

## Outputs Arising from Dean's Research Fund

### Second round

<b>Individual Research Scheme (IRS)</b>	
Project Leader	<b>Prof SO Wing Mui Winnie, SES</b>
Project Title ( <i>RefNo.</i> )	Public Perception on Food and Plastic Waste Minimisation & Barriers to Reduce, Reuse and Recycle Behaviour in Hong Kong ( <i>IRS-1</i> )
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> <li>1. *So W. M., Chen, Y., Cheng, N. Y., Cheung, L., Chow, S., Lo, S. K., Environmental sustainability on plastic waste management (<u>under preparation</u>)</li> <li>2. So, W.M. *, Chen, Y., Cheng, N.Y., Cheung, L., Chow, S. &amp; Lo, S.K.. Extending the theory of planned behavior to explore the plastic waste minimization intention of Hong Kong citizens (<u>under review</u>)</li> </ol> <p>Conference</p> <ol style="list-style-type: none"> <li>1. International Conference on Synergy between Science and Social Development Title: Education for Plastic Waste Management</li> <li>2. Asia Pacific Educational Research Association – Taiwan Educational Research Association 2016 International Conference Title: Challenges and opportunities of Education For Sustainability</li> <li>3. Recycling Summit 2018 Title: Education on Plastic Recycling Waste (PRW) management in Hong Kong Schools</li> </ol> <p>External Grant</p> <ol style="list-style-type: none"> <li>1. Public Policy Research (PPR) Funding Scheme Title: Challenges and opportunities with Hong Kong students' Sciences, Technology, Engineering and Mathematics aspirations (Date of application: September 2018)</li> </ol>

<b>Collaborative Research Scheme (CRS)</b>	
Project Leader	<b>Prof YEUNG Yau Yuen , SES</b>
Project Title ( <i>RefNo.</i> )	Theoretical Calculations of the Luminescence Properties of Transition Metal for Developing Eco-friendly Optical Devices ( <i>CRS-1</i> )
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> <li>1. Yau Yuen Yeung and Peter A. Tanner*., Trends in Atomic Parameters for Crystals and Free Ions across the Lanthanide Series: the Case of LaCl<sub>3</sub>: Ln<sup>3+</sup>. The Journal of Physical Chemistry A, 119(24), 6309-6316. (<u>2015</u>)</li> </ol>

2. Meng Ju, Xiaoyu Kuang\*, Cheng Lu\*, Hui Li, Jingjing Wang, Chuanzhao Zhang, Yongsheng Zhu and Yauyuen Yeung\*, Determination of the microstructure, energy levels and magnetic dipole transition mechanism for Tm<sup>3+</sup> doped yttrium aluminum borate. *Journal of Materials Chemistry C*, 4(10), 1988-1995. (2016)
3. Ju, M., Lu, C., Yeung, Y.Y., Kuang, X., Wang, J., & Zhu, Y., Structural Evolutions and Crystal Field Characterizations of Tm-Doped YA1O3: New Theoretical Insights. *ACS Applied Materials & Interfaces*, 8(44), 30422-30429. (2016)
4. LI Bang-xing, LEUNG Chi-fai and YEUNG Yau-yuen\*, First-principle calculations and re-analysis of the optical spectra and electron paramagnetic resonance parameters for Yb<sup>3+</sup> in YA1<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> crystal. *Journal of Rare Earths*, 35(3), 254-258. (2017)
5. Wen, Jun; Yeung, Yau-yuen\*; Ning, Lixin; Duan, Changkui; Huang, Yucheng; Zhang, Jie; Yin, Min  
Effects of vacancies on valence stabilities of europium ions in  $\beta$ -Ca<sub>2</sub>SiO<sub>4</sub>: Eu phosphors. *Journal of Luminescence*, 178, 121-127 (2016)
6. Wen, Jun; Yeung, Yau-yuen\*; Ning, Lixin; Duan, Changkui; Huang, Yucheng; Zhang, Jie; Yin, Min  
Thermal stabilities, electronic structures and optical properties of intrinsic defects and dopant cerium in Ca<sub>4</sub>F<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>, *Journal of Alloys and Compounds*, 713, 28-37 (2017)

#### Conference

1. 4th International Conference on Photonics  
Title: Exploration of the electric and magnetic dipole transition mechanism for Nd<sup>3+</sup> doped Yttrium aluminum borate

#### External Grant

1. GRF  
Title: New Luminescent Applications of Open-shell Metal Ions: Theoretical Modeling for Migration from Rare Earth to Transition Metal Ions (Date of application: November 2015)
2. GRF  
Title: First-principles study of new luminescent materials formed from lanthanide ions and neighboring point defects: Characteristics and formation mechanisms  
(Date of application: November 2016)

<b>Early Career Researchers (ECR)</b>	
Project Leader	<b>Dr SUEN Chun Kit Anthony, MIT</b>
Project Title ( <i>RefNo.</i> )	Existence, Uniqueness and Regularity Results for the Viscous Magneto-Geostrophic Equations ( <i>ECR-1</i> )
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> <li>1. S. Friedlander and A. Suen*, Existence, uniqueness, regularity and instability results for the viscous magneto-geostrophic equation/ Nonlinearity (<i>2015</i>)</li> <li>2. S. Friedlander and A. Suen*, Solutions to a class of forced drift-diffusion equations with applications on magneto-geostrophic equations (<i>under preparation</i>)</li> </ol> <p>External Grant</p> <ol style="list-style-type: none"> <li>1. ECS Wellposedness and Vanishing Diffusion Parameters Limits of the Magneto-geostrophic Equation (Date of approval: July 2016, Total budget approved: \$409,423)</li> </ol>
Project Leader	<b>Dr SUN Fenghua, HPE</b>
Project Title ( <i>RefNo.</i> )	Effect of Carbohydrate-electrolyte-protein Solutions Consumption during Marathon Running on Physiological and Psychological Functions, as well as Performance in Female Marathon Runners ( <i>ECR-2</i> )
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> <li>1. SUN Fenghua*, GUI Zhaohuan, Effect of carbohydrate electrolyte protein solution ingestion on 21km running performance in female marathon runners/ British Journal of Sports Medicine, 2016;50:e4 doi:10.1136/bjsports-2016-096952.7 (<i>2016</i>)</li> <li>2. GUI Zhaohuan, SUN Fenghua*, SI Gangyan, CHEN Yajun, Effect of protein and carbohydrate solutions on running performance and cognitive function in female recreational runners, PLOS ONE (<i>under review</i>)</li> </ol> <p>Conference</p> <ol style="list-style-type: none"> <li>1. International Sports Science + Sports Medicine Conference 2016 Title: Effect of carbohydrate-electrolyte-protein solutions consumption on 21 –km running performance in female marathon runners</li> </ol> <p>External Grant</p> <ol style="list-style-type: none"> <li>1. ECS Effect of exercise modes and pre-exercise carbohydrate load on post-exercise appetite regulation (Date of application: October 2015)</li> </ol>

Project Leader	<b>Dr LI Chunxiao, HPE</b>
Project Title ( <i>RefNo.</i> )	Impact of the Talent Development Environmental Factors on Talented Youth Athletes' Effort and Burnout: A Self-Determination Theory Perspective ( <i>ECR-3</i> )
Output:	<p>Journal/ book</p> <p>1. Li Chunxiao*, Martindale Russell, Wu Yandan, &amp; Si Gangyan, Psychometric Properties of the Talent Development Environment Questionnaire with Chinese Talented Athletes/ Journal of Sports Science [Rank A] (<u>2017</u>)</p> <p>Conference</p> <p>1. International Conference of Chinese Applied Psychology Title: Reliability and validation of the Talent Development Environment Questionnaire-5 among Chinese athletes: A pilot study</p> <p>External Grant</p> <p>1. ECS Development of Athletes' Mental Toughness: A Self-Determination Perspective on Talent Development Environments (Date of Application: 18 Nov 2016)</p>
Project Leader	<b>Dr CHEANG Chi Chiu, SES</b>
Project Title ( <i>RefNo.</i> )	An Updated on the Aquatic Biological Invasion in the Streams of the International Aquarium Hobbyist Trading Centre, Hong Kong ( <i>ECR-4</i> )
Output:	<p>External Grant</p> <p>1. Marine Ecology Enhancement Fund, Hong Kong Airport Authority Revealing cryptic faunal biodiversity in Hong Kong western waters using environmental DNA approach</p>
Project Leader	<b>Dr YEUNG Chi Ho, SES</b>
Project Title ( <i>RefNo.</i> )	From Statistical Physics towards a New Understanding and Paradigm of Optimization Algorithms ( <i>ECR-5</i> )
Output:	<p>Journal/ book</p> <p>1. Chi Ho YEUNG*(Single-author publication), Do recommender system benefit users? A modelling approach. Journal of Statistical Mechanics: Theory and Experiment (<u>2016</u>)</p> <p>2. Zeng A. and Yeung C.H.*, Predicting the future trend of popularity by network diffusion. Chaos: An Interdisciplinary Journal of Nonlinear Science 26(6) (<u>2016</u>)</p> <p>External Grant</p> <p>1. GRF Connecting Theoretical Statistical Physics with Practical</p>

	Combinatorial Optimization problems (Date of Approval: June 2016)
Project Leader	<b>Dr CHEUNG Ting On Lewis, SSC</b>
Project Title ( <i>RefNo.</i> )	Understanding Motivations, Environmental Attitudes and Behaviours of Nature-based Tourists in Protected Areas in Mainland China ( <i>ECR-6</i> )
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> <li>Cheung, L.T.O.*, Lo, A.Y.H. &amp; Fok, L., Recreational specialization and ecologically responsible behaviour of Chinese birdwatchers in Hong Kong. <i>Journal of Sustainable Tourism</i> (2016)</li> <li>Chow, A.S.Y., Cheng, I.N.Y. &amp; Cheung, L.T.O.*, Self-determined travel motivations and ecologically responsible attitudes of nature-based visitors to the Ramsar wetland in South Chinese. <i>Annals of Leisure Research</i>. (<i>under review</i>)</li> <li>Cheng, I.N.Y., Cheung, L.T.O.*, Chow, A.S.Y., Fok, L. &amp; Cheang, C.C., The roles of interpretive programmes in supporting the sustainable operation of the nature-based activities. <i>Journal of Cleaner Production</i>, 200, 380-389 (2018)</li> <li>Ma, A.T.H., Chow, A.S.Y., Cheung, L.T.O.*, Lee, K.M.Y. &amp; Liu, S., Impacts of tourists' sociodemographic characteristics on the travel motivation and satisfaction: the case of protected areas in South China, <i>Sustainability</i>, 10(10), 3388 (2018)</li> <li>Ma, A.T.H., Chow, A.S.Y., Cheung, L.T.O.* &amp; Liu, S. Self-determined travel motivation and environmentally responsible behavior of Chinese visitors to national forest protected areas in South China. <i>Global Ecology and Conservation</i>, (online) (2018)</li> </ol> <p>Conference</p> <ol style="list-style-type: none"> <li>Global Sustainable Tourism Conference 2016, Suwon, Korea Title: Improving visitor management for the changing behaviour of the Country Park Users in Hong Kong</li> </ol> <p>External Grant</p> <ol style="list-style-type: none"> <li>ECS Specialization, motivation, environmental attitude and behaviour of the wildlife photographers in the protected areas of Hong Kong (Date of application: September 2016)</li> </ol>
Project Leader	<b>Dr LI Ping, MIT</b>
Project Title ( <i>RefNo.</i> )	An Integrated Pipeline for Compact Circular Pattern Analysis and Design ( <i>ECR-7</i> )
Output:	<p>Journal/ book</p> <ol style="list-style-type: none"> <li>Li, P.*, &amp; Sun, H., Density-enhanced perceptual mosaic on GPU. <i>Computer Animation and Virtual Worlds</i>, 27(3-4), 241-249. (2016)</li> </ol>

	<p>2. Fang, X., Sheng, B. *, Li, P., Wu, D., &amp; Wu, E., Automatic GUI test by using SIFT matching. <i>China Communications</i>, 13(9), 227-236. <u>(2016)</u></p> <p>3. Wang, R., Zheng, L., Xiong, C., Qiu, C., Li, H., Hou, X., Sheng, B. *, Li, P., &amp; Wu, Q., Retinal optic disc localization using convergence tracking of blood vessels. <i>Multimedia Tools and Applications</i>, Online First, 1-23. <u>(2016)</u></p> <p>Conference</p> <p>1. The 15th ACM SIGGRAPH VRCAI Title: Real-time video stylization using spatial-temporal Gabor filtering</p> <p>2. The IEEE International Conference on Progress in Informatics and Computing Title: i. Mass data storage platform for smart grid ii. Load forecast of resource scheduler in cloud architecture iii. High-availability deployment for large enterprises iv. Smart grid data analysis and prediction modeling v. Smart grid data mining and visualization</p> <p>3. The 11th Digital Entertainment Art Title: Assessing image quality via high-pass difference features</p> <p>4. The IEEE International Conference on Signal and Image Processing Title: i. Cartoon image segmentation based on improved SLIC superpixels and adaptive region propagation merging ii. Automatic multiview face detection and pose estimation from videos based on mixture-of-trees model and optical flow</p> <p>5. The 33rd Computer Graphics International Title: Temporal coherent video decolorization using proximity optimization</p> <p>External Grant</p> <p>1. GRF Abnormal Synopsis, Visualization and Browsing for Multi-Camera Surveillance System (Date of application:15 November 2016)</p> <p>2. ECS A Unified Framework for Example-Based Complex Pattern Generation (Date of approval: 30 June 2015)</p>
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**Knowledge Transfer Scheme (KTS)**

Project Leader

**Dr POPOSKI Zoran, CCA**

Project Title ( <i>Ref No.</i> )	Interdisciplinary Arts ( <i>KTS-3</i> )
Output:	<p>Conference</p> <ol style="list-style-type: none"> <li>1. International Conference on Business, Economics and Social Science &amp; Humanities Title: Community-based Arts Education in Hong Kong</li> <li>2. IAFOR International Conference on Education Title: Engagement and Empowerment Through Community-based Art Education in Hong Kong</li> </ol> <p>External Grant</p> <ol style="list-style-type: none"> <li>1. ECS Mapping Chinese Social Practice Art: A communities-of-practice approach to investigating learning through participatory art. (Date of application: 12 Nov 2015)</li> </ol>