

Outputs Arising from Dean's Research Fund

Second round

Individual Research Scheme (IRS)	
Project Leader	Prof. SO Wing Mui Winnie, SES
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"> *So W. M., Chen, Y., Cheng, N. Y., Cheung, L., Chow, S., Lo, S. K., Environmental sustainability on plastic waste management (<u><i>under preparation</i></u>) <p>Conference</p> <ol style="list-style-type: none"> International Conference on Synergy between Science and Social Development Title: Education for Plastic Waste Management Asia Pacific Educational Research Association – Taiwan Educational Research Association 2016 International Conference Title: Challenges and opportunities of Education For Sustainability <p>External Grant</p> <ol style="list-style-type: none"> Planning to submit a proposal to an external funding agency for a Competitive grant on plastic waste management.

Collaborative Research Scheme (CRS)	
Project Leader	Prof. YEUNG Yau Yuen , SES
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"> Yau Yuen Yeung and Peter A. Tanner*., Trends in Atomic Parameters for Crystals and Free Ions across the Lanthanide Series: the Case of $\text{LaCl}_3: \text{Ln}^{3+}$. The Journal of Physical Chemistry A, 119(24), 6309-6316. (<u><i>2015</i></u>) 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^{3+} doped yttrium aluminum borate. Journal of Materials Chemistry C, 4(10), 1988-1995. (<u><i>2016</i></u>) Ju, M., Lu, C., Yeung, Y.Y., Kuang, X., Wang, J., & Zhu, Y., Structural Evolutions and Crystal Field Characterizations of Tm-Doped YA1O_3: New Theoretical Insights. ACS Applied Materials & Interfaces, 8(44),

	<p>30422-30429. <u>(2016)</u></p> <p>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^{3+} in $\text{YA1}_3(\text{BO}_3)_4$ crystal. <i>Journal of Rare Earths</i>, 35(3), 254-258. <u>(2017)</u></p> <p>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 β-Ca_2SiO_4: Eu phosphors. <i>Journal of Luminescence</i>, 178, 121-127 <u>(2016)</u></p> <p>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 $\text{Ca}_4\text{F}_2\text{Si}_2\text{O}_7$, <i>Journal of Alloys and Compounds</i>, 713, 28-37 <u>(2017)</u></p> <p>Conference</p> <p>1. 4th International Conference on Photonics Title: Exploration of the electric and magnetic dipole transition mechanism for Nd^{3+} doped Yttrium aluminum borate</p> <p>External Grant</p> <p>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)</p> <p>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)</p>
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Early Career Researchers (ECR)	
Project Leader	Dr. SUEN Chun Kit Anthony, MIT
Project Title (<i>Ref No.</i>)	Existence, Uniqueness and Regularity Results for the Viscous Magneto-Geostrophic Equations (<i>ECR-1</i>)
Output:	<p>Journal/ book</p> <p>1. S. Friedlander and A. Suen*, Existence, uniqueness, regularity and instability results for the viscous magneto-geostrophic equation/ Nonlinearity <u>(2015)</u></p> <p>2. S. Friedlander and A. Suen*, Solutions to a class of forced drift-</p>

	<p>diffusion equations with applications on magneto-geostrophic equations (<i>under preparation</i>)</p> <p>External Grant</p> <p>1. ECS</p> <p>Wellposedness and Vanishing Diffusion Parameters Limits of the Magneto-geostrophic Equation</p> <p>(Date of approval: July 2016, Total budget approved: \$409,423)</p>
Project Leader	Dr. SUN Fenghua, HPE
Project Title (<i>Ref No.</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> <p>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>)</p> <p>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>)</p> <p>Conference</p> <p>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</p> <p>External Grant</p> <p>1. ECS</p> <p>Effect of exercise modes and pre-exercise carbohydrate load on post-exercise appetite regulation (Date of application: October 2015)</p>
Project Leader	Dr. LI Chunxiao, HPE
Project Title (<i>Ref No.</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, & Si Gangyan, Psychometric Properties of the Talent Development Environment Questionnaire with Chinese Talented Athletes/ Journal of Sports Science [Rank A] (<i>2017</i>)</p>

	<p>Conference</p> <ol style="list-style-type: none"> International Conference of Chinese Applied Psychology Title: Reliability and validation of the Talent Development Environment Questionnaire-5 among Chinese athletes: A pilot study <p>External Grant</p> <ol style="list-style-type: none"> ECS Development of Athletes' Mental Toughness: A Self-Determination Perspective on Talent Development Environments (Date of Application: 18 Nov 2016)
Project Leader	Dr. YEUNG Chi Ho, SES
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> <ol style="list-style-type: none"> Chi Ho YEUNG*(Single-author publication), Do recommender system benefit users? A modelling approach. Journal of Statistical Mechanics: Theory and Experiment (<i>2016</i>) <p>External Grant</p> <ol style="list-style-type: none"> GRF Connecting Theoretical Statistical Physics with Practical Combinatorial Optimization problems (Date of Approval: June 2016)
Project Leader	Dr. CHEUNG Ting On Lewis, SSC
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"> Cheung, L.T.O.*, Lo, A.Y.H. & Fok, L., Recreational specialization and ecologically responsible behaviour of Chinese birdwatchers in Hong Kong. Journal of Sustainable Tourism (<i>2016</i>) Chow, A.S.Y., Cheng, I.N.Y. & Cheung, L.T.O.*, Self-determined travel motivations and ecologically responsible attitudes of nature-based visitors to the Ramsar wetland in South Chinese. Annals of Leisure Research. (<i>under review</i>) <p>Conference</p> <ol style="list-style-type: none"> Global Sustainable Tourism Conference 2016, Suwon, Korea Title: Improving visitor management for the changing behaviour of the Country Park Users in Hong Kong <p>External Grant</p>

	<p>1. ECS</p> <p>Specialization, motivation, environmental attitude and behaviour of the wildlife photographers in the protected areas of Hong Kong (Date of application: September 2016)</p>
Project Leader	Dr. LI Ping, MIT
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"> 1. Li, P.*, & Sun, H., Density-enhanced perceptual mosaic on GPU. <i>Computer Animation and Virtual Worlds</i>, 27(3-4), 241-249. <u>(2016)</u> 2. Fang, X., Sheng, B.*, Li, P., Wu, D., & Wu, E., Automatic GUI test by using SIFT matching. <i>China Communications</i>, 13(9), 227-236. <u>(2016)</u> 3. Wang, R., Zheng, L., Xiong, C., Qiu, C., Li, H., Hou, X., Sheng, B.*, Li, P., & 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>Conference</p> <ol style="list-style-type: none"> 1. The 15th ACM SIGGRAPH VRCAI Title: Real-time video stylization using spatial-temporal Gabor filtering 2. The IEEE International Conference on Progress in Informatics and Computing Title: <ol style="list-style-type: none"> 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 3. The 11th Digital Entertainment Art Title: Assessing image quality via high-pass difference features 4. The IEEE International Conference on Signal and Image Processing Title: <ol style="list-style-type: none"> 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 5. The 33rd Computer Graphics International Title: Temporal coherent video decolorization using proximity optimization

	<p>External Grant</p> <ol style="list-style-type: none"> GRF Abnormal Synopsis, Visualization and Browsing for Multi-Camera Surveillance System (Date of application: 15 November 2016) ECS A Unified Framework for Example-Based Complex Pattern Generation (Date of approval: 30 June 2015)
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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"> International Conference on Business, Economics and Social Science & Humanities Title: Community-based Arts Education in Hong Kong IAFOR International Conference on Education Title: Engagement and Empowerment Through Community-based Art Education in Hong Kong <p>External Grant</p> <ol style="list-style-type: none"> ECS Mapping Chinese Social Practice Art: A communities-of-practice approach to investigating learning through participatory art. (Date of application: 12 Nov 2015)