C URRICULUM VITAE 7 March 2018 K. L. HEONG

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Academic Qualifications

- 2010 Fellow of the The World Academy of Science (TWAS), Italy
- 2009 Fellow of the Academy of Science, Malaysia (FASc)
- 2000 D. Sc. Doctor of Science
- 1986 Ph.D. in applied entomology and systems analysis
- 1978 M. S. with mark of distinction in applied entomology
- 1978 D.I.C.
- 1973 B. Sc. with honors in zoology

Employment

<u>Employment</u>				
2017 – now	Adjunct Professor	Universiti Putra Malaysia		
2015 – now	Visiting Quishi Chair Professor	Zhejiang University, Hangzhou, PR China		
2014 - now	Senior Advisor	CABI South East Asia, Malaysia		
2010- 2013	Principal Scientist	International Rice Research Institute		
1988 - 2010	Senior Scientist,	International Rice Research Institute		
	IPM specialist &Insect ecologist	(IRRI) LosBanos, Philippines.		
1973 - 1987	Senior Entomologist	Malaysian Agricultural Research &		
		Development Institute (MARDI)		
Awards and recognitions				

Imperial College

ImperialCollege,

Imperial College,

Imperial College. University of Malaya

Awards and recognitions

- 2017 Malaysia Research Star Award. Elsevier and Ministry of Higher Education.
- 2016 Westlake Friendship Award, Zhejiang Province, China.
- 2015 International Plant Protection Award of Distinction International Plant Protection Association
- 2010 Merit Gold Medal for the Cause of Science and Technology Development of Vietnam.
- 2009 Second prize **Global Development Award** for best research paper. Entertainmenteducation to communicate environment issues to farmers. Kuwait Development Fund
- 2008 **One World Broadcasting trust**. Special commendation for communication innovation.
- 2008 **Dubai International Award** for "Best Practice". Top 100 best practice for Campaign to motivate farmers reduce seeds, fertilizer and pesticides.
- 2007 COM+ Communications Award for communicating Science for the People and the

planet Alliance for Communication for Sustainable Development. Radio soap opera for ruralVietnam.

- 2006 The World Academy for Science (TWAS) Prize for Agriculture
- 2005 World Bank Development Marketplace Award.
- 2003 Golden Rice Award 2003 Ministry of Agriculture and Rural Development, Vietnam
- 2003 Green Apple Award for Environmental Best Practices, UK
- 2003 Excellence Award for Plant Protection Malaysian Plant Protection Society
- 2003 **Charles Black Award** for exemplary contributions to public understanding if food and agricultural sciences US Council for Agricultural Sciences and Technology (CAST)
- 2002 St Andrews Prize for Environment, University of St Andrews, UK.
- 2002 Partnership Award, CSIRO co recipient with Grant Singleton.
- 2002 Golden Rice Award 2002 Ministry of Agriculture and Rural Development, Vietnam
- 1997 Article of the year. Journal of Applied Communications, USA.
- 1996 Gold Medal for Agriculture Development in Vietnam Government of Vietnam

Societies & Professional Activities

tection Society - President 1987.	
Assist Sec 1984-1986	
Life Member.	
Newsletter editor 1982-86.	
Editor, J Plant Prot, in Tropics	
Journal of Plant Protection in the Tropics.	
International Journal of Pest Management.	
J Insect Science	
Invertebrate Ecology and Conservation Monographs. Pensoft F	ublishers
Biorisk – section editor	
Pertanika - Journal of Tropical Agricultural Science.	
Crop Protection.	
MARDI Research Bulletin	
Agriculture, Ecosystems & Environment	
·t	Assist Sec 1984-1986 Life Member. Newsletter editor 1982-86. Editor, J Plant Prot, in Tropics Journal of Plant Protection in the Tropics. International Journal of Pest Management. J Insect Science Invertebrate Ecology and Conservation Monographs. Pensoft F Biorisk – section editor Pertanika - Journal of Tropical Agricultural Science. Crop Protection. MARDI Research Bulletin

Academic Appointments

Senior Advisor - Centre for Agricultural Biodiversity International (CABI) Advisor - International Foundation for Science, Sweden Member of the IUCN Task Force on Systemic Pesticides Visiting professor in Visayas State College of Agriculture, Leyte 1998 - 2013 University of Philippines, Los Banos 1988 - 2013 KasetsartUniversity, Bangkok, Thailand 1989 - 2013 ZhejiangAgriculturalUniversity, PR China 1990 - 2013 Andhra Pradesh Agricultural Univ, India 1988 - 1990 ZhongsanUniversity, PR China 1992 - 1998 Zhejiang Academy of Agric Sci., PR China 1994 – present ChinaJilangUniversity, PR China 2005 – present Fujian Agricultural and Forestry University 2006 - present KhonKaen University, Thailand 2008 - 2013

External examiner to University of Science, Malaysia University of Western Sydney, NSW, Australia. University of Peridynia, Sri Lanka. University of Queensland, Australia Steering Committee: IOBC Working Group on the development of biosafety evaluations protocols for GMOs. 2002-2008. Advisor – UNEP/GEF project on Conservation and Use of Crop Genetic Diversity to Control Pests and Diseases in Support of Sustainable Agriculture IUCN Task force on systemic pesticides Reviewer – IPBes Chapter 2 on pollination Graduated 12 PhDs; 9MS.

Administration

Acting Division Head -	Sept 1988 - Feb 1991		
	Aug 1993 - Aug 1994		
Deputy Division Head -	Feb 1991 - Aug 1993		
	Aug 1993 - 2000		
Project Team Leader -	1992 - 2006		
Research Network Coordinator -	1989 - 2001		
Training Course Coordinator in IPM 1988 - 1992; 2001			
Executive secretary of the IRRI Environment Council – 2005 - 2009			
Organizer of:			
> 150 international workshops, 12 international conferences, 2 international study tours.			

Scientific Publications

More than 200 papers in peer review journals, 15 books and 3 CD. (List on request).

International Project Development and Management

<u>**Co Principal Investigator**</u> - Implementing Plantwise for the establishment of improved Rice Plant Health Systems in the Greater Mekong Sub-region (GMS) with Thailand as a Pilot. Budget 183,000 CHF. 2012 – 2014.

<u>**Principal Investigator**</u> -Developing Ecological Engineering Approaches to Restore and Conserve Ecosystem Services for Pest Management for Sustainable Rice Production in the Philippines. .4 million pesos. US\$95,000. 2012 – 2015. Department of Agriculture, Philippines.

<u>**Co- Principal Investigator**</u> -Land-use intensity and Ecological EnGineering – Assessment Tools for risks and Opportunities in Irrigated rice based production (LEGATO) 704.300 euro US\$985,000.2012 – 2016.German Ministry of Education and Research (BMBF). Website: <u>http://legato.net/</u> <u>**Principal Investigator**</u> - Conserving arthropod biodiversity and ecosystem services in rice environments of Hainan Island, China. US\$400,000. 2009 – 2013. Kalgoorie Charity Foundation. Website: <u>http://hainanproject.org/</u>

<u>Principal Investigator</u> - Addressing the pre harvest challenges of the rice supply chain.ADB RETA 14.US\$ 1 million 2010 – 2012.Website <u>http://ricehoppers.net/</u>.

<u>Principal Investigator</u> – Strategic research for sustainable food and nutrition security. <u>ADB</u> <u>RTDA</u>. US\$ 1.5 million 2010 – 2012. Website <u>http://ricehoppers.net/</u>.

Principal Investigator - Pesticide and Information Supply Chain Studies. US\$80,000. 2011 – 2012. FAO Rome.

<u>Principal Investigator</u> - Sustainable agronomic revolution by reducing pre and post harvest losses and protecting ecosystem services in rice systems. ADB RETA 13.US\$ 1 million 2008 – 2010.Website <u>http://ricehoppers.net/</u>.

<u>**Principal Investigator-**</u> Scoping study to identify research and implementation issues related to management of the Brown Planthopper/virus problem in rice in Vietnam.ACIAR. US\$ 90,000 (2007-2008).(completed). Report in <u>http://ricehoppers.net/wp-content/uploads/2009/01/sra-final-report-cp2007-211.pdf</u>

Principal Investigator of Environmental Radio Soap Opera for Rural Vietnam.World Bank Development Marketplace Award 2005.US\$ 131,800. (2005-2007). 2 papers published. Paper awarded second prize in Global Development Awards.

Principal Investigator of Using Entertainment Education approach to motivate farmers to reduce pesticides in the MekongBasin. Rockefeller Foundation. US\$300,000 (2003-2006). 5 papers published. This project awarded:

2008One World Broadcasting trust. Special commendation for communication innovation, 2008 Dubai International Award for "Best Practice". Top 100 best practice.

2007 - COM+ Communications Award for communicating Science for the People and the Planet. Alliance for Communication for Sustainable Development.

<u>Project Team Leader</u> of Project on "Resource Management in Fragile Rice Systems" (2004-2008). Developed environmental sustainability objectives, work-plans, managed budgets. – Annual operating budget – US\$ 400,000. 10 scientists.

Project Team Leader of IRRI core project on "Managing Resource under intensive rice based systems (2001 - 2003). Developed interdisciplinary project objectives, work-plans, managed budgeting and reporting. 20 scientists. Annual operating budget - US\$ 800,000.

Project Team Leader of IRRI core project on "Improving Pest Management" involving 10 scientists for 8 years (1992 - 2000). Developed interdisciplinary project objectives, work-plans, managed budgeting and reporting. Annual operating budget - US\$ 100,000 from IRRI Core. Numerous papers published.

Research Network Coordinator of the Rice IPMNetwork involving scientists, extension specialists and policy makers from 8 countries, China, India, Indonesia, Laos, Malaysia, Philippines, Thailand and Vietnam for 10 years (1989 - 2000). Initiated and developed processes and procedures for joint planning of research agenda, workplans, budget allocations, activities and reporting among participants from different countries, disciplines and institutions. Facilitated the development of project and activity objectives, organized annual international review and planning workshops, managed collaborative R and D activities and budgets. The process also focused on leveraging support in terms of funds, "in kinds" and institutional commitments from national scientists. Applied a participatory diagnostic process to facilitate paradigm shifts in research thinking among participants. Developed a process to enhance collaborative research between biologists and social scientists. Obtained a favorable peer review after 5 years in 1995 and gained extension of project to Phase III (1997- 2000). Awarded the **Gold Medal for Agriculture Development in Vietnam** in1996 by the Government of Vietnam for contributions.Annual operating budget - US\$ 380,000 from Swiss Agency for Development and Cooperation (SDC). Numerous papers published.

Leader.Rodent Ecology Working Group in Asia involving 7 Asian countries and Australia. Budget \$56,000 per annum from SDC. 2001 – 2004. This now serves as a platform for activities amounting to \$150,000 pa from multi donors. Received "CSIRO partnership Award 2002".

<u>Principal Investigator</u> in FAO/IRRI Collaborations in farmer participatory research in pest management. (1992-1995). US\$ 15,000. One paper published.

Initiated the **Weed Ecology Work Group** and the **Rodent Ecology Work Group** within the Network framework to facilitate "buy-in" funds from donors. The weed group now receives separate funding amounting to about \$100,000 per annum (1999 – 2001) from DFID. The **Rodent Ecology Work Group** is being funded at \$ 50,000 per annum (1999 – 2001) by DANIDA and linked with an ACIAR funded project (\$100,000 pa) on Rodent management in S E Asia coordinated by CSIRO.

<u>Coordinator</u> of component on pest management in EPA funded project on Global Climate Change impacts for 4 years (1992-1995). Developed research agenda, instruments and techniques to monitor changes on arthropod adaptations to climate change. Coordinated research activities in Thailand, S. Korea, China, Vietnam andSriLanka. Annual operating budget - US\$ 80,000. 4 papers published.

Technical Committee member of CRSP IPM project funded by USAID for 5 years (1993-1998). Reviewed and planned research objectives, budgets, activities and reporting from 4 country sites; Philippines, Jamaica, Guatemala and Mali. Applied a participatory process in problem definition, research agenda setting and monitoring.Helped in the development of Phase II (1999-2003).Annual operating budget - US\$ 400,000. Two paper published.

<u>Biodiversity</u> - Developed a project on enhancing natural biological control through habitat biodiversity in rice ecosystems. The objectives include introducing community and landscape ecology concepts and techniques into habitat management in agriculture in order to develop

sustainable systems. The US\$ 2.2 million project was developed for funding by DGIS of the Netherlands, but was unsuccessful. Elements of this project were later incorporated into the project "Exploiting biodiversity in rice pest management" and is funded by ADB 1997-1999: US\$ 750,000. 2 papers.

<u>Co Principal Investigator in project</u> on agricultural technology utilization & transfer

(ATUT). Planned and conduct research on stem borers in collaboration with scientists from Egypt and University of Arkansas. Funded by USAID US\$ 32,000 per annum (1998-2002. 2 papers published.

Principal Investigator of project on IPM curriculum in Environmental Education-

Developed a joint project with Population and Community Development Association (PDA) an NGO in Thailand to evaluate introduction of an IPM curriculum to school children in the Student Environmental Education and Demonstration (SEED) project. Implemented in early 1997. Annual budget US\$ 18,000.

<u>Co Principal Investigator</u> in the Development of IPM CD for Research, Extension and Training – A collaborative project with the University of Queensland, Brisbane aimed at developing a prototype multi media interactive software made available on CDs for distribution. Annual budget: A\$ 100,000 from AusAID. Rice IPMCD published 2001.

<u>**Co Principal Investigator**</u> in Development of the Rice Doctor, an interactive multimedia product for diagnosis of rice maladies. Annual Budget A\$ 75,000 from ACIAR. 2001-2002.