

Outputs Arising from Dean's Research Fund

Sixth Round

Individual Research Scheme (IRS)	
Project Leader	Dr ZHANG Qiaoping, MIT
Project Title (<i>Ref No.</i>)	Why I Find Important (WhyFI) in Mathematics Teaching: How Mainland China and Hong Kong Mathematics Teachers' Values Influence Their Teaching (<i>IRS-7</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> 1. Tang, H. J., Seah, W.T., Zhang, Q. P. & Zhang W. Z, The Mathematics learning attributes of valued by student in Eastern China (<i>2020</i>) 2. Seah, W. T., Zhang, Q. P., Bishop, A., Mentors Expressing What They Value Through Their Writings: Emphasizing the Person in Mathematics. ECNU Review of Education (<i>2020</i>) 3. Seah, W. T., Zhang, Q. P.* & Han, C., Hong Kong students' espoused values in learning mathematics (<i>Under Preparation</i>) <p>Conference</p> <ol style="list-style-type: none"> 1. The 14th International Congress on Mathematics Education Title: Comparing espoused values in mathematics teaching between novice and experience primary teachers: A case study in Mainland China
Project Leader	Dr SONG Yanjie, MIT
Project Title (<i>Ref No.</i>)	Developing and evaluating the impact of learning dashboards on collaborative science inquiry on a mobile learning platform (<i>IRS-8</i>)
Output:	<p>Conference</p> <ol style="list-style-type: none"> 1. The 28th International Conference on Computers in Education (ICCE 202) Title: Evaluation of a Dashboard Developed on a Mobile Collaborative Science Inquiry App <p>External Grant</p> <ol style="list-style-type: none"> 1. GRF Enhancing students' engagement in learning via zoom supported by animated avatars in higher education (Date of application: Oct 2020)
Project Leader	Dr LAM Chung Wah James, SES
Project Title (<i>Ref No.</i>)	Assessment of organophosphorus flame retardants in Hong Kong coral communities (<i>IRS-10</i>)

Output:	External Grant 1. GRF Pharmaceutical residues in the source water and water treatment system (Date of application: Nov 2019)
Project Leader	Dr CHOW Cheuk Fai Stephen, SES
Project Title (<i>Ref No.</i>)	Converting Plastic Wastes to Towngas: A Study of C-H Bond Activation of Polyolefin by Lewis Acid-activated KMnO ₄ (<i>IRS-11</i>)
Output:	Journal/ book 1. Chow, C. F.*, Huang, M., Zheng, A., Chang, S., Lam, C. S. & Lau, K. C.*, Bond Desaturation vs. OH Rebound: C-H Bond Activation in Polyolefin Plastics by Solid-State Ball-Milling (<i>Under Preparation</i>) External Grant 1. GRF Desaturation vs. Rebound : A Critical Consideration to Oxidize C-H Bond of Solid Polyolefin (Date of application: Nov 2019)

Interdisciplinary Research Scheme (IDS)	
Project Leader	Dr LING Man Ho, MIT
Project Title (<i>Ref No.</i>)	Developing Item Response Models with Copula Models for Data with Local Item Dependence (<i>IDS-2</i>)
Output:	Journal/ book 1. Ling, M. H. *, Chan, P. S., Ng, H. K. T. & Balakrishnan, N., Copula models for one-shot device testing data with correlated failure modes. Communications in Statistics –Theory and Methods (<i>2020</i>) 2. Ling, M. H. *& Balakrishnan, N., Recent developments in accelerated life testing data analyses for one-shot devices, Springer Handbook of engineering Statistics, 2nd ed., Springer Nature (<i>2020</i>) 3. Ling, M. H. * & Hu, X. W., Optimal design of simple step-stress accelerated life test for one-shot devices under Weibull distributions, Reliability Engineering & System Safety (<i>2020</i>) External Grant 1. GRF Statistical inference for one-shot device testing data with correlated failure modes (Date of application: Nov 2018)
Project Leader	Dr CHENG Kwok Shing & Dr XIE Haoran, MIT
Project Title (<i>Ref No.</i>)	Supervised Humor Detection Models with GAN-based Data Argumentation Framework for Affective Vocabulary Learning Systems (<i>IDS-3</i>)

Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> 1. Qin, X., Rao, Y., Xie, H. Yin, J., & Wang., F. L., Extractive convolutional adversarial networks for network embedding, 23(3).1925-1944, World Wide Web <u>(2020)</u> 2. Wang, Q., Lou, L., Xie, H. *, Rao, Y., Lau, R. Y. K. & Zhang, D., A deep data augmentation framework based on generative adversarial networks, Expert System with Applications <u>(Under Review)</u> <p>External Grant</p> <ol style="list-style-type: none"> 1. GRF Emotion Distribution Learning over Short Text (Date of application: Nov 2019)
Project Leader	Dr DENG Wenjing, SES
Project Title (<i>Ref No.</i>)	Environmental education and policy implications on veterinary antibiotics in food of Hong Kong (<i>IDS-5</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> 1. Li, N., Chai, Y. M., Jones, K. C., Ying, G. G. & Deng, W. J. *, Airborne antibiotic resistance genes in Hong Kong kindergarten. Environmental Pollution 260 <u>(2020)</u> <p>External Grant</p> <ol style="list-style-type: none"> 1. GRF Estimating the key endocrine disrupting chemicals (EDCs) by effect directed analysis (EDA) in children's urine in Hong Kong and Belgium (Date of application: Nov 2018)
Project Leader	Dr CHEUNG Ting On Lewis, SSC
Project Title (<i>Ref No.</i>)	Does human rights awareness lead people to engage in environmental activism? The case of the development of country parks in Hong Kong (<i>IDS-7</i>)
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> 1. Lee, K. M. Y., Lee, J. C. K., Ma. A. T. H., & Cheung, L. T. O. *, Does human rights awareness spur environmental activities? Hong Kong's country park' controversy. Land Use Policy, 87, 104033 <u>(2019)</u> 2. Cheung, L.T. O. *, Ma, A.T.H., Lee, K. M. Y., Lee, J. C. K. & Lo, Y. L., How does political orientation influence one's environmental attitude and behavior? Debate over country park conservation in Hong Kong. Environmental Science and Policy. 99, 11-122 <u>(2019)</u>
Project Leader	Prof SO Wing Mui Winnie, SES
Project Title (<i>Ref No.</i>)	Understanding the extent of the integration of science, technology,

	engineering and mathematics in students' inquiry activities (<i>IDS-8</i>)
Output:	Journal/ book 1. Wan, Z.H., So, W. M. W. * & Zhan, Y., Developing and validating a scale of STEM project based learning experience. Research in Science Education (<i>Under Review</i>) 2. So, W.M. W.*, Does Computation Technology Matter in STEM Projects? (<i>Under Review</i>)

Student Researcher Scheme (SRS)

Project Leader	Dr XIE Haoran, MIT
Project Title (<i>Ref No.</i>)	Preliminary Study on Data Augmentation with Generative Adversarial Nets (<i>SRS-1</i>)
Output:	Journal/ book 1. Xie, H., Full, L. W., Wang, Q., Wei, M. *, Kwan, R. & Qing, J., Joint weight least squares for normal decomposition of 3D measurement surface. Measurement Science and Technology, 31, 045401 (<i>2020</i>)

Research Impact Prize (RMP)

Project Leader	Prof WOO Chi Keung, APS
Project Title (<i>Ref No.</i>)	Estimation of Electricity and Transportation Demand (<i>RMP-1</i>)
Output:	Journal/ book 1. Woo, C. K. *, Cheng, Y. S. *, Li, R., Shiu, A., Ho, S. T. & Horowitz, I. Can Hong Kong price-manage its cross-harbor-tunnel. Transportation Research Part A : Policy and Practice, 82, 94-109 (<i>2015</i>) 2. Woo, C. K. *& Zarnikau, J. Renewable energy's vanishing premium in Texas's retail electricity pricing plans. Energy Policy, 132, 764-770 (<i>2019</i>)

Research Output Prize (ROP)

Project Leader	Prof WOO Chi Keung, APS
Project Title (<i>Ref No.</i>)	Occurrence, Distribution, and Fate of Organic UV Filters in Coral Communities (<i>ROP-7</i>)

Output:	<p>Journal/ book</p> <ol style="list-style-type: none"><li data-bbox="507 192 1362 461">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). Journal of Hazardous Materials 2019, 371, 288-294. <u>(2019)</u><li data-bbox="507 479 1378 607">2. Woo, C. K. * , Milstein, I., Tishler, A. & Zarnikau, J., A wholesale electricity market design sans missing money and price manipulation, Energy Policy, 134, Article 110988 <u>(2019)</u><li data-bbox="507 624 1378 752">3. Zarnikau, J., Tsai, C. H. & Woo, C. K., Determinants of the wholesale prices of energy and ancillary services in the US Midcontinent electricity market, Energy,195 (117051),1-12 <u>(2020)</u>
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