinese Version of the Netherlands Physical Activity Questionnaire for Young Children (NPAQ) in Assessing Physical Activity Behaviors in Preschool Children in Hong Kong (<i>IRS-4</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Physical Activity, sedentary behavior, and sleep in Hong Kong kindergarten children <u>(Under Preparation)</u>

	<p>Conference:</p> <ol style="list-style-type: none"> 23th Anniversary Congresssn of European College of Sports Science Title: Physical activity and sleep in Kindergarten children in Hong Kong <p>External Grant</p> <ol style="list-style-type: none"> Health and Medical Research Fund 2018 Effect of Game-based High-Intensity Interval Training on the Executive Function of Preadolescent in Hong Kong : A Pilot Randomized Control Trial (Date of application: 1 April 2019)
Project Leader	Dr LI Chunxiao & Dr SUN Fenghua, HPE
Project Title (<i>Ref No.</i>)	Effect of Brief Mindfulness Induction on University Athletes' Sleep Quality Following Night Training: A Pilot Study (<i>IRS-5</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Li, C.*, Kee, Y.H. & Lam, L.S. Effect of Brief Mindfulness Induction on University Athletes' Sleeping Quality Following Night Training. <i>Frontiers in Psychology</i>, 2018. (<u>2018</u>)
Project Leader	Dr LI Wai Chin, SES
Project Title (<i>Ref No.</i>)	Investigation of Root Anatomy in Rice with Different Characteristics of Metalloid Uptake and Accumulation (<i>IRS-6</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Huang, L., Li, W.C.* & Ye, Z.H., Mitigation of metal accumulation in rice by water management. (<u>Under Preparation</u>) <p>External Grant</p> <ol style="list-style-type: none"> GRF Effects and mechanisms of cultivar-water condition interactions on the uptake and accumulation of cadmium in rice (<i>Date of application: Nov 2018</i>)
Project Leader	Dr CHEUNG Ka Luen, MIT
Project Title (<i>Ref No.</i>)	Study of Global Existence of the Solutions to the 3-dimensional Euler Equations for Generalized Chaplygin Gas in the Vacuum (<i>IRS-7</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Cheung, K. L.*, Global Existence of the Three-dimensional Compressible Euler Equations for Generalized Chaplygin Gas with Damping (<u>Under Review</u>) Cheung, K. L.* & Wong, S., Finite-time Blowup and Global-in-time Exact Solutions of the Compressible Euler Equations for Generalized

	<p>Chaplygin Gas (<i>Under Review</i>)</p> <ol style="list-style-type: none"> Cheung, K. L.* & Wong, S., .*, Global Existence of Solutions to the Compressible Euler Equations with Time-dependent Damping and Logarithmic State Equation (<i>Under Review</i>) Cheung, K. L.* & Wong, S., Finite-time Blowup of C1 Solutions to the Compressible Euler Equations with Arbitrary Time-dependent Damping (<i>Under Review</i>) Cheung, K. L.* & Wong, S., Finite-time Singularity Formation of C1 Solutions to the Compressible Euler Equations with Time-dependent Damping (<i>Under Review</i>) <p>External Grant</p> <ol style="list-style-type: none"> GRF Blow-up Phenomenon of the Compressible Euler Equations for Generalized Chaplygin Gas and Beyond (Date of application: Nov 2018)
Project Leader	Dr XIE Haoran, MIT
Project Title (<i>Ref No.</i>)	Data Augmentation for Chinese Character Recognition via Generative Adversarial Networks (<i>IRS-8</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Wang, Q., Luo, L., Xie. H.*, Rao, Y., Lau, R. Y. K., Zhang, D., Data Augmentation for Chinese Character Recognition via Generative Adversarial Networks. Neural Networks (<i>Under Review</i>) Luo, L., Xie, H.*, Rao, Y., Wang, F. L., Personalized recommendation by matrix co-factorization with tags and time information. Expert systems With Application 119, 311-321 (<i>2019</i>) Liu, Y., Chen, X., Rao, Y., Xie H., Li, Q., Zhang, J., Zhao, J., & Wang, F. L., Supervised Group Embedding for Rumor Detection in Social Media. Lecture Notes in Computer Science, 11496,139-153 (<i>2019</i>) <p>External Grant</p> <ol style="list-style-type: none"> GRF Multi-Style and - Method based Relief Modeling from 3D Model (Set) (Date of application: Nov 2018)
Project Leader	Dr YUEN Man Wai, MIT
Project Title (<i>Ref No.</i>)	The Flows of the Euler Equations with Coriolis Force in Ocean Dynamics (<i>IRS-10</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Dong. J. J.* & Yuen, M. W., Soliton molecules and mixed solutions of the (2+1)-dimensional bidirectional Sawada-Kotera equation.

	<p>Communications in Theoretical Physics, 72, 025002 (2020)</p> <p>2. Ho, C. Y. & Yuen. M. W.*, Blowup for projected 2-dimensional C2solutions of compressible Euler equations with Coriolis force. Nonlinear Analysis: Real World Applications, 55, 103143 (2020)</p> <p>3. Fan, E. G. & Yuen, M. W.*, Exact Vector Solutions for Euler Equations with Coriolis Force in Atmospheric Dynamics. (<u>Under review</u>)</p>
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<u>Interdisciplinary Research Scheme (IDS)</u>	
Project Leader	Dr CHEUNG Pui Yee, HPE
Project Title (<i>Ref No.</i>)	A Pilot Study on a Smartphone-based Intervention in Overweight Middle-aged Adults (<i>IDS-1</i>)
Output:	<p>Journal/ book</p> <p>1. Cheung, P. Y.*, Tentative title: Engagement in an apps-based intervention of weight control for middle-age adult : Difference with human-touch (<u>Under preparation</u>)</p>
Project Leader	Prof YEUNG Yau Yuen, SES
Project Title (<i>Ref No.</i>)	Low-cost Online Experiments for Science Education in Hong Kong and China: Trial Implementation and Evaluation of Learning Effectiveness (<i>IDS-3</i>)
Output:	<p>Journal/ book</p> <p>1. Tho, S. W. & Yeung, Y. Y.*, An implementation of remote laboratory for secondary science education. Journal of Computer Assisted Learning, 34(5), 629-640. (2018)</p> <p>2. Yeung, Y. Y. *, Sun, D. & Tho, S.W., Students' Learning of science through online experiments: Pilot evaluation in Mainland China's secondary schools. (for submission to Journal of Science Education and Technology) (<u>Under Preparation</u>)</p> <p>3. Lee, L. H., & Yeung, Y. Y. *, A Scoping Review of Flipped Classrooms in K-12 Science Education: A Call for Future Research Grounded in Technology–Enhanced and Self-Regulated Learning Strategies. Journal of Computers in Mathematics and Science Teaching. (<u>Under Review</u>)</p> <p>4. Yeung, Y. Y.*, Online real-time experiments for enhancing learning of interdisciplinary and disciplinary STEM subjects at the secondary level. A book chapter for publication by Routledge (<u>Under Preparation</u>)</p> <p>External Grant</p> <p>1. GRF</p>

	Education effectiveness and process of online laboratory for STEM education and evaluation in secondary schools ((Date of application: Nov 2018)
Project Leader	Dr SUN Daner, MIT
Project Title (<i>Ref No.</i>)	Adaptive Scaffolding for Learning Fraction among Students with Learning Disabilities (<i>IDS-5</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Sun, D.* & Yeung, W. K., Design and Develop the Computer-Supported Scaffolding in Learning Fractions for Primary Students with Learning Difficulties. (<u><i>Under preparation</i></u>) <p>External Grant</p> <ol style="list-style-type: none"> The Public Policy Research Fund (Special Round) No Children Left Behind : Computer-mediated Scaffolding in Learning Fractions for Students with Learning Disabilities or Learning Difficulties (Date of application: Dec 2019)
Project Leader	Dr DENG Wenjing, SES
Project Title (<i>Ref No.</i>)	Developing a Science Education on Indoor Air Quality (IAQ) for Primary and Secondary Schools Based on a Pilot Case Study in EdUHK Campus (<i>IDS-8</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> Li, N., Chen, X.W., Deng, W.J.*, Giesy, J. P. & Zheng, H.L. PBDEs and Dechlorane Plus in the environment of Guiyu, Southeast China: A historical location for E-waste recycling (2004, 2014). Chemosphere, 199, 603-611. (<u><i>2018</i></u>) Chen, J., Liu, Y.S., Deng, W.J.* & Ying. G.G. *, Removal of steroid hormones and biocides from rural wastewater by an integrated constructed wetland. Science of the Total Environment 660, 358-365. (<u><i>2019</i></u>) Chen, J., Ying, G.G. * & Deng, W.J., Review of antibiotic residues in food: Sources, extraction, analysis and human health concerns. Environment International (<u><i>under review</i></u>) Li, N., Ho, W. K., Wu, R. S. S., Ying, G. G. & Deng, W.J.* Ultra violet filters in the urine of preschool children and drinking water in Hong Kong. Environmental International (<u><i>under review</i></u>) <p>External Grant</p> <ol style="list-style-type: none"> GRF Estimating the key endocrine disrupting chemicals (EDC) by effect

	directed analysis (EDA) in children's urine in Hong Kong and Belgium (Date of application: November 2018)
Project Leader	Prof CHOU Kee Lee, APS
Project Title (<i>RefNo.</i>)	Multi-modal Measurement of Learning Engagement in Hong Kong Primary School Students (<i>IDS-9</i>)
Output:	<p>Journal/ book</p> <p>1. A convolutional neural network for emotion classification based on multi-modality bio-signal data (<i>Under preparation</i>)</p> <p>External Grant</p> <p>1. Public Policy Research Fund</p> <p>Multi-modal measurement of learning engagement in Hong Kong primary school students (Date of application: July 2018)</p>

Research Impact Prize (RMP)

Project Leader	Dr LAM Chung Wah James, SES
Project Title (<i>RefNo.</i>)	Assessment of Contaminants of Emerging Concern in Aquatic Environment (<i>RMP-3</i>)
Output:	<p>Journal/ book</p> <p>1. Lai, N. L. S., Kwok, K.Y., Wang, X., Yamashita, N., Liu, G., Leung, K. M. Y., Lam, P. K. S. & Lam, J. C. W.*, Assessment of organophosphorus flame retardants and plasticizers in aquatic environments of China (Pearl River Delta, South China Sea, Yellow River Estuary) and Japan (Tokyo Bay). <i>Journal of Hazardous Materials</i> 2019, 371, 288-294. (<i>2019</i>)</p>

Research Output Prize (ROP)

Project Leader	Dr LAM Chung Wah James, SES
Project Title (<i>RefNo.</i>)	Occurrence, Distribution, and Fate of Organic UV Filters in Coral Communities (<i>ROP-7</i>)
Output:	<p>Journal/ book</p> <p>1. Lai, N. L. S., Kwok, K.Y., Wang, X., Yamashita, N., Liu, G., Leung, K. M. Y., Lam, P. K. S. & Lam, J. C. W.*, Assessment of organophosphorus flame retardants and plasticizers in aquatic environments of China (Pearl River Delta, South China Sea, Yellow River Estuary) and Japan (Tokyo Bay). <i>Journal of Hazardous Materials</i> 2019, 371, 288-294. (<i>2019</i>)</p>