



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

Faculty of
Geoinformation and
Real Estate

CURRICULUM VITAE MARCH 2014

KASTURI DEVI KANNIAH

BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)



Kasturi Devi Kanniah, is a senior lecturer at Universiti Teknologi Malaysia (UTM). She obtained her first degree in Geography (BA Honors-first class) from Universiti Malaya, Malaysia. Then she pursued her studies in industrial Geography and obtained a research certificate from Osaka University of Foreign Studies, Japan in 1996. In 1998, she received M.Phil in GIS and Remote Sensing from Cambridge University, UK. She worked as a lecturer in Universiti Teknologi Malaysia from 1999 until May 2005, before she continued her studies in Monash University, Australia in the field of Geography & Environmental Science. She obtained her PhD in 2009 and continued her journey as a lecturer at the department of Geoinformation, Faculty of Geoinformation and Real Estate, UTM. She actively involves in both teaching and research activities in UTM. Among

the subjects that she teaches include Remote Sensing Technology, Physical Geography, Statistics for Remote Sensing and application of remote sensing in various fields such as Environmental Hazards, Environmental Impact Assessment, Meteorology, Natural Resources Management etc. Her current research focuses on the use of remote sensing in terrestrial carbon (tropical forests, tropical savannas, oil palm plantations and mangroves), atmospheric aerosols and urban studies. She has authored and co-authored number of peer reviewed journal articles, conference papers, national and international technical reports, books and book chapters. Kasturi is also an editorial board member of an international journal (International Journal of Geoinformatics) and has reviewed articles from some leading journals in the field of remote sensing such as Remote Sensing of Environment, International Journal of Remote Sensing, *SPIE* Journal of Applied Remote Sensing and other journals including Agriculture Ecosystems & Environment. She is a member of Institute of Electrical and Electronics Engineers (IEEE), IEEE Geoscience and Remote Sensing Society (IEEE GRSS), Malaysian Remote Sensing Society, AsiaFlux, International Association for Urban Climate, International Association of Vegetation Science, International Association for Ecology, Associate Member for International Journal of Geoinformatics and a fellow of Cambridge Commonwealth Society. She has also received several national and international awards for research & publication. Among them are: Top 100 scientists 2012 by International Biographical Centre, Cambridge, England, Marqui's who's who in the world 2012, several awards for publications (by the National Space Agency, Ministry of Science, Technology & Innovation, Malaysia & UTM) and scholarships to undertake postgraduate studies such as International Postgraduate Research Scholarship by the Faculty of Arts, Monash University (for PhD), Monbusho Scholarship to undertake Research in Osaka University of Foreign Studies, Japan and Cambridge Commonwealth Trust & Ex-Gratia grant to undertake M.Phil degree in Cambridge University, UK.

Dr. Kasturi Devi Kanniah (Associate Professor)
Department of Geoinformation, Faculty of Geoinformation & Real Estate, Universiti Teknologi Malaysia, 81310 UTM, Johor Bahru, Malaysia, Johor.
Office: 607-5530739, Facsimile:07-5566163, Email: kasturi@utm.my
Website: <http://fght.utm.my/kasturidevikanniah/>
<http://www.staff.utm.my/portalv3/portal/kasturi/>
ResearchGate: https://www.researchgate.net/profile/Kasturi_Kanniah/
Researcherid:<http://www.researcherid.com/rid/K-6777-2012>



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ACADEMIC BACKGROUND

- 2005-2009 **Doctor of Philosophy (PhD)**
Geography & Environmental Science
Monash University, Clayton Campus, Melbourne, Australia
Thesis Title: Environmental controls on the spatial and temporal variability of savanna productivity in the Northern Territory, Australia
Advisors: Prof. Dr. Jason Beringer, Prof. Nigel Tapper and Dr. Xuan Zhu
(See Appendix 1 for Abstract)
- 1997-1998 **Master of Philosophy (M.Phil)**
GIS and Remote Sensing
Cambridge University, UK
Thesis Title: Temperature and colour analysis of volcanic crater lake using remote sensing techniques
Advisor: Dr. Clive Oppenheimer
- 1996-1997 **Certificate**
Industrial Geography
Osaka University of Foreign Studies, Osaka, Japan
Advisor: Prof. Takayama Masaki
- 1991-1995 **Bachelor of Arts (First class honors)**
Geography
Universiti Malaya

LANGUAGE PROFICIENCY

- | | |
|----------|------------------------------|
| English | Excellent (spoken & written) |
| Malay | Excellent (spoken & written) |
| Tamil | Excellent (spoken & written) |
| Japanese | Average (spoken & written) |



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PREVIOUS & CURRENT POSITIONS

1. Head, "Tropical Resources Mapping Research Group", Universiti Teknologi Malaysia (since Nov 2012)
2. Lecturer, Department of Remote Sensing, Faculty of Geoinformation and Real Estate, UTM (from 10 Sept 1999- 12 May 2010)
3. Senior Lecturer, Department of Remote Sensing, Faculty of Geoinformation and Real Estate, UTM (13 May 2010-2 April 2014)
4. Tutor, Dept. of Geography, University Malaya (from August 1995 – March 1996)
5. Teacher, Assuntha Primary School, Petaling Jaya, Malaysia (from Apr 1995 – July 1996)
6. Teacher, primary school-SRJK (T) Serdang, UPM, Selangor, Malaysia (from Jan 1990 - July 1990)

AREAS OF EXPERTISE

1. Remote Sensing and GIS Applications for Terrestrial Carbon Studies (tropical savanna, tropical forest, mangrove, oil palm, urban forest)
2. Remote sensing for vegetation mapping
3. Remote Sensing for Atmospheric Aerosols
4. Low carbon cities

RESEARCH

INTERNATIONAL

- | | | |
|----------------|---|---|
| 1. Position | : | Key member since March 2012 |
| Research Title | : | Development of Low carbons society of Asian Region |
| Sponsor | : | SATREP (Science and Technology Research Partnership for Sustainable Development) |
| Value | : | approximately equivalent to RM 7.8 million |
| Duration | : | 5 years (June 2011 to June 2016) |
| Status | : | Ongoing |
| Head | : | Prof. Yuzuru Matsuoka (Kyoto University, Japan) |
| 2. Position | : | International Collaborator |
| Research Title | : | Patterns and processes of carbon and water budgets
Across northern Australian landscapes: From point to region |
| Sponsor | : | Australian Research Council |
| Value | : | - |
| Duration | : | Jan 2007- Dec 2008 |
| Status | : | Completed |
| Head | : | Prof. Dr. Jason Beringer (Monash University, Australia) |



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NATIONAL

1. Position : Principal Investigator
Research Title : Low carbon cities for sustainable development:
Exploring the role of green infrastructure on reducing
atmospheric carbon dioxide with geospatial technology
Sponsor : Ministry of Higher Education & UTM (GUP Tier 1)
Value : RM 90,000.00
Duration : 2 years (Dec 2012 to Dec 2014)
Status : Active

2. Position : Principal Investigator
Research Title : Estimating CO₂ emissions from deforestation of
Tropical forests for net carbon stock assessment: towards
making REDD a reality in Malaysia
Sponsor : Ministry of Higher Education & UTM (GUP Tier 1)
Value : RM 100,000
Duration : 2 years (May 2012 to April 2014)
Status : Active

3. Position : Principal Investigator
Research Title : Satellite remote sensing of urban aerosols at high
spatial resolution
Sponsor : Ministry of Higher Education (FRGS)
Value : RM 134,400.00
Duration : 2 years (April 2012 to March 2014)
Status : Ongoing

4. Position : Principal Investigator
Research Title : Estimating productivity of tropical oil palm in
Peninsular Malaysia using remote sensing techniques
Sponsor : Ministry of Higher Education
Value : RM 40,000.00
Duration : 1 year (April 2011 to September 2012)
Status : Completed

5. Position : Principal Investigator
Research Title : Remote sensing analysis of the spatial and temporal
patterns of aerosols and their ecological implications
Sponsor : Ministry of Higher Education
Value : RM 30,000.00
Duration : 2 years (August 2009 to July 2011)
Status : Completed



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6. Position : Principal Investigator
Research Title : Environmental management of mangrove forest Species composition using high spatial resolution remote sensing data
Sponsor : Research Management Centre (RMC), UTM
Value : RM 20,000.00
Duration : 15 Months (October 2003- Dec 2004)
Status : Completed
7. Position : Research Member
Research Title: Multi source remote sensing data integration for estimating tropical rain forest above ground biomass at layers and species level
Sponsor: Department of Higher Education, Ministry of Education Malaysia
Value : RM 91,000.00
Duration : (Dec 2013- Dec 2015)
Status : Active
Head : Mr.Abd. Wahid Rasib (UTM)
8. Position : Research Member
Research Title : Parameterization of zero plane displacement and aerodynamic roughness length over tropical region using remotely sensed data
Sponsor : Department of Higher Education, Ministry of Education Malaysia
Value : RM 91,000.00
Duration : (Dec 2013- Dec 2015)
Status : Active
Head : Dr.Muhammad Zulkarnain Abd. Rahman (UTM)
9. Position : Research Member
Research Title : Remote Sensing Image Understanding Service on Cloud-computing platform
Sponsor : Department of Higher Education, Ministry of Education Malaysia
Position : Researcher
Value : RM 108,000.00
Duration : (Apr 2014- Mar 2017)
Status : Active
Head : Associate Prof. Dr. Tuong Thuy Vu (Nottingham University-Malaysia)



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10. Position : Research Member
Research Title : Study on aerosol optical properties by the synergy of multi space borne remote sensing and ground based instrumentation
Sponsor : Ministry of Higher Education
Value : RM 84,000.00
Duration : (July 2011- June 2013)
Status : Completed
Head : Dr.Mohd Nadzri Md. Reba (UTM)
11. Position : Research Member
Research Title : Study on satellite remote sensing data to develop environmental indicators: ambient air and coastal water quality monitoring to support high level decisions for national and international environmental protection
Sponsor : Ministry of Higher Education
Value : RM130,00.00
Duration : April 2011- March 2013)
Status : Completed
Head : Prof. Dr. Mazlan Hashim
12. Position : Research Member
Research Title : Investigating radiometric properties of remote sensing analysis for forest health mapping
Sponsor : Ministry of Higher Education
Value : RM30,000.00
Duration : August 2009-July 2011
Status : Completed
Head : Dr. Alvin Lau Meng Shin (UTM)
13. Position : Researcher Member
Research Title : Investigating Spatial and Spectral Response in relation to Vegetation Species Mapping
Sponsor : Ministry of Higher Education
Value : RM81,000.00
Duration : July 2011- June 2013
Status : Completed
Head : Dr. Alvin Lau Meng Shin (UTM)
14. Position : Research Member
Research Title : Building of spectral library as 'bio-fingerprint' of tropical rainforest
Sponsor : Ministry of Higher Education
Value : RM 40,000.00
Duration : April 2011- September 2012
Status : Completed
Head : Dr. Alvin Lau Meng Shin (UTM)



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15. Position	:	Research Member
Research Title	:	Development of Direct Satellite Readout for Daily Monitoring of Haze and Coastal Environments
Sponsor	:	Ministry of Science and Technology
Value	:	RM 74,100.00
Duration	:	3 years (1999 to 2002)
Status	:	Completed
Head	:	Prof. Dr. Mazlan Hashim (UTM)

POSTGRADUATE STUDENT SUPERVISION

Ph.D

1. Tan Kian Pang (PG103030) Estimating primary productivity of oil palm in Peninsular Malaysia using remote sensing and ancillary data (Completed May 2014)
Mr. Tan has produced 4 ISI cited journal articles (cumulative impact factor of 6.833) and 3 ISI cited conference papers
2. Hamed Adab (PG093110) Remote Sensing based thermophysical approach for detecting forest pre-ignition in Iran (Completed April 2014)
Mr. Hamed has produced 1 ISI cited journal article with an impact factor of 1.639 and 1 paper accepted with corrections (impact factor = 2.322) and 2 ISI cited conference paper
3. Kang Chuen Siang (PG113019) Validation of SMOS soil moisture products over forested land in tropical region (Since Sept 2011)
4. Afsaneh (PG 103061) Predicting urban heat island in Iskandar Malaysia using Artificial Neural Network technique (Since Dec 2011)
5. Putri Ida Sunaryathy (PG PG103065) Estimating aboveground biomass of oil palm trees in Sulawesi, Indonesia using using Synthetic Aperture Radar data.

M.Sc

1. Ghulam Fadel Ahmed Al-Hamed (MG 091018), Patterns and transport pathways of aerosols in Peninsular Malaysia using MODIS aerosol data (M.Sc taught course thesis-completed in 2011).
2. Lim Hui Qi (MG 113011), Retrieval of aerosol optical depth over urban areas at high spatial resolution (Since Sept 2011- Thesis will be submitted in February 2014 and Lim has published 1 IS cited journal article with an impact factor of 2.2 and 1 scopus cited conference proceeding).



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3. Fateen Nabilla Binti Rasli (MG 131006), Site suitability analysis of urban parks in Iskandar Malaysia using GIS and remote sensing techniques (M.Sc taught course-Since January 2014)
4. Nazarin Ezzaty Binti Mohd Najib (MG 131007), Decadal changes in forest cover in Malaysia using Landsat satellite data (M.Sc taught course-Since January 2014)

PUBLICATIONS

BOOK

1. Darus Ahmad, Nik Nasruddin Mahmood, Mansor Abd. Rahaman, laili@Asri Nordin, Jimat Bolhassan, Mardiana Shafiee, Ku Mohd Noh Ku Ramli, Noraini Surip, Kamaruzaaman Wahid, Aidy@M.Shawal M.Muslim, Idris Saedin, Ibrahim Selamat, Mariamni Halid, Jasmi Ab Talib, Norizan Abdul Patah, Nik Mazlina Nik Mustapha, Roslina Samad, Siti Atikah Mohamed Hashim, Siti MOrni Umor, Mohamed Kamal Azidy Musa, Khor Soong Wei, Abdul Majid Wahab, Md. Nazri Safar, Achmad Qamal Siatan, Syariman Samsudin, Kasmah Hamid, Donna Patrick Apan, Mazlan Hashim, Samsudin Ahmad, Ab. Latif Ibrahim, Sahrum Ses, Wan Hazli Wan Kadir, Abd. Wahid Rasib, Mohd Ibrahim Seenii Mohd, **Kasturi Devi Kanniah**, Azmi Hassan, Hafizal Ahmad, Faidrullah Sheikh Naimullah, Hamdan Omar, Mohd Amin Md Johari, Mohd Azahari Faidi, Norlizan Razali, Norsahida Said, Nur Aznim Mohamed Azizi and Zamzarina Ali (2008), *Satellite Image Atlas of Malaysia- an atlas of satellite imagery*, pp254, ISBN 978-983-43550-1-2, Malaysian Centre for Remote Sensing and Universiti Teknologi Malaysia.

2. Zaini Ujang, Mohd Azraai Kassim, Ho Chin Siong, Koichi Okabe, Ahmad Nazri Muhammad Ludin, Mohd Ismail Abd Aziz, Mohd. Hamdan Ahmad, Mohammad Rafee Majid, Ibrahim Ngah, **Kasturi Devi Kanniah**, Chau Loon Wai, Teh Bor Tsong, Azilah Mohamed Akil, Muhamad Azahar Zikri Zahari, Abdul Rahim Ramli, Anis Syahira Zulkifli, Kang Chuen Siang, Malik Tassaduq Abbas, Yasmin Sofia Hussain, Fatin Aliah Phang Abdullah, Wong Wai Yoke, Haslenda Hashim, Ho Wai Shin, Siti Aktar Ishak, Zainura Zainon Noor, Lee Chew Tin, Mohd Razman Salim, Siti Nadzirah Othman, Tan Sie TingNawal Shaharuddin, Mohd Rashid Mohd Yusof, Muhammad Zaly Shah Muhammad Hussein, Gobi Krishna Sinniah, Afsaneh Afzali, Nurain Mohd Sith, Yuzuru Matsuoka, Prof. Dr. Takeshi Fujiwara, Dr. Junichi Fujino, Dr. Mikiko Kainuma, Ms. Reina Kawase, Kei Gomi, Janice Jeevamalar Simson, Miho Kamei, Yuri Hayashi, Maiko Suda, Shuichi Ashina, Diego Silva Herran, Siti Norbaizura Md. Rezab, Tomohito Hamada, Hiroaki Obayashi, Gakuji Kurata (2013), *Low Carbon Society Blueprint for Iskandar Malaysia 2025 - Summary for Policymakers (Second Edition, Mar 2013): UTM-Low Carbon Asia Research Center, Universiti Teknologi Malaysia, Malaysia ISBN: 978-967-11889-0-3 pp.34*

BOOK CHAPTER

Kanniah, Kasturi Devi and Teh, P L 2003. *Generation of Tasseled Cap Transformation Coefficients for the Use of TiungSAT-1 Multi Spectral Earth Imaging System (MSEIS) Data.*



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Chapter 8: In: TiungSAT-1: Data Applications. Astronautic Technology (M) Sdn. Bhd., Bukit Jalil, Kuala Lumpur, pp. 61-80. ISBN 983-41363-0-7.

ACADEMIC JOURNALS

ISI Cited

1. Tan, Kian Pang; **Kanniah, Kasturi Devi**; Cracknell, Arthur (2014), On the upstream inputs into the MODIS primary productivity products using biometric data from oil palm plantations-*International Journal of Remote Sensing* Volume 35 (issue 6), Pages 2215-2246 • Impact factor: 1.138
2. **Kasturi Devi Kanniah**, Hui Qi Lim, Dimitris G. Kaskaoutis, Arthur P. Cracknell (2014) Investigating aerosol properties in Peninsular Malaysia via the synergy of satellite remote sensing and ground-based measurements, *Atmospheric Research*, Volume 138, Pages 223–239 • Impact factor: 2.2
3. Hamed Adab, **Kasturi Devi Kanniah** and Karim Solaimani (2013) Modeling forest fire risk in the northeast of Iran using remote sensing and GIS techniques, *Natural Hazards*, Vol. 65, Issue 3, pp. 1723-1743 10.1007/s11069-012-0450-8 • Impact factor: 1.639
4. **Kanniah, K.D.**, Beringer, J., Hutley, L.B (2013) Response of savanna gross primary productivity to inter-annual variability in rainfall: results of a remote sensing based light use efficiency model, *Progress in Physical Geography*, Vol. 37, Issue 5, pp 642-663. doi: 10.1177/0309133313490006 • Impact factor: 3.419.
5. **Kanniah, K.D.**, Beringer, J., Hutley, L.B (2013) Exploring the link between clouds, radiation, and canopy productivity of tropical savannas, *Agricultural and Forest Meteorology* (special issue on water and carbon coupling to honour Dr Ray Leuning), Volumes 182–183, 15 December 2013, Pages 304–313. • Impact factor: 3.421
6. Arthur Philip Cracknell, **Kasturi Devi Kanniah**, Kian Pang Tan and Lei Wang, 2013, *Evaluation of MODIS gross primary productivity and land cover products for the humid tropics using oil palm trees in peninsular Malaysia and Google earth imagery*, *International Journal of Remote Sensing*, Vol. 34, Issue 20, pp. 7400-7423 • Impact factor: 1.138
7. Kian Pang Tan, **Kasturi Devi Kanniah** and Arthur P. Cracknell, 2013, *Use of UK-DMC 2 and ALOS PALSAR for studying the age of oil palm trees in southern Peninsular Malaysia*, *International Journal of Remote Sensing*, Vol. 34, Issue 20, pp. 7424-7446 • Impact factor: 1.138



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

8. **Kanniah, K.D.**, Beringer, J., Hutley, L.B (2012) Control of atmospheric particles on diffuse radiation and terrestrial plant productivity: a review, *Progress in Physical Geography*, Vol. 36 (2), pp. 210 – 238 • Impact factor: 3.419

9. Tan K.P., **Kanniah, K.D.**, and Cracknell, A.P (2012) A review of remote sensing based productivity models and their suitability for studying oil palm productivity in tropical regions, *Progress in Physical Geography*, Vol. 39 (5), page 655-679 • Impact factor: 3.419

10. Beringer, J., J. Hacker, L.B. Hutley, S.K. Arndt, R. Amiri, L. Bannehr, L.A Cernusak, S. Grover, C. Hensley, D.Hocking, P. Isaac, H. Jamali, **K. Kanniah**, R. Leuning, S. Livesley, B. Neininger, K.T. Paw U, W. Sea, D. Stratten, N. Tapper, R. Weinmann, S. Wood and S. Zegelin. 2011."SPECIAL – Savanna Patterns of Energy and Carbon Integrated Across the Landscape.' *Bulletin of the American Meteorological Society* 92: 1467-1485• Impact factor: 6.591

11. **Kanniah, K.D.**, Beringer, J., Hutley, L.B (2011) Environmental controls on the spatial variability of savanna productivity in the Northern Territory, Australia, *Agricultural and Forest Meteorology (Special Issue: Savanna Patterns of Energy and Carbon Integrated Across the Landscape (SPECIAL))*, 151 (11), 1429– 1439. • Impact factor: 3.421

12. **Kanniah, K.D.**, Beringer, J., Hutley, L.B (2010) The comparative role of key environmental factors in determining savanna productivity and carbon fluxes: a review, with special reference to Northern Australia, *Progress in Physical Geography*, 34 (4): 459 – 490, DOI: 10.1177/0309133310364933. • Impact factor: 3.419

13. **Kanniah, K.**, Beringer, J., Tapper, N.J. and Long, C. (2010) Aerosols and their influence on radiation partitioning and productivity in northern Australia, *Theoretical and Applied Climatology*, 100(3-4): 423 – 438. DOI: 10.1007/s00704-009-0192-z. • Impact factor: 1.759

14. **Kanniah, K.D.**, Beringer, J., Tapper, N.J., Hutley, L.B. and Zhu, X. (2009) Evaluation of Collections 4 and 5 of the MODIS Gross Primary Productivity product and algorithm improvement at a tropical savanna site in Northern Australia, *Remote Sensing of Environment*, 113(9): 1808-1822 ,doi:10.1016/j.rse.2009.04.013. • Impact factor: 5.103

15. M. Hashim, **K.D. Kanniah**, A. Ahmad, A.W. Rasib and A.L Ibrahim, "The use of AVHRR data to determine the concentration of visible and invisible tropospheric pollutants originating from a 1997 forest fire in South East Asia", *International Journal of Remote Sensing*, Vol. 25, No.21, November 2004, pg. 4781-4794. • Impact factor: 1.138

Scopus Cited

1. **Kasturi Devi Kanniah**, Ng Su Wai, Alvin Lau Meng Shin and Abd.Wahid Rasib "Per-pixel and sub-pixel classifications of high resolution satellite data for mangrove species mapping", *Applied GIS*, 3(8), 1-22 (August 2007) Monash University Press. ISSN 1832-5505, <http://www.appliedgis.net> • Impact factor: n/a (Scopus cited)



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Refereed International Journal

1. **Kasturi Devi Kanniah** and D. John Prabaharan, "GIS for Visualizing Environmental Hazards", *Geoinformation Science Journal*, Vol.4, Number 1, 2004, pg. 95-102.
2. **Kasturi Devi Kanniah** and Teh Poey Lee, "Tasseled Cap Transformation Coefficients using Tiungsat 1 for vegetation studies", *Malaysian Journal of Remote Sensing & GIS*, Volume 3, July 2002, pg 63-71
3. **Kasturi Devi Kanniah**, "Temperature analysis of volcanic crater lake using Landsat Thematic Mapper", *Malaysian Journal of Remote Sensing and GIS*, Vol. 2, July 2001 pg. 39-50
4. Mazlan Hashim, **Kasturi Devi Kanniah**, Asmala Ahmad and Abdul Wahid Rasib, "Remote Sensing of Tropospheric Pollutants Originating from 1997 Forest Fire in Southeast Asia", *Asian Journal of Geoinformatics*, Vol.4 No.4, June 2004, pg.57-67.
5. D.John Prabaharan and **Kasturi Devi Kanniah**, "Volcano hazard management using digital elevation model", *Asian Journal of Geoinformatics* Vol.1 No 4. June 2001, pg. 85-90.

Academic Magazine

1. **Kasturi Devi Kanniah**, Mazlan Hashim and Mohd Ibrahim Seeni Mohd, "A systematic approach in remote sensing education and training at Universiti Teknologi Malaysia", *GIS Development*, January, 2001, Vol.5 Issue 1, pg32-35 and 43.

Accepted with Correction

1. Adab Hamed, **Kanniah Kasturi Devi**, Solaiman Karim and Sallehuddin Roselina, (Nov. 2013) Modeling Structural Forest Fire Risk Using Frequency Analysis, *International Journal of Wildland Fire* • Impact factor: 2.322
2. Beringer, Jason; Hutley, Lindsay; Abramson, David; Arndt, Stefan; Bristow, Mila; Canadell, Josep; Cernusak, Lucas; Eamus, Derek; Evans, Bradley; Fest, Benedikt; Goergen, Klaus; Grover, Samantha; Hacker, Jorg; Haverd, Vanessa; **Kanniah, Kasturi**; Livesley, Stephen J; Lynch, Amanda; Maier, Stefan; Moore, Caitlin; Raupach, Mike; Russell-Smith, Jeremy; Tapper, Nigel; Uotila, Petteri, (Dec 2013), Fire in Australian Savannas: from leaf to landscape *Global Change Biology* • Impact factor: 6.91



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MONOGRAPHS

Kasturi Devi Kanniah, Remote sensing for natural resources management, Part 1: Remote Sensing for Agricultural management (2001), Remote Sensing Department, Faculty of Geoinformation Science & Engineering, Universiti Teknologi Malaysia (in Malay language)

TECHNICAL /RESEARCH REPORTS

1. Zaini Ujang, Mohd Azraai Kassim, Ho Chin Siong, Koichi Okabe, Ahmad Nazri Muhammad Ludin, Mohd Ismail Abd Aziz, Mohd. Hamdan Ahmad, Mohammad Rafee Majid, Ibrahim Ngah, **Kasturi Devi Kanniah**, Chau Loon Wai, Teh Bor Tsong, Azilah Mohamed Akil, Muhamad Azahar Zikri Zahari, Abdul Rahim Ramli, Anis Syahira Zulkifli, Kang Chuen Siang, Malik Tassaduq Abbas, Yasmin Sofia Hussain, Fatin Aliah Phang Abdullah, Wong Wai Yoke, Haslenda Hashim, Ho Wai Shin, Siti Aktar Ishak, Zainura Zainon Noor, Lee Chew Tin, Mohd Razman Salim, Siti Nadzirah Othman, Tan Sie TingNawal Shahrudin, Mohd Rashid Mohd Yusof, Muhammad Zaly Shah Muhammad Hussein, Gobi Krishna Sinniah, Afsaneh Afzali, Nurain Mohd Sith, Yuzuru Matsuoka, Prof. Dr. Takeshi Fujiwara, Dr. Junichi Fujino, Dr. Mikiko Kainuma, Ms. Reina Kawase, Kei Gomi, Janice Jeevamalar Simson, Miho Kamei, Yuri Hayashi, Maiko Suda, Shuichi Ashina, Diego Silva Herran, Siti Norbaizura Md. Rezab, Tomohito Hamada, Hiroaki Obayashi, Gakuji Kurata (2012), Development of Low Carbon Society Scenarios for Asian Region: Summary for Policy Makers: Low Carbon Society Blueprint for Iskandar Malaysia 2025 (Nov 2012) pp.42

2. **Kasturi Devi Kanniah**, (2011), Worldview-2 remote sensing data for tropical mangrove species classification, Report submitted to DigitalGlobe® Incorporated, USA for the WorldView-2, 8-Bands Research Challenge

3. **Kasturi Devi Kanniah**, Alvin Lau Meng Shin, and Mazlan Hashim (2012), Estimating Productivity of Tropical Oil Palm in Peninsular Malaysia (Q.J130000.7127.01J44 -GUP TIER 2)- Final report submitted to Research Management Centre, UTM.

4. **Kasturi Devi Kanniah**, (2011), Remote Sensing Analysis Of The Spatial And Temporal Patterns Of Aerosols And Their Ecological Implications, Final report submitted to Research Management Centre, UTM (Fundamental Research Grant Scheme, Ministry of Higher Education, Malaysia).

5. **Kasturi Devi Kanniah**, Environmental management of mangrove forest species composition using high resolution satellite data (2004). Final report submitted to Research Management Centre, UTM.



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

CONFERENCE PAPERS/ABSTRACTS

ISI Cited

1. Hamed adab, **Kasturi Devi Kanniah**, Karim Solaimani, and Kian Pang Tan, 2013, Estimating atmospheric humidity using MODIS cloud-free data in temperate humid region, *IEEE International Geoscience & Remote Sensing Symposium*, July 21-26, Melbourne, Australia, page 1827-1830.
2. Kian Pang Tan, **Kasturi Devi Kanniah** and Arthur Philip Cracknell, 2013, The potential of modis derived photochemical reflectance index for studying gross primary productivity of oil palm Trees, *IEEE International Geoscience & Remote Sensing Symposium*, July 21-26, Melbourne, Australia, page 2141-2144.
3. Chuen Siang Kang and **Kasturi Devi Kanniah**, 2013, Validation of AMSR-E soil moisture product and the future perspective of soil moisture estimation using smos data over tropical region, *IEEE International Geoscience & Remote Sensing Symposium*, July 21-26, Melbourne, Australia, page 3730-3733.
4. **Kasturi Devi Kanniah**, Kian Pang Tan and Cracknell,A.P, 2012, UK DMC-2 satellite data for deriving biophysical parameters of oil palm trees in Malaysia, 2011 *IEEE International Geoscience & Remote Sensing Symposium*, July 22-27, 2012, Munich, Germany, page 6569-6572.
5. Hamed Adab, **Kasturi D. Kanniah** ,and Karim Solaimani, 2011, GIS-based Probability Assessment of Fire Risk in Grassland and Forested Landscapes of Golestan Province, Iran, *International Conference on Environmental and Computer Science IPCBEE* vol.19(2011), pages 170-175, © (2011), IACSIT Press, Singapore.
6. Tan, K.P., **Kanniah, K.D.**, Busu, I., and Cracknell,A.P, 2011, Evaluation of MODIS Gross Primary Productivity of tropical oil palm in southern Peninsular Malaysia, 2011 *IEEE International Geoscience & Remote Sensing Symposium*, July 24-29, 2011, Vancouver, Canada, page 756-759.

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1. **Kasturi Devi Kanniah**, Hou Lee Ping and Alvin Lau Meng Shin, 2013, Mapping mangrove species using worldview-2 Satellite data, 34th Asian Conference on Remote Sensing, Bali, Indonesia, 20-24 October 2013, pg SC04-166-172.
2. **K D Kanniah**, N Muhamad and C S Kang, 2013, Remote sensing assessment of carbon storage by urban forest, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia. IOP Conf. Series: Earth and Environmental Science 18, 012151.
3. **K D Kanniah**, A sheikhi and C S Kang, 2013, Exploring The Role Of Green And Blue Infrastructure In Reducing Temperature In Iskandar Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia. IOP Conf. Series: Earth and Environmental Science 18, 012151.



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KASTURI DEVI KANNIAH

BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

4. S T Tan, H Hashim, C T Lee, J S Lim, **K D Kanniah**, 2013, Optimal Waste-To-Energy Strategy Assisted By Gis For Sustainable Solid Waste Management, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia. IOP Conf. Series: Earth and Environmental Science 18, 012159.
5. E C Yeap, Alvin M S Lau, Ibrahim Bin Busu, **Kasturi Devi Kanniah**, Abd Wahid Rasib and Wan Hazli Wan Kadir, 2013, Development Of Local Atmospheric Model For Estimating Solar Irradiance In Peninsular Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia. IOP Conf. Series: Earth and Environmental Science 18, 012103.
6. B Rokni Deilmai, **K D Kanniah**, A W Rasib and A Ariffin, 2013, Comparison Of Pixel Based And Artificial Neural Networks Classification Methods In Detecting Forest Cover Changes In Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia. IOP Conf. Series: Earth and Environmental Science 18, 012069.
7. Hui Qi Lim, **Kasturi Devi Kanniah**, Alvin Meng Shin Lau, 2013, Retrieval Of Aerosol Optical Depth Over Urban Areas In Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia. IOP Conf. Series: Earth and Environmental Science 18 , 012085.
8. Nor Syazwani Mat Nor, Abd Wahid Rasib, Abdul Razak Mohd Yusoff, Alvin Lau Meng Shin, Wan Hazli Wan Kadir, Shahabudin Amerudin, Mohammad Zulkarnain Abd Rahman, **Kasturi Devi Kanniah** and Tam Tze Huey, 2013, Estimation Of Ocean Primary Production Using MODIS Satellite Data In Straits of Malacca, 34th Asian Conference on Remote Sensing, Bali, Indonesia, 20-24 October 2013, pg SC04 – 765- 772..
9. Hamed Adab, **Kasturi D. Kanniah** and Karim Solaimani, 2011, "Forest Fire Hazard Zone Mapping Using Structural Fire Index: A Case Study". 32 *Asian Conference on Remote Sensing (ACRS2011)*, Taiwan, October 3-7, 2011, Volume 3. Page 1678-1684 (ISBN: 978-1-61839-497-2).
10. **Kasturi Devi Kanniah** and Khoo Kian Hong, "Timber volume estimation using Landsat ETM+ Imagery", 25th *Asian Conference on Remote Sensing Proceeding*, Chiang Mai, Thailand, 22-26 Nov. 2004, pg. 697-703.
11. **K. D. Kanniah**, T. P. Lee, M. Hashim, "Capability of the first Malaysian micro satellite - TiungSat-1 MSEIS (Multi Spectral Earth Imaging System) for vegetation studies," Proceedings of 23rd ACRS (Asian Conference on Remote Sensing), Nov. 25-29, 2002, Kathmandu, Nepal.
12. **Kasturi Devi Kanniah**, Mazlan Hashim and Mohd Ibrahim Seeni Mohd, "Remote sensing: an environmentally friendly tool to enhance environmental education at the Department of Remote Sensing", Universiti Teknologi Malaysia, 22nd *Asian Conference on Remote Sensing Proceeding*, Singapore, 5-9 Nov. 2001.
13. Mazlan Hashim, **Kasturi Devi Kanniah**, Abd Wahid Rasib and Lim Chee Ming, "Mapping and measuring the troposphere pollutants originated from the 1997 forest fire in



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KASTURI DEVI KANNIAH

BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

- South East Asia, 2000", 21st *Asian Conference on Remote Sensing Proceeding*, Vol. 1, pg 1006-1011, Taiwan, 4-8 Dec, 2000.
14. D.John Prabakaran and **Kasturi Devi Kanniah**, "Volcano Hazard Management using Digital Elevation Model", 21st *Asian Conference on Remote Sensing Proceeding*, Vol. 1, pg 1148-1154, Taiwan, 4-8 Dec, 2000.
 15. **Kasturi Devi Kanniah**, Mazlan Hashim and Mohd Ibrahim Seeni Mohd, "A systematic Approach in Remote Sensing Education and Training at Universiti Teknologi Malaysia", 21st *Asian Conference on Remote Sensing Proceeding*, Vol. 1, pg 1036-1041, Taiwan, 4-8 Dec, 2000.

Other Proceedings

1. Cracknell, A. P., **Kanniah, K. D.** and Tan, K. P. (2013). The use of oil palm estates in Peninsular Malaysia for the validation of MODIS gross primary productivity (GPP) and net primary productivity (NPP) for the humid tropics. In: *Proceedings of the Remote Sensing and Photogrammetric Society Conference 2013 on Earth Observation for Problem Solving*, 4-6 September 2013, Scotland, UK.
2. **Kanniah, K. D.**, Tan, K. P. and Cracknell, A. P. (2013). The use of radar ALOS PALSAR and the prospective use of airborne Lidar for studying the age of oil palm trees. In *Seminar on Advanced Active Remote Sensing (SAARS 2013)*, 11-13 June 2013, Kuala Lumpur, Malaysia (Abstract).
3. Hamed Adab, **Kasturi D. Kanniah** and Karim Solaimani, 2012, "Role of Physiographic and Anthropogenic Factors in Forest Fire", 6th *International Symposium on Advance in Science and Technology (SASTech) 2012 Malaysia*, 24 - 25 March 2012, page 5.
4. **Kasturi Devi Kanniah**, Jason Beringer, and Lindsay Hutley, 2011, "Modelling Gross Primary Productivity of Savanna Vegetation in northern Australia using MODIS data", 34th *International Symposium on Remote Sensing of Environment*, Sydney Convention and Exhibition Centre, 10-15 April 2011.
5. **Kasturi Devi Kanniah**, Jason Beringer, and Lindsay Hutley 2011, "Relationship between clouds, radiation and canopy productivity in savannas, *Proceedings of AsiaFlux 2011: Bridging ecosystem science to services and stewardship*, pg 14 (Abstract).
6. **Kasturi Devi Kanniah** and Norbaizura Yaso, 2010, "Preliminary assessment of the impact of atmospheric aerosols on climate change in Peninsular Malaysia, *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Science*, Volume XXXVIII, Part 8, Pages 386-391, Kyoto Japan 2010 (Refereed Proceeding)
7. **Kasturi Devi Kanniah**, Jason Beringer and Lindsay Hutley, 2010, Analysis of the spatial and temporal variability of savanna productivity in the Northern Territory, Australia using MODIS data, *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Science*, Volume XXXVIII, Part 8, Pages 553-558, Kyoto Japan 2010 (Refereed Proceeding)



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

8. Beringer J, Hacker J, Hutley L B, Leuning R, Arndt S K, Amiri R, Bannehr L, Cernusak L A, Grover S, Hensley C, Hocking D J, Isaac P R, Jamali H, **Kanniah K**, Livesley S, Neiningen B, Paw U K, Sea W B, Straten D, Tapper N J, Weinmann R A, Wood S, Zegelin S J (2010) SPECIAL - The Savanna Patterns of Energy and Carbon Integrated Across the Landscape campaign, American Geophysical Union (AGU) Fall Meeting, 13 - 17 December, San Francisco, USA
9. **Kasturi Devi Kanniah**, Nigel Tapper, Jason Beringer, Chuck Long, Lindsay Hutley and Xuan Zhu, "Preliminary investigations of the role of smoke aerosols on carbon uptake of a northern Australian tropical savanna", *Sixteenth ARM Science Team Meeting Proceedings*, Albuquerque, New Mexico, March 27 - 31, 2006, extended abstract available online
http://www.arm.gov/publications/proceedings/conf16/extended_abs/kanniah_kd.pdf
10. Hashim, Mazlan and Seeni Mohd, Mohd Ibrahim and **Kanniah, Kasturi**, 2002, *Remote Sensing Education in Malaysia: A systematic approach at Universiti Teknologi Malaysia*. In: FIG XXII International Congress, April 19-26 2002, Washington, D.C. USA, page 1-13.
11. **K.D. Kanniah** and M. Hashim, "A systematic approach in remote sensing education and training in Malaysia with special reference to Universiti Teknologi Malaysia", *International Archives of Photogrammetry and Remote Sensing*, Vol. XXXIII, Part B6, Commission VI, pp 153-163, Amsterdam (16-23 July) 2000 (Refereed Proceeding)

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CITATION INDEX

h- index by Scopus: 7
Researchgate Score: 20.49 (as of May 2014)



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CURRICULUM VITAE MARCH 2014

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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

CONSULTANCY

- | | | |
|----------|---|--|
| 1. Title | : | Technical Consultant in World Express Mapping Sdn Bhd |
| Period | : | From 1 November 2013 and ending on 31 October 2014 |
| Sponsor | : | World Express Mapping Sdn Bhd |
| Position | : | Technical Consultant |
| Status | : | Ongoing |
| | | |
| 2. Title | : | Technical Consultant in Uni-Technologies Sdh Bhd |
| Period | : | Since 15 January 2014 |
| Sponsor | : | Uni-Technologies Sdh Bhd |
| Position | : | Technical Consultant |
| Status | : | Ongoing |
| | | |
| 3. Title | : | Satellite Image Atlas of Malaysia |
| Period | : | From Nov 2003 to April 2005 (project period 2003-2006) |
| Sponsor | : | Malaysia Remote Sensing Centre |
| Position | : | Member |
| Value | : | RM 2,336,602.65 |
| Status | : | Completed |

INTERNATIONAL/NATIONAL ORAL/POSTER PRESENTATIONS

Invited speaker

1. Support vector machine for monitoring land cover changes in Johor, 'Earth Observation and Monitoring through Remote Sensing' - national workshop organized by IEEE Malaysia section Geoscience and Remote Sensing society chapter- 22 November, at Multimedia University, Melaka.



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KASTURI DEVI KANNIAH

BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

Presenter

1. **K D Kanniah**, N Muhamad and C S Kang, 2013, Remote sensing assessment of carbon storage by urban forest, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia.
2. **K D Kanniah**, A sheikhi and C S Kang, 2013, Exploring The Role Of Green And Blue Infrastructure In Reducing Temperature In Iskandar Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia.
3. S T Tan, H Hashim, C T Lee, J S Lim, **K D Kanniah**, 2013, Optimal Waste-To-Energy Strategy Assisted By Gis For Sustainable Solid Waste Management, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia.
4. E C Yeap, Alvin M S Lau, Ibrahim Bin Busu, **Kasturi Devi Kanniah**, Abd Wahid Rasib and Wan Hazli Wan Kadir, 2013, Development Of Local Atmospheric Model For Estimating Solar Irradiance In Peninsular Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia.
5. B Rokni Deilmal, **K D Kanniah**, A W Rasib and A Ariffin, **2013**, Comparison Of Pixel Based And Artificial Neural Networks Classification Methods In Detecting Forest Cover Changes In Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia.
6. Hui Qi Lim, **Kasturi Devi Kanniah**, Alvin Meng Shin Lau, 2013, Retrieval Of Aerosol Optical Depth Over Urban Areas In Malaysia, International Symposium on Digital Earth, 26-29 August 2013, Kuching, Sarawak, Malaysia.
7. Hamed adab, **Kasturi Devi Kanniah**, Karim Solaimani, and Kian Pang Tan, **2013**, Estimating atmospheric humidity using MODIS cloud-free data in temperate humid region, *IEEE International Geoscience & Remote Sensing Symposium*, July 21-26, Melbourne, Australia.
8. Kian Pang Tan, **Kasturi Devi Kanniah** and Arthur Philip Cracknell, 2013, The potential of modis derived photochemical reflectance index for studying gross primary productivity of oil palm Trees, *IEEE International Geoscience & Remote Sensing Symposium*, July 21-26, Melbourne, Australia.
9. Chuen Siang Kang and **Kasturi Devi Kanniah**, **2013**, Validation of AMSR-E soil moisture product and the future perspective of soil moisture estimation using smos data over tropical region, *IEEE International Geoscience & Remote Sensing Symposium*, July 21-26, Melbourne, Australia.
10. Arthur Philip Cracknell, **Kasturi Devi Kanniah** and Kian Pang Tan, 2013, The Use of Oil Palm Estates in Peninsular Malaysia for the Validation of MODIS Gross Primary Productivity (GPP) and Net Primary Productivity (NPP) for the Humid Tropics", nab Remote Sensing and Photogrammetry Society 2013 Annual Conference, Earth Observation for Problem Solving, 4-6 September 2013, Hilton Hotel Glasgow.
11. **Kanniah, K. D.**, Tan, K. P. and Cracknell, A. P. (2013). The use of radar ALOS PALSAR and the prospective use of airborne lidar for studying the age of oil palm trees.



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- In: Seminar on Advanced Active Remote Sensing (SAARS 2013), 11-13 June 2013, Kuala Lumpur, Malaysia.
12. Hamed adab, **Kasturi Devi Kanniah**, Karim Solaimani, and Kian Pang Tan, 2013, Estimating atmospheric humidity using MODIS cloud-free data in temperate humid region, *IEEE International Geoscience & Remote Sensing Symposium*, July 21-26, Melbourne, Australia, page 1827-1830 (ISI Cited)
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 15. Beringer J, Hutley L B, Hacker J, Leuning R, Arndt S, Amiri R, Bannehr L, Cernusak L A, Grover S, Hensley C, Hocking D J, Isaac P R, Jamali H, **Kanniah K**, Livesley S, Neininger B, Paw U K T, Sea W B, Straten D, Tapper N J, Weinmann R A, Wood S & Zegelin S J. (2012) SPECIAL – The Savanna Patterns of Energy and Carbon Integrated Across the Landscape campaign, ESA Annual Meeting 2012, Portland, USA, 5 – 10 August 2012.
 16. Beringer J, Hacker J, Hutley L B, Leuning R, Arndt S K, Amiri R, Bannehr L, Cernusak L A, Grover S, Hensley C, Hocking D J, Isaac P R, Jamali H, **Kanniah K**, Livesley S, Neininger B, Paw U K, Sea W B, Straten D, Tapper N J, Weinmann R A, Wood S & Zegeli S J. (2011) SPECIAL – The Savanna Patterns of Energy and Carbon Integrated Across the Landscape campaign, OzFlux Meeting, 13 – 15 June 2011, Perth.
 17. **Kasturi Devi Kanniah**, Jason Beringer, and Lindsay Hutley 2011, “Relationship between clouds, radiation and canopy productivity in savannas, AsiaFlux 2011: Bridging ecosystem science to services and stewardship, November 9-11, 2011, Universiti Teknologi Malaysia, Johor, Malaysia.
 18. Beringer J, Hacker J, Hutley L B, Leuning R, Arndt S K, Amiri R, Bannehr L, Cernusak L A, Grover S, Hensley C, Hocking D J, Isaac P R, Jamali H, **Kanniah K**, Livesley S, Neininger B, Paw U K, Sea W B, Straten D, Tapper N J, Weinmann R A, Wood S & Zegeli S J. (2011) SPECIAL - The Savanna Patterns of Energy and Carbon Integrated Across the Landscape campaign, OzFlux Meeting, 13 - 15 June 2011, Perth.
 19. **Kasturi Devi Kanniah**, Jason Beringer, and Lindsay Hutley, 2011, “Modelling Gross Primary Productivity of Savanna Vegetation in northern Australia using MODIS data”, 34th International Symposium on Remote Sensing of Environment, Sydney Convention and Exhibition Centre, 10- 15 April 2011.
 20. Beringer J, Hacker J, Hutley L B, Leuning R, Arndt S K, Amiri R, Bannehr L, Cernusak L A, Grover S, Hensley C, Hocking D J, Isaac P R, Jamali H, **Kanniah K**, Livesley S, Neininger B, Paw U K, Sea W B, Straten D, Tapper N J, Weinmann R A, Wood S, Zegelin S J (2010) SPECIAL - The Savanna Patterns of Energy and Carbon Integrated



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

- Across the Landscape campaign, American Geophysical Union Fall Meeting, 13 - 17 December, San Francisco, USA.
21. **Kasturi Devi Kanniah**, 2010, Preliminary assessment of the impact of atmospheric aerosols on climate change in Peninsular Malaysia, International Photogrammetry, Remote Sensing and Spatial Information Science Conference, 9-12 August 2010, Kyoto Japan.
 22. **Kasturi Devi Kanniah**, 2010, Analysis of the spatial and temporal variability of savanna productivity in the Northern Territory, Australia using MODIS data, International Photogrammetry, Remote Sensing and Spatial Information Science Conference, 9- 12 August 2010, Kyoto Japan.
 23. Beringer J, Hutley L B, Tapper N J, Cernusak L, and **Kanniah K** (2008), Northern Australian savannas are observed as a strong carbon sink: Where does all the carbon go?, *Eos Trans. AGU*, 89(23), West. Pac. Geophys. Meet. Suppl., Abstract B25A-06.
 24. **Kasturi Devi Kanniah**, Jason Beringer, Lindsay Hutley, Nigel Tapper Xuan Zhu, Evaluation of MODIS gross primary productivity and scaling up GPP over northern Australian savannas, *oral presentation, Ozflux workshop on spatial variability and scaling (Australia and New Zealand flux) meeting*, Barossa Weintal Resort Tanunda, South Australia, 4-6 February 2008
 25. Beringer J, Hutley LB, Tapper NJ, Cernusak L and **Kanniah K** (2008) *Northern Australian savannas are observed as a strong carbon sink: Where does all the carbon go?*, International symposium on CO2 flux monitoring Technology, *Invited speaker*, International Conference Hall, Sitou Nature Education area, The Experimental Forest, National Taiwan University, December 16-18, 2008.
 26. Beringer J, Hutley LB, Tapper NJ, Cernusak L and **Kanniah K** (2007) *Northern Australian savannas are observed as a strong carbon sink: Where does all the carbon go?*, *Combio, Invited speaker - Ecophysiology session*, Sydney convention and exhibition centre, September 22-26, 2007
 27. **Kasturi Devi Kanniah**, Nigel Tapper, Jason Beringer, Chuck Long, Lindsay Hutley and Xuan Zhu, *Poster* entitled "Interaction between aerosols, clouds and solar radiation: impact on savanna productivity", *Third Australian Aerosol workshop*, 4-7 July 2007, CSIRO Marine and Atmospheric Research, Melbourne, Australia
 28. **Kasturi Devi Kanniah**, Jason Beringer, Nigel Tapper, Lindsay Hutley, Xuan Zhu and Chuck Long, "Modelling plant productivity in northern Australian savannas using a land surface model" *poster* presented at a *summer school (Land Surface - Atmosphere Interactions in a Changing Climate) in Grindelwald*, Switzerland, 26-31 August, 2007.
 29. **Kasturi Devi Kanniah**, Jason Beringer, Nigel Tapper, Lindsay Hutley, Xuan Zhu, Evaluation of MODIS gross primary productivity and algorithm improvement in Northern Australian savannas, *oral presentation, Monash Climate Science Day*, 26 September, 2007.
 30. **Kasturi Devi Kanniah**, Nigel Tapper, Jason Beringer, Chuck Long, Lindsay Hutley and Xuan Zhu, *Oral presentation* entitled "Responses of a tropical savanna carbon exchange to smoke aerosols in Northern Australia" presented in "*International Geographic Union*" conference in Brisbane, Australia 3-7 July 2006.
 31. **Kasturi Devi Kanniah**, Nigel Tapper, Jason Beringer, Chuck Long, Lindsay Hutley and Xuan Zhu, *Poster* entitled "Preliminary investigations of the role of smoke aerosols on carbon uptake of a northern Australian tropical savanna" presented at *Atmospheric*



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

- Radiation Measurement Science Meeting* in Albuquerque, New Mexico, USA 27- 31 March 2006.
32. **Kasturi Devi Kanniah**, Teh Poey Lee and Mazlan Hashim Generation of Tasseled Cap Transformation Coefficients for the Use of Tiungsat MSEIS Data, *Tiungsat 1-User Group Seminar*, 24 September 2002, Cyberjaya, Kuala Lumpur, Malaysia
33. **Kasturi Devi Kanniah**, Mazlan Hashim and Mohd Ibrahim Seeni Mohd, "Remote sensing: an environmentally friendly tool to enhance environmental education at the Department of Remote Sensing", Universiti Teknologi Malaysia, 22nd *Asian Conference on Remote Sensing Proceeding*, Singapore, 5-9 Nov. 2001
34. **Kasturi Devi Kanniah**, Development of direct satellite readout for daily monitoring of haze and coastal environment, *The Aerospace, IT & Telecommunication Focus Group (ASITT) seminar*, 6 May 2000, Hotel Puteri Pan Pacific, Johor Bahru

PROFESSIONAL AFFILIATIONS/MEMBERSHIPS

PROFESSIONAL MEMBERSHIPS

1. Institute of Electrical and Electronics Engineers (IEEE), member since Sept. 2011 (membership no:91285948)
2. IEEE Geoscience and Remote Sensing Society (IEEE GRSS), member since Sept. 2011 (membership no:91285948)
3. International Association for Vegetation Science –Member since March 2012 (no: 1916368)
4. IEEE Malaysia Section Geoscience & Remote Sensing Society Chapter (Committee Member/Chair for Student Activities) since Nov 2012
5. International Association for Ecology- member since March 2012 (Member no: 201212269).

OTHER MEMBERSHIPS

1. Associate Member for International Journal of Geoinformatics- since March 2012
2. Malaysian Remote Sensing Society (member since 2001, member no: M176)
3. Cambridge Commonwealth Society (fellow since 1998)
4. AsiaFlux member since 24 July 2009
5. Editorial board member- Geoinformation Science Journal- International journal (June 2009 to June 2010)
6. Editorial board member -International Journal of Geoinformatics- Scopus cited- since June 2012
7. Associate member of Committee on Space Research (COSPAR)



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AWARDS AND RECOGNITION

International

1. Full sponsorship to participate in Capacity Building Workshop on 'Remote Sensing of the Global Water Circulation to Climate Change at Key Laboratory of Microwave Remote Sensing (MIRs/CAs), National Space Center (NSSC), Beijing, China (3-14 September 2012)- Sponsored by Committee on Space Research (COSPAR) and National Space Science Center, Chinese Academy of Sciences.
2. Top 100 scientists 2012 by International Biographical Centre, Cambridge, England (April 2012)- International Award/recognition for publication activities.
3. Marquis's who's who in the world 2012 (International Award/recognition for publication)
4. Marquis's who's who in the world 2013 (International Award/recognition for publication)
5. Marquis's who's who in the world 2014 (International Award/recognition for publication)
6. Full Scholarship to undertake PhD in Monash University, Australia (from May 2005 to September 2008) International Postgraduate Research Scholarship by the Faculty of Arts, Monash University (International Scholarship)
7. Full Scholarship by Cambridge Commonwealth Trust and Ex-Gratia grant by Cambridge University to undertake M.Phil degree in Cambridge University, UK, 1997 (International Scholarship)
8. Full Monbusho Scholarship to undertake Research in Osaka University of Foreign Studies, Japan, April 1995-October 1996 (International Scholarship)

National/ University

1. Publication Award 2011 by the National Space Agency, Ministry of Science, Technology & Innovation, Malaysia (second place under Publication in conference papers category) (National level Recognition)
2. Contribution to the University's Key Performance Index 2011 (award from Sustainability Research Alliance, UTM for Publication in High Impact factor Journals (University level Recognition)
3. Publication Award 2009- publication in high impact factor Journal, (University level Recognition)



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

4. Excellent Service Award, UTM (2009)
5. Publication Award 2005- Faculty of Geoinformation Science & Engineering (Faculty level Recognition).
6. Research Awards (Excellent Achievement), 2003, UTM (University level Recognition)

TEACHING ACTIVITIES

Undergraduate

1. Introduction to Oceanography and Physical geography (SGS 2163)
2. Environmental Impact Assessment (SGS 4323)
3. Technical Writing (SGS 3162)
4. Remote sensing for earth resource management (SGS 3243)
5. Remote Sensing for Environmental Application (SGS 4113)
6. Applied Statistics for Remote Sensing (SGS 2213)
7. Field Data Collection (SGS 2643)
8. Technology Remote Sensing 2 (SGS 2513)
9. Undergraduate Project 1 & 2 (SGS 4532 and SGS 4644)
10. Supervision of Industrial Training –Undergraduate students (B.Sc Remote Sensing) 14-16 and 23 June 2010 in Kuala Lumpur, PutraJaya, Cyberjaya and Skudai, Malaysia
11. Supervision of Industrial Training –Undergraduate students (B.Sc Remote Sensing) 17 May 2004 in Kota Kinabalu Sabah, Malaysia
12. Supervision of Industrial Training –Undergraduate students (B.Sc Remote Sensing) - 7-13 May 2003 in Subang, Petaling Jaya and Kuala Lumpur, Malaysia

Postgraduate

1. Applications of Remote Sensing (MGS 1104)
2. Research Methods in RS & GIS (MGS 1084)
3. Principals of Remote Sensing (MGS 1014)



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

Undergraduate Project (B.Sc) Supervision

1. Teh Poey Lee (2002), Generation of Tssaed Cap transformation coefficients for Multi spectral earth imaging system (MSEIS) Tiungsat-1 data (thesis in Malay language- Penjanaan Koefisien Tassaed Cap bagi data Tiungsat-1 for Multi spectral earth imaging system (MSEIS))
2. Kumar Veliayudam (2002), Estimation of G factor value for Revised Universal Soil Loss Equation-2 using NDVI technique from Landsat TM data (thesis in malay language- Anggaran nilai factor G bagi model Revised Universal Soil Loss Equation-2 dengan menggunakan teknik NDVI daripada data Landsat TM)
3. Shahrom Nasrodin (2002), Cloud discrimination technique for Landsat TM data (thesis in malay language- Teknik pengasingan awan bagi data Landsat TM)
4. Hadznizan Hamdan (2003), Effect and correction of BRDF for NOAA AVHRR data (thesis in malay language- Kesan dan pembetulan BRDF terhadap data NOAA AVHRR)
5. Kasturi Gunaratnam (2003), Buildings' edge extraction from Lidar data (thesis in malay language- Pengestrakan sisi bangunan daripada data Lidar)
6. Khoo Kian Hong (2003), Timber volume estimation for Pasoh Forest reserve using landsat 7 ETM+ imagery
7. Mohd Dini Hairi bin Suliman (2003), Change detection of urban development with spatial feature highlighting technique in post classification (thesis in malay language- Pengesanan perubahan pembangunan Bandar dengan teknik penonjolan fitur spatial di dalam post-classification)
8. Jason Jon Benedict (2004), The application of remote sensing and GIS for the development of fire mapping database
9. Kristofre Ian Morton (2004), An evaluation of lambertian correction, mannert correction and C correction for SPOT satellite image over Cameron Highlands
10. Norsahida binti Said (2004), Topography analysis for housing planning with remote sensing, Geography Information System and ancillary data (thesis in malay language- Analisis Topografi bagi perancangan tapak perumahan menggunakan kaedah remote sensing, sistem maklumat geografi (GIS) dan data sampingan)
11. Ng Su Wai (2005), Classification of Ikonos data for mangrove mapping



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

12. Khairul Faizi bin Dalail (2009), Flood detection using Radarsat-1 data
13. Siti Nurliana binti Saat (2009), Monitoring clouds movement during 2006 Johor flood using satellite imageries
14. Norbaizura Binti Yaso (2010)- Spatial and temporal analysis of aerosols in Peninsular Malaysia using MODIS data (thesis in malay language- Analisa corak taburan spatial dan temporal erosol di Semenanjung Malaysia dengan menggunakan data MODIS)
15. Halimatun Saadiah Binti Majid (2010), Urban mapping using IKONOS data (thesis in malay language-Pemetaan Bandar dengan menggunakan data Ikonos)
16. Yap Xen Quan (2010), Estimation of aerosol optical depth using moderate Resolution Imaging Spectroradiometer (MODIS) Level 1B data at 1 km resolution in Peninsular Malaysia.
17. Siti Rhodiyah Binti Md Safar (2010), Improving vegetation productivity model with soil moisture data: remote sensing approach (thesis in malay language-Memperbaiki model productivity tumbuhan dengan menggunakan data kelembapan tanah: pendekatan remote sensing)
18. Lim Tze Chyn (2011), Mapping flood hazard zone (thesis in malay language- pemetaan kawasan rawan bencana banjir)
19. Abdul malik bin mohd sayut (2011), Remote sensing and GIS application in controlling dengue (thesis in malay language-aplikasi remote sensing dan gis dalam pengawalan wabak denggi)
20. Syarafina Binti Yaacob (2011), Mapping Solar Radiation In Peninsular Malaysia Using Aqua Modis Data
21. Hou Lee Ping (2011), Mangrove Species Classification Using Worldview-2 Data
22. Norfashareena Binti Muhamad (2012), Remote Sensing assessment of carbon sequestration by urban forest
23. Low Chen Yen (2012), Evaluations of MODIS evapotranspiration product for tropical forest in Peninsular Malaysia
24. Chiang Hui Shuang (2012), Carbon storage estimation of street trees in Johor Bahru using remote sensing techniques
25. Nurhidayah Binti Hamdan (2012), Deriving biophysical parameters of oil palm trees using airborne hyperspectral data



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26. Nur Rabiatul Adawiyah Binti Jobli (2013), Carbon storage estimation of mangrove forest using optical and radar satellite data.
27. Siti Shazwani Binti Mohamad Akhir (2013), Support Vector Machines (SVM) for monitoring mangrove changes over west south Johor

Activities enhancing students' personalities

1. Academic Advisor for year 1 students - session 2010/2011
2. Academic Advisor for year 2 students - session 2011/2012
3. Academic Advisor for year 3 students - session 2012/2013
4. Academic Advisor for year 4 students - session 2013/2014
5. Accompanying students on Global Outreach Programme to National University of Singapore 18 March 2009
6. Accompanying students on Global Outreach Programme to Thailand (Program Global Outreach "First Asian Institute of Technology Remote Sensing Study Tour 2009" (14-20 Dec 2009)
7. Remote Sensing Camp 2- 4-11 Dec 2010 in Kuala Lumpur, Malaysia
8. Remote sensing Camp from 7-9 August 2009 in Port Dickson, Malaysia
9. Remote sensing Camp from 20 March to 3 April 2005 in Kota Tinggi, Malaysia
10. Remote sensing Camp 2-17 May 2001 in Shah Alam and Klang Valley, Malaysia

ACADEMIC/ADMINISTRATIVE DUTIES

1. Course Coordinator (B.Sc. Remote Sensing)- August 2002 to July 2004
2. Course Coordinator (B.Sc. Remote Sensing)- Feb 2009 to July 2009
3. Postgraduate Course Coordinator (Remote Sensing)- July 2009 to Dec 2012
4. Academic Programme Marketing Committee member- Faculty of Geoinformation & Real Estate: 20 May 2009-19 May 2011
6. National Geomatic/Geoinformatic Student Innovation Competition 2012 Sub-Committee Member (February- Dec 2012)
7. Quality Assurance Committee member (at the faculty from 13 February 2012 to 12 February 2014)
9. Postgraduate Committee, Remote Sensing Department- member since January 2011.
10. Postgraduate Programme at Faculty of Geoinformation and Real Estate (COPPA Committee) member since 28 October 2010



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

11. Research Methodology course Committee at the Faculty of Geoinformation and Real Estate member since 19 August 2011
12. Quality Assurance Document (MQA), B.Sc Remote Sensing Programme Committee (member from 25 October 2010 to 24 October 2012)
14. Examination Question Panel, Department of Remote Sensing (member from 1 October 2010 to 3 September 2012).

REVIEWER

1. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2013- Effects of forest type and environmental factors on forest carbon use efficiency (CUE) assessed using MODIS and FIA data across the eastern USA
2. **Journal of Applied Remote Sensing** (International journal published by the International Society for Optics and Photonics- Impact factor 0.876) 2013- Study on the Multi-Factor and Interactions with Soil-Vegetation Mixed Pixels
3. **International Journal of Remote Sensing** (Remote Sensing Letters)- International journal published by Taylor and Francis Impact factor 1.138) 2013- Can EVI-derived land surface phenology be used as a surrogate for phenology of canopy photosynthesis?
4. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2013- Development of an allometric model to estimate above-ground biomass for the Forest, case study: North of Iran
5. **International Journal of Geoinformatics**- International journal published by Geoinformatics International Co., Ltd (Scopus cited) 2013- Integrating GIS based Fuzzy set theory in Multicriteria Evaluation methods for Landslide Susceptibility Mapping
6. **Environmental Conservation** (ISI journal published by Cambridge University Press- Impact factor 1.927) 2013- Effects of varying spatial sampling-scales on modeling of Net Primary Productivity: Case study of tropical forests in Indonesia
7. **African Journal of Environmental Science and Technology** (journal published by Academic Journals) 2013- 'Fire Risk Zone Assessment in Chitrakoot Area, Satna M.P.'
8. **Journal of Applied Remote Sensing** (International journal published by the International Society for Optics and Photonics- Impact factor 1.000)- 2013-'Predicting Forest Above-Ground Biomass Carbon Using Object-Based Analysis of Very High Spatial Resolution Satellite Images'



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

9. **Environmental Pollution** (International Journal published by Elsevier- Impact Factor 3.730) 2013- 'The impact of elevated CO₂ concentration on dynamics of leaf photosynthesis in *Fagus sylvatica* is modulated by sky conditions'
10. **Central European Journal of Geosciences** (International Journal published by Springer- Impact Factor 0.506) 2013- 'Using GIS techniques for assessing the surface runoff depth changes in S^r??el river basin (in Romania), between 1990-2006
11. **Jurnal Teknologi** (International Journal published by Penerbit UTM Press and indexed by Scopus) 2013- 'Some aspects of geographic views on climate and its impact on settlement and the life population: the case northeastern Montenegro'
12. **International Journal of Atmospheric Sciences** (peer-reviewed, open access journal published by Hindawi Publishing Corporation) 2012&2013- "Numerical Simulations and analysis of 16th June 2010 heavy rainfall event over Singapore using the WRFV3 Model"
13. **Agriculture Ecosystems & Environment** (International Journal published by Elsevier- Impact factor 2.790)- 2010- "Gross primary production estimation from MODIS data with vegetation index and photosynthetically absorbed radiation in maize"
14. **Remote Sensing of Environment** (International journal published by Elsevier- Impact factor 3.951) 2011- "Land surface dynamics of the global tropical and sub-tropical savannah biome from MODIS NBAR, Albedo and BRDF products"
15. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2011- 'The suitability of multi-temporal Web-Enabled Landsat Data (WELD) NDVI for phenological monitoring – a comparison with flux tower and MODIS NDVI'
16. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138 2011- 'Spatial estimation of the forest biomass of NSTEC based on remote sensing and forest inventory data'
17. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2011- 'Evaluation of two high resolution MODIS aerosol retrieval algorithms: MRT and MSTAR method over Hong Kong'
18. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2011- 'Validation of MODIS pixel-scale GPP predictions across the eastern USA with FIA plot-scale NPP measures'
19. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2011- 'Use of pixel- and plot-scale screening variables to validate MODIS GPP predictions with Forest Inventory and Analysis NPP measures across the eastern USA'



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

20. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2012- 'Estimation of the North South Transect of Eastern China (NSTEC) forest biomass using remote sensing and forest inventory data'

21. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2012- 'Modeling gross primary production in semi-arid Inner Mongolia using MODIS imagery and eddy covariance data'

22. **International Journal of Remote Sensing** - International journal published by Taylor and Francis Impact factor 1.138) 2012-'Evaluation of MODIS land surface phenology using phenology of canopy photosynthesis derived from AmeriFlux'

23. **Journal of Applied Remote Sensing** (International journal published by the International Society for Optics and Photonics- Impact factor 1.000)- 2012-"The use of a vegetation index model for estimating gross primary production with 250 m MODIS images in an open grassland"

24. **National Research Foundation**-South Africa Scholarship Review 2011

25. **Geoinformation Science** (International and refereed – published by the Faculty of Geoinformation and Real Estate)

26. **Malaysian Journal of Remote Sensing & GIS** (International and refereed – published by Malaysian Remote Sensing Society) 2011- "New Generation Remote Sensing Data Analysis for Mammal Biodiversity Richness Mapping in Tropical Rainforest"

27. **Journal of Tropical Forest Science** (international reviewed journal published by the Forest Research Institute Malaysia- Impact Factor 0.467) 2012 and 2013- "Mangrove carbon stock assessment by optical satellite imagery"

28. **Atmospheric Environment** (International journal published by Elsevier- Impact factor 3.110) 2014-" Global aerosol change in the last decade: An analysis based on MODIS data".

29. **Remote Sensing** (International and refereed published by MDPI- Impact factor 2.101) 2014-" Investigating the Potential of Long Time Series Remote Sensing NDVI data set for Forest Gross Primary Productivity Estimation over Continental U.S".

POSTGRADUATE STUDENT EVALUATION

1. Assistant Chairperson Viva-voce PhD (4 December 2013) UTM student/staff (Abd. Wahid Rasib- Faculty of Geoinformation and Real Estate)
2. Examiner- M.Sc Research proposal presentation (23 August 2013) UTM student (Malik Rashid Abbas- Faculty of Geoinformation and Real Estate)



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BA Honors (Uni. Malaya), M.Phil (Cambridge Uni. UK), PhD (Monash Uni. Australia)

3. Examiner PhD. Research proposal presentation (23 August 2013) UTM student (Chew Wei Chuang- Faculty of Geoinformation and Real Estate)
4. Chairperson Viva-voce PhD (11 July 2011) UTM student (Babolola Ayo- Faculty of Geoinformation and Real Estate)
5. Chairperson- PhD Research proposal presentation (14 November 2011) UTM student (Wani Sofia Binti Udin- Faculty of Geoinformation and Real Estate)
6. Examiner MSc. Research proposal presentation (16 August 2011) UTM student (Norsheilla Bt Johan Chuah - Faculty of Geoinformation and Real Estate)
7. Examiner M.Sc (taught course and mixed mode) (8 June 2011) UTM students (Kaveh Deilami, Maryam Adel Saharkhiz and Hamid Allahvirdiasl- Faculty of Geoinformation and Real Estate)
8. Examiner MSc. Research proposal presentation (17 May 2010) UTM student (Ahmad Thariq bin Mohd Khairudin- - Faculty of Geoinformation and Real Estate)
9. Examiner MSc. Research proposal presentation (13 May 2010) UTM student (Yeo Sek Khas - Faculty of Geoinformation and Real Estate)
10. Examiner MSc. Research proposal presentation (3 June 2010) UTM student (Nurul Nadia Binti Yahya - Faculty of Geoinformation and Real Estate)
11. Examiner PhD. Research proposal presentation (23 February 2010) UTM Fast Track student (Jaw Siow Wei- Faculty of Geoinformation and Real Estate)
12. Examiner PhD. Research proposal presentation (3 June 2010) UTM student (Mohd Idris bin Ali- Faculty of Geoinformation and Real Estate)
13. Examiner PhD. Research proposal presentation (13 May 2010) UTM student (Mohamad Hossein Mokhtari - Faculty of Geoinformation and Real Estate)

COURSES ATTENDED/ CAPACITY BUILDING

1. Worldview knowledge, framework civilization & the development of a holistic personality (11-12 Nov 2013), UTM- Organised by Universiti Teknologi Malaysia.
2. Wildlife Conservation Awareness Day, (2 April 2013) Johor Bahru- Organised by Johor Corporation & Universiti Teknologi Malaysia
3. Capacity Building Workshop on 'Remote Sensing of the Global Water Circulation to Climate Change at Key Laboratory of Microwave Remote Sensing (MIRs/CAs), National Space Center



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(NSSC), Beijing, China (3-14 September 2012)- Sponsored by Committee on Space Research (COSPAR) and National Space Science Center, Chinese Academy of Sciences.

4. Eddy Covariance Training Course, 12-13 Nov 2011 organised by LI-COR Biosciences, Nebraska at UTM Skudai.
5. 'Marketing Team- UTM Staff' course, 17 Jan 2011 at Pulau Springs Resort, Johor.
6. Creative Problem Solving and Innovative Thinking Workshop- 25-27 July 2000- conducted by Business and Advanced Technology Centre UTM, KL
7. E-Learning Basic Course, 4-5 Feb 2009, UTM Skudai
8. Internet Technology in Teaching and Learning Course - 24-25 Feb 2009, Centre for Teaching & Learning, UTM Skudai
9. Kursus Kenegaraan Sistem Saraan Malaysia PTK 1- 7-11 April 2005, Organised by National Civics Bureau, Department of Prime Minister.
10. Use of E-Learning software for Academic Staff (Lecturers Teaching Year 1 Subjects) - 2-3 Nov 2004, UTM Skudai
11. Preparation of Quality Assurance Document Workshop -24-26 May 2004- Palm Resort Golf and Country Club, Senai, Johor
12. Induction Course -19 May-6 June 2003, UTM Johor
13. Academic Advising Course -19-20 Feb 2003- Starhill Golf & Country Club JB
15. Making and Evaluation of Test/Examination Questions Course - 4 July 2001- UTM skudai

INVOLVEMENT IN ORGANISING COMMITTEES

1. Organising Committee Member IEEE Working Group on Geoscience & Remote Sensing 2013, 22 Nov 2013, Multi Media University, Melaka, Malaysia
2. Secretariat for 'Remote Sensing for Marine Application Workshop 2004'- 14-16 June 2004, Organised by Dept. Remote Sensing, Fac. Geoinformation & Engineering, UTM
3. Secretariat- 'International Symposium and Exhibition on Geoinformation 2002'- 22-24 Oct. 2002-Nikko Hotel Kuala Lumpur- Organised by UTM, Institutions of Surveyors, Malaysia, Universiti Putra Malaysia and Universiti Sains Malaysia.



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4. Committee member 'Urban Development and Management Symposium (IUCDM 2003) 7-9 July 2003- Langkawi, Kedah
5. Committee member AsiaFlux Workshop 2011 (international workshop held in UTM from 9-13 November 2011)
6. Technical committee member "Special Session on transformation towards a sustainable low carbon society (International) 8th International Symposium on Digital Earth, 2013.

CONTRIBUTION TO SOCIETY

1. Focus group discussion on the content and feasibility of the 12 Dozen Action of Low Carbon Society of Iskandar Malaysia with a team from Iskandar regional Development Authority, 26 April 2012 at Puteri Pacific Hotel, Johor Bahru, Malaysia
2. Focus group (stakeholders) discussion on the climate mitigation policy making process for low carbon Iskandar Malaysia, 2nd May 2012 at Puteri Pacific Hotel, Johor Bahru, Malaysia (stakeholders, including, among others, city councillors, municipal staff, non-governmental organisation, industry experts and enterprises).
3. Friend and Rescuer of Fire Hydrant – a project by KulaiJaya Fire station and IndahPura 1 Secondary School (Teman Pili Bomba dan Penyelamat –projek Balai Bomba KulaiJaya bersama Sekolah Menengah Kebangsaan Indahpura 1)- member since 14 October 2013
4. Guest on a radio programme on 24th August 2013 (Special Broadcasting Service (SBS-Tamil Programme) – New South Wales, Australia)- shared my success story and gave some insight into my career as an academician and as a researcher at the Department of Geoinformation, Universiti Teknologi Malaysia
5. Motivation talk to primary school (UPSR) students (KulaiJaya district –zone 2)- organized by Association of Indian Community Development Kulai Jaya (Persatuan Kemajuan Kaum India Kulai Jaya), Kulai Besar - 8 September 2013.

REFEREES

1. Professor Dr. Jason Beringer
School of Geography & Environmental Science
Faculty of Arts, Clayton Campus
Monash University
Victoria
Australia
Tel: +61 3 990 59352
Fax: +61 3 990 52948
Email: Jason.Beringer@arts.monash.edu



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2. Professor Emeritus Dr. Arthur P. Cracknell

Dundee University, Scotland
Flat 8,
97 East London Street,
Edinburgh EH7 4BF,
Scotland, UK
Tel: 44 7810 697298
Email: apcracknell774787@yahoo.co.uk

3. Professor Emeritus Dr. Mohd Ibrahim Seenii Mohd

Faculty of Geoinformation & Real Estate
Universiti Teknologi Malaysia
81310 Johor Bahru
Tel: 019-7228451
Email: drmism@gmail.com

Appendix 1 (PhD Dissertation Abstract)

The overall objective of this thesis is to examine the role of environmental drivers in controlling the spatial and temporal variations of gross primary productivity (GPP) in savannas in the Northern Territory (NT), Australia. GPP is a critical measure of the health and sustainability of ecosystems. An understanding of GPP will underpin predictions of the impact of climate change on the savanna carbon cycle. This thesis employs an integrated approach combining in situ measurements, eddy covariance based flux tower data and remote sensing techniques to address the objective.

The control of aerosols and clouds (important environmental variables in savannas) on the temporal variation of GPP was examined at Howard Springs, a tropical savanna site in the NT. Results indicated that aerosols and clouds affected the temporal variability of savanna productivity by altering the quantity and quality (partitioning of total radiation into direct and diffuse) of solar radiation. It was found that in the dry season aerosols emitted in the region were relatively lower compared to other savanna regions. Consequently, a small increase in the diffuse radiation (22%) resulted in a small decrease in the total radiation (10%), but did not affect the GPP significantly. In contrast, during the wet season, diffuse radiation increased due to cloudiness but was overshadowed by large decreases in total radiation (57% under thick clouds compared to clear sky periods) which reduced overall productivity by up to 19% under thick clouds.

Information on other environmental controls such as fPAR (fraction of absorbed Photosynthetically Active Radiation), VPD (vapour pressure deficit), soil moisture, and temperature on the temporal variability of savanna GPP were also examined using Moderate



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Resolution Imaging Spectro- radiometer (MODIS) GPP products. Given that these products are generated based on inference from surface reflectance, MODIS GPP and the upstream products used to estimate GPP; fPAR, light use efficiency (LUE) and climate were validated against flux tower derived GPP to improve the products for savannas. In northern Australia, soil moisture rather than VPD was found to be an important factor limiting savanna GPP in the dry season. This was suggested by the improved estimation of GPP and improved simulation of the seasonal dynamics when VPD was replaced with a moisture index in the GPP algorithm. Validation of MODIS

GPP and associated inputs provided information on the uncertainties of the MODIS GPP algorithm inputs. This information was used to improve the estimation of GPP at the regional scale across the NT from 2000 to 2007 using field based LUE, regional specific meteorology and fPAR from the latest MODIS product. Results showed that GPP estimated with this approach captured the seasonal patterns of monthly GPP quite well across 18 sites along the Northern Australian Tropical Transect (NATT). The magnitude of GPP was also estimated quite well with only a 6% error at the Howard Springs site. Changes in rainfall along the gradient resulted in changes in the structure and composition of savannas and GPP across the NATT. Consequently, within the NT savanna region, vegetation type was a major driver of GPP with closed forest having six times more GPP than Acacia vegetation. Examination of the environmental controls on the spatial variation in GPP showed a strong influence of mean annual rainfall (r^2 0.88). In terms of interannual variability, arid ecosystems had higher variation (>20%) in GPP than forests (<10%) and this was associated with large variations in rainfall (>30% for arid vegetation versus 19% for forest). These results suggest that future changes in precipitation driven by climate change may affect the future distribution and dynamics of savanna vegetation in northern Australia.

Given the significance of soil moisture (rainfall) and radiation control on GPP over Australian savannas, more emphasis should be placed on models that are able to accurately simulate the sensitivity of these factors on productivity. Results presented in this thesis provide valuable information for savanna management in predicting the response of savannas to perturbations of the major environmental drivers. Such research will become vital in formulating strategies to secure resources in the tropical savannas of northern Australia, as well as mitigating the potential adverse effects of climate change.