

一、 氣候變遷與永續發展中心計畫 (總計畫)

中心主要協助計畫規劃與推動工作、召開諮詢委員會議、工作相關會議，協助研擬計畫徵求書等。透過本中心推動平台與各主軸研究能量之投入，最終以培養頂尖人才、成為政府重要智庫與引領國際前瞻議題為目標。除中心例行業務之外，教育訓練組與國際合作組亦有許多業務推動，分述如下：

(一) 教育訓練

目前本校已經開設地球科學學程、永續資源學程、能源科技學程等三學程。本組將以設置「氣候變遷與永續發展」學位學程為發展目標，整合校內現有課程，以及開設跨領域的實務課程，並進一步開設工具型課程、溝通課程，甚至是研究所學程、在職進修班與訓練課程，或設置全球氣候變遷與永續發展碩博士學位。於下年度希望能達成整合師資；辦理說明會吸引大學部與研究所學生參與課程與學位；整合課程、實務課程、工具型課程與溝通課程之規劃；涵蓋社會科學與公共衛生的跨領域課程之規劃；規劃研究所課程與學位、在職進修班與訓練課程、學生論壇之規劃等目標。

另外，日本文部省為日本大阪地區五所大學，設置永續發展研究相關學程，以全英語網路視訊授課，並致力於促進國際合作，如韓國首爾國立大學已經加入，本中心希望於下年度能取得合作事宜。

(二) 國際合作

1. 概述說明

為提升國際能見度為重點，邀請國際具有代表性的專家學者交流，或組團赴國外考察與交流，增加國際相關研究單位合作機會。合作機構可能如：歐盟都會區改善水資源永續管理聯盟 (Sustainable Water management Improves Tomorrow's Cities' Health, SWITCH)；美國 NASA 下的地球物理與流體動力實驗室 (The Geophysical Fluid Dynamics Laboratory, GFDL)、University of Maryland；德國 University of Bremen、IFM-GEOMAR；澳洲 University of Melbourne；印度 Notre Dam University；日本地球模擬器中心 (Earth Simulator)、國際稻米研究所、作物科學研究所、千葉大學。

除上述合作事宜，預計於今年與 GLP 合作成立台北據點辦公室。Global land project (GLP)一個典型的國際學術組織，其由 IGBP (國際地圈生物圈計畫) 與 IHDP (國際全球變遷人文面向計畫) 共同支援組成。主要以 IGBP 之 GCTE (Global Change Terrestrial Ecosystems; 全球變遷與陸域生態系) 及 IHDP 之 LUCC (Land Use and Cover Change; 土地利用與覆蓋變遷) 之研究為基礎及架構，而發展出 GLP (Global Land Project; 全球土地利用計畫)，以求更充份瞭解全球系統範疇下土地的動態變遷及永續發展，提供相關環境決策更多恰當的知識，以求解決急迫性人為與自然的因素導

致全球環境變遷的問題。此計畫融合現有的 GCTE 與 LUCC 研究社群，進一步整合人文社會及環境陸域系統成為土地系統(Land System)的跨領域研究。

GLP 的目的是量測、模擬與瞭解人與環境的結合系統。GLP 主要是提出人與環境的相互作用(GLP, 2005)、瞭解地球系統內這些作用如何發生、陸域生物圈的永續性以及土地系統與地球系統的雙向作用與回饋。其具體的目標有三，分別是：

- 確認人與環境結合系統的原動力、結構與自然的變遷，並加以量化。
- 評估上述的變遷如何對於生態系統所提供服務產生影響。
- 確認人與環境結合系統的脆弱性與永續性與干擾間的特性。

此三大目標涵蓋的主要研究領域包括：

- 影響決策制定的因子
- 實施土地管理的成就
- 對生態系統與環境動力的影響
- 生態系統服務的供給
- 評估人與環境結合系統的脆弱性與永續性

在三大目標五項領域之下，衍生出三個主要的研究的主題分別是：土地系統的動力機制(Dynamics of Land Systems)、土地系統改變的結果(Consequences of Land System Change)、土地永續性的結合分析與模擬(Integrating Analysis and Modelling For Land Sustainability)；並強調人類對於生態系統和陸地景觀的改變是造成全球變遷的最大主因，影響著生物圈維持生命的能力，而土地利用與管理的變化造成生態系統特性與生態系統服務供給的改變，進而影響人類福祉，因此需要瞭解人類決策如何影響土地系統，以及評估土地利用變化所造成的後果(GLP, 2005)。

為了有效的實現及推廣 GLP 之目的及主旨，GLP 除本部外，目前已在日本、中國、澳大利亞與英國分別設置 Nodal office，每地 Nodal office 有不同的主題焦點，日本 Nodal office 的目標焦點為土地系統的脆弱性、恢復力與永續性分析；中國 Nodal office 為土地利用與生態系統的交互作用；英國 Nodal office 的焦點是科學模式整合，澳大利亞籌設中。為與三處區別，又為符合 GLP 的軸心，鑑此，考量本團隊的潛力與專業背景下，台北 Nodal office 的主題焦點為“不同尺度下土地利用、生物多樣性保育與環境規劃及管理”。

2. GLP 台北 Nodal office 計畫

- (1) 邀請歐洲氣候變遷相關學者來臺參訪與演講：2013 年 6 月 12-14 日 Josef Settele 來訪
 - 來自德國 Helmholtz Centre for Environmental Research – UFZ 的學者 Josef Settele 於 2013 年 6 月 12 日抵台，先後參訪桃園農水利會和國立臺灣大學。為與臺灣研究氣候變遷與環境生態議題之學者進行交流，Josef 於台大生工系舉辦之研討會發表演說，分享其參與 Intergovernmental Panel on Climate

Change, IPCC 和 LEGATO-Rice System Services 計畫之經驗與目前成果。

➤ 講者介紹

- Adj. Prof. Dr. Josef Settele
- Dept. of Community Ecology
- Helmholtz Centre for Environmental Research – UFZ
- 2011-2016: Scientific Coordinator BMBF Project LEGATO („Land-use intensity and Ecological Engineering – Assessment Tools for risks and Opportunities in irrigated rice based production systems“); ca. 100 scientists and stakeholders from Europa and South-East-Asia, esp. Germany, Philippines and Vietnam (www.legato-project.net);
- 2010-2014: IPCC AR5 Working Group II; Coordinating lead author (CLA) of chapter 04 “Terrestrial and inland water systems”

➤ 參訪行程

表 1 Josef Settele 來臺參訪行程

日期	行程	陪同人員
06/12(二)	飛機抵達桃園機場 13:05 PM	臺灣大學林裕彬教授
06/13(三)	參訪台灣水稻田	臺灣大學 江莉琦博士 王咏潔博士 農田水利會 相關人員
06/14(四)	演講 Issue 1 Experiences and insights as Coordinating Lead Author of the ecosystems chapter of the IPCC 5th assessment report Issue 2 Land-use intensity and Ecological Engineering – Assessment Tools for risks and Opportunities in irrigated rice based production systems	臺灣大學 林裕彬教授 江莉琦博士 王咏潔博士

➤ 演講內容

- IPCC 計畫簡介

IPCC 的研究團隊由世界氣象組織(WMO)和聯合國環境規劃署(UNEP)成立於 1988 年。其旨在回顧並評估全球近期為瞭解氣候變遷之科學與技術研究資訊與成果。IPCC 之成員由全球各地相關領域之學者以自願的方式加入，並參與 IPCC 最基要的工作-文獻回顧與整理-以確保對現今科學與技巧發展和資訊之客觀且完整的評析，且反映不同面向的看法與專業知識。藉此，IPCC 具有提供決策者如 COP、UNFCCC 等科學研究資訊之政治功能。

IPCC 站在不同政府/國家之間之合作地位，開放於所有 UN 和 WMO 的會員國，且目前有 194 個國家參與。IPCC 之組織架構與文獻評析程序與圖 2、3 所示。



圖 1 IPCC 之法定地位與國際角色示意圖(Source: Josef Settele, 2013)

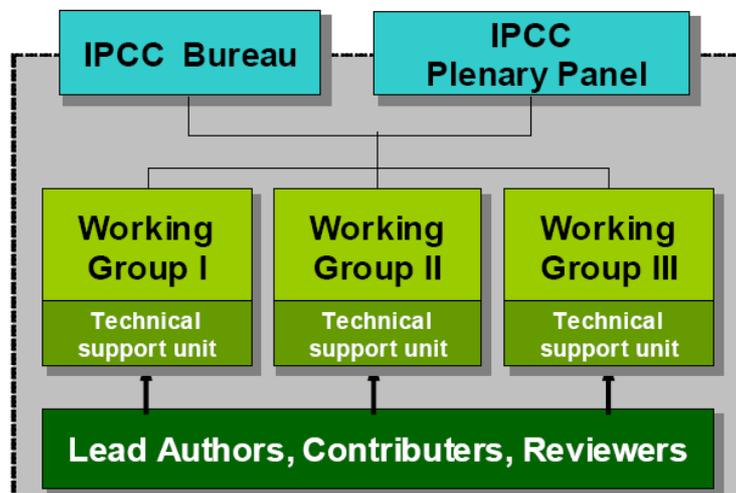


圖 2 IPCC 組織架構 (Source: Josef Settele, 2013)

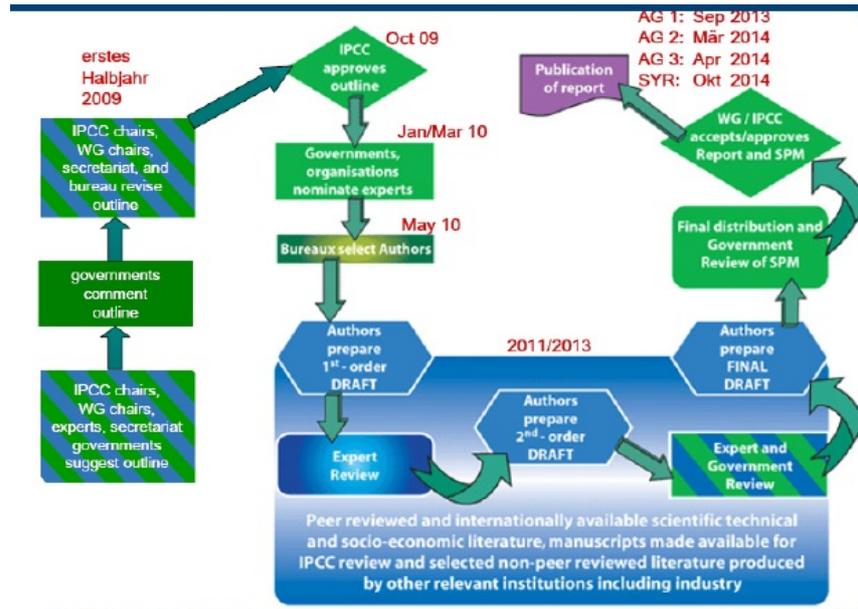


圖 3 IPCC 文獻評析程序 (Source: Josef Settele, 2013)

如圖 2 所示，IPCC 共分為三個工作組，Josef 目前參與第五屆 IPCC 的評估報告，並為第二工作組之主要領導人與協調者。評估報告之工作組分別負責第五屆 IPCC 氣候變遷評估報告之下列內容：

- Working Group I (Climate Change 2013): The Physical Science Basis
工作組一(2013 氣候變遷)：物理科學基礎
- Working Group II (Climate Change 2014): Impacts, Adaptation, and Vulnerability
工作組二(2014 氣候變遷)：衝擊、調適和脆弱性
- Working Group III (Climate Change 2014): Mitigation of Climate Change
工作組三(2014 氣候變遷)：氣候變遷之減緩

透過國際專家學者之研究成果交流與分組討論，第五屆 IPCC 報告目前仍在進行中。在公眾輿論放大鏡之檢視與監督下，IPCC 學者致力於專業研討和工作效率之餘，仍需兼顧報告之品質管理與控制、政治處理與協調和公眾說明性與透明度。

- LEGATO 計畫簡介

LEGATO 計畫全名為 Land-use intensity and EcoloGical engineering –Assessment Tools for risks and Opportunities in irrigated rice based production systems；土地利用強度與生態工程-灌溉稻作生產系統風險與契機之評估工具。其研究主要致力於亞洲稻米生產系統之生態系統服務與生態工程，考量不同自然與人為因子，包含氣候變遷、環境水土平衡變化、都市化、稻作技術發展與改良及飲食習慣改變稻作之供需平衡.....等，並嘗試應用生態工程之概念與技術於灌溉管理系統，以達成永續土地管理、增加稻作產量與收入來源之多元化等目標。

PROJECT PARTNERS

GERMANY
 Helmholtz-Centre for Environmental Research (UFZ)
 Christian Albrecht University of Kiel (CAU)
 Georg-August-University Göttingen (UGOE)
 L.U.P.O. Ltd, Trippstadt (LUPO)
 Martin-Luther-University of Halle-Wittenberg (MLU)
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 Science4you, Bonn (S4Y)
 Technical University of Munich (TUM)
 Ernst-Moritz-Arnsht-University Greifswald (UGr)
 University of Marburg (UMAR)

INTERNATIONAL
 International Rice Research Institute, Los Banos (IRRI)
 CABI Southeast & East Asia, Malaysia (CABI)

VIETNAM
 Center for Policy Studies and Analysis, Hanoi (CEPSTA)
 Institute of Ecology and Biological Resources, Hanoi (IEBR, VAST)
 Vietnam Academy of Agricultural Sciences, Ho-Chi-Minh (IRRI, MARD)

THE PHILIPPINES
 Visayas State University, Baybay (IRRI/VSU)
 Philippine Rice Research Institute, Munoz (PhilRice)

BULGARIA
 PENSOFT Publishers, Sofia (PENSOFT)

UK
 Biomathematics & Statistics Scotland (BIOSS)

SPAIN
 Autonomous University of Barcelona, Barcelona (UAB)

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As core output, LEGATO will develop guidelines for optimising ecosystem functions and services given the local socio-cultural conditions and their stabilisation under future climate and land use change, which will particularly affect South and Southeast Asia. There is a clear need for crop productivity increases and diversification. LEGATO will analyse the potential of ecological engineering to achieve this, and test its implementation and transferability across regions. The latter is to be achieved through inclusion of local agricultural agencies and extension services as partners. Implementation will include assessments of ecosystem services risks and opportunities in the light of changes in land use intensity, biodiversity and climate.



Photos have been kindly provided by Lyubomir Penev, Pavel Stoev, Josef Settele

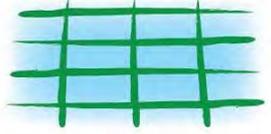




BMBF funding measure „Sustainable land management“
 Module A: "Interaction between land management, climate change and ecosystem services"

LEGATO

RICE ECOSYSTEM SERVICES



Land-use intensity and Ecological Engineering – Assessment Tools for risks and Opportunities in irrigated rice based production systems

<http://legato-project.net>

Project duration: 1 March 2011 – 29 February 2016

Project Coordinator:
 Josef Settele
 E-mail: josef.settele@ufz.de

Coordination team:
 Josef Settele, Ingolf Kühn, Stefan Klotz, Joachim Spangenberg
 Helmholtz Centre for Environmental Research – UFZ (Germany)
<http://www.ufz.de>

 HELMHOLTZ CENTRE FOR ENVIRONMENTAL RESEARCH – UFZ

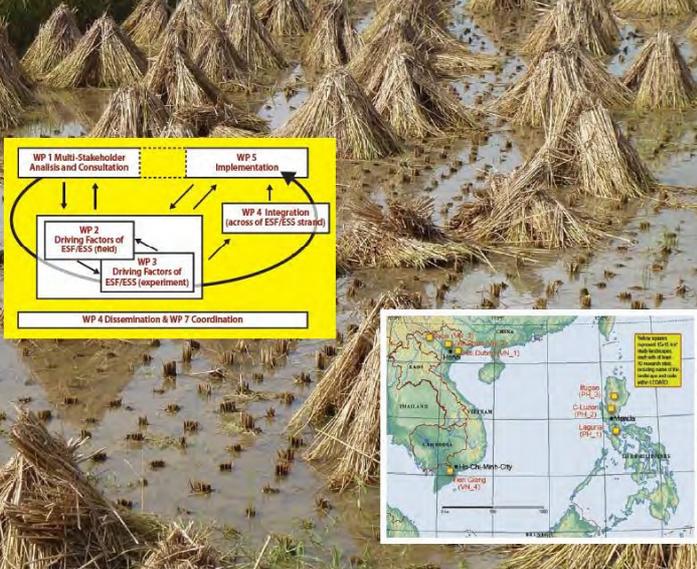
圖 4 LEGATO 計畫網站: www.legato-project.net

LEGATO aims to advance long-term sustainable development of irrigated rice fields, against risks arising from multiple aspects of global change. The overall objective is the elaboration and testing of generally applicable principles within the frame of ecological engineering – an emerging discipline, concerned with design, monitoring and construction of ecosystems.



The project plans to quantify the dependence of ecosystem functions (ESF) and the services (ESS) they generate in agricultural systems in seven landscapes in Southeast Asia: Luzon island (Philippines): Laguna Province, Central-Luzon and Ifugao Province; Vietnam: Hai Duong Province, Vinh Phuc Province and Sapa area along the Red River Valley, and Tien Giang Province in the Mekong Delta.



WP 1 Multi-Stakeholder Analysis and Consultation

WP 2 Driving Factors of ESF/ESS (field)

WP 3 Driving Factors of ESF/ESS (experiment)

WP 4 Integration (across of ESF/ESS strands)

WP 5 Implementation

WP 4 Dissemination & WP 7 Coordination



圖 5 LEGATO 計畫簡介與網站資訊(Source: Josef Settele, 2013)

- 交流成果與心得

本次邀訪與交流成果豐碩，奠定雙方未來針對氣候變遷與永續環境議題研究之合作基礎。其主要成果如下：

- Josef 實際參訪桃園農田水利會及其水稻灌溉系統，並與當地負責人員和農耕小組長會談，進行經驗交流。
- 於台大生工系舉行研究會，分享參與 IPCC 氣候變遷評估報告之工作經驗與 LEGATO 計畫之成果與未來研究展望，引發台大相關學者之熱烈回響與討論。
- 為雙方未來合作開啟契機，使推動臺灣氣候變遷研究與國際接軌，有機會參與氣候變遷研究相關國際合作計畫，如 IPCC、LEGATO 等。



圖 6 Josef 參訪水稻田並與農具機合影



圖 7 Josef 與林裕彬教授、張倉榮主任合影

(2) 邀請歐洲氣候變遷相關學者來臺參訪與演講：2013 年 6 月 15-21 日 Rob Lemmens 來訪

➤ 來自荷蘭 Department of Geo-information processing, ITC 的學者 Rob Lemmens 於 2013 年 6 月 15-21 日來台，於國立臺灣大學生工系參與國科會計劃成果發表會，並發表演講，進行學術經驗交流。

➤ 講者介紹

- Dr. Ir. Rob Lemmens
- Department of Geoinformation Processing
- International Institute for Geo-Information Science and Earth observation (ITC)
- MEMBERSHIP OF PROFESSIONAL ORGANISATIONS
- OpenGIS Consortium (OGC) contact person for ITC.
- AGILE contact person for ITC.
- Member of Geo-Informatie Nederland (GIN).
- Initiator of www.geosemantics.org website.
- Software community leader at 52North: <http://52north.org/ilwis>

➤ 演講內容

以 Geo-crowdsourcing and its deployment-Examples from The Netherlands 為題，Dr. Lemmens 分享其在荷蘭利用群眾搜尋之資料進行分析與研究之案例。探討在資訊快速產生與更新的時代，各種科學研究包括生態調查、環境保育、流行病學追蹤、氣候變遷及其影響等環境議題等，皆可利用群眾之力量收集相關資料，以增加資料之數量，並加以整理、分析以控制資料之質量。Lemmens 提出「資料即的石油」之概念，表達資料在現今各領域研究中之重要角色。

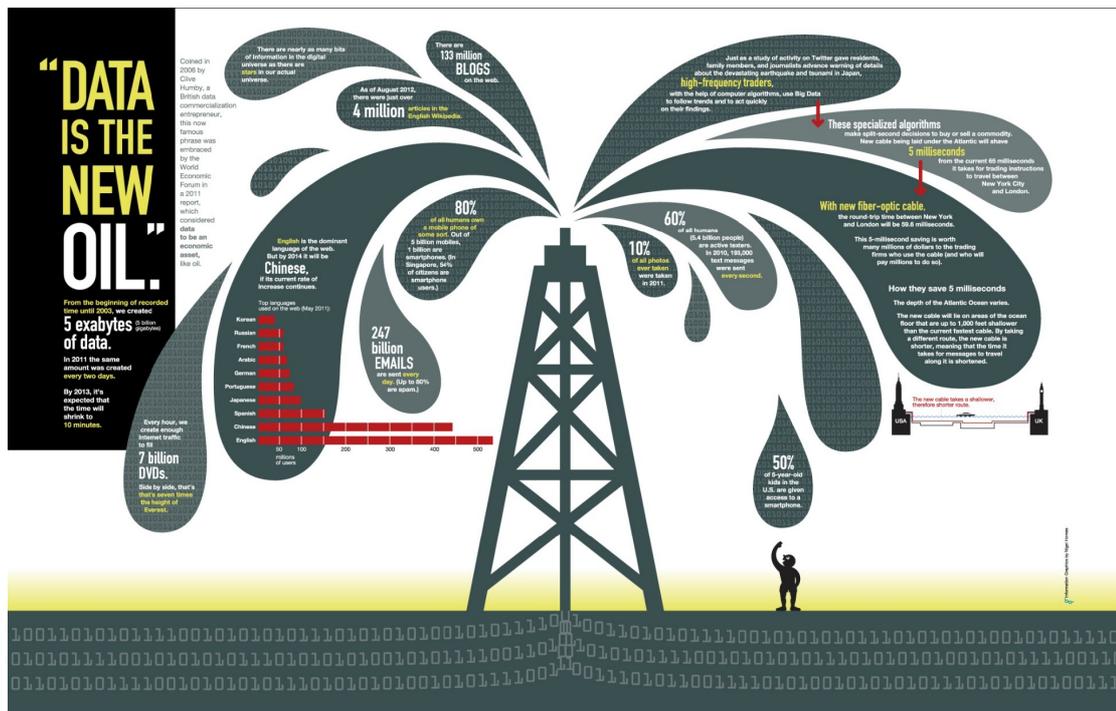


圖 8 資料即新的石油(Source: Rob Lemmens, 2013)

Dr. Lemmens 以荷蘭與各國國際網站為例，如 Netherlands phenology network、Nature Calendar、Border stones、CadastreForest trails、Fix my Neighborhood、Envirocar 等，展示運用群眾自發性資料搜尋力量以進行研究與計劃之進展和目前成果。

de NATUURKALENDER
het fenologisch waarnemersnetwerk van Nederland www.natuurkalender.nl

Phenology in image
The Nature observation is a program that will bring. Ecological changes in image For this we look at the timing of nature in relation to the climate.

Join and log in as an observer
Join and log in as an observer

See observations
Look what first observations already done

Nature Forecast
Extended Forecast of plants, butterflies and dragonflies

Login
Pass and watching my own Observations

Tekenradar.nl
Sign Expectation and tick bites transmit

soort	fenofase	datum
Groene kikker	eerste individu in water	15-6-2013
weidebeekjuffer	eerste individu	14-6-2013
Fuut	Eerste jong gezien	14-6-2013
Knobbelzwaan	Eerste jong gezien	14-6-2013
glassnijder	eerste individu	14-6-2013
Bosaardbei	Eerste bloei	14-6-2013
platbuik	eerste individu	14-6-2013
Waterlilie (witte)	Eerste bloei	14-6-2013
Gele plompe	Eerste bloei	14-6-2013
eikenprocessierups	rups gezien	14-6-2013

Nieuws:
 May 26: So far very little grass pollen
 May 19: Flowering Time similar to earlier
 May 12: The magic figure of 400 broken
 May 11: Poll Seasons rapid succession
 May 5: Birth tachinids filmed

natuurbericht.nl
 Natuurbericht Ganzenrek Verwachting
 Sat, 15 Jun 2013 07:00:00 +0200
 Ooijpolder klaar voor de otter
 Met het plaatsen van loopplanken onder de brug bij de Hubertusweg heeft de provincie Gelderland het grootste verkeersrisico voor otters in de Ooijpolder weggenomen. De Hubertusweg (N840) is de ontsluitingsroute van de Ooijpolderbewoners. Hier passeren

圖 9 Netherlands phenology network 網站頁面(Source: Rob Lemmens, 2013)

Verbeterdebuurt

Kaart Over Verbeterdebuurt Voor gemeentes

Straat & plaats of postcode Zoeken Satelliet Beide

Nieuw probleem Nieuw idee Uitleg kaart

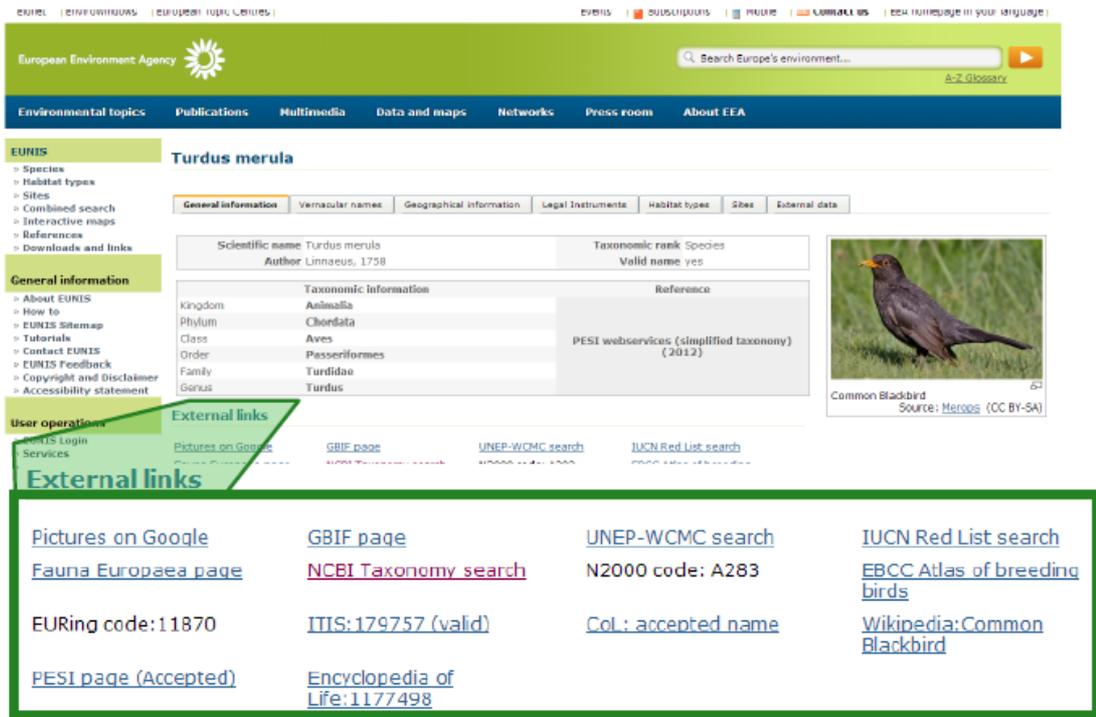
Toon op de kaart

Soort melding
 Ideeën
 Problemen

Categorieën
 Afval
 Water en riolering
 Verkeer en bestrating
 Groen en speelvoorzieningen
 Straatmeubilair en verlichting
 Overlast
 Overig
 Bouwoverlast

圖 10 Fix My Neighborhood 網站頁面(Source: Rob Lemmens, 2013)

Web 3.0 Semantically Linked Data



European Environment Agency

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Turdus merula

General information | Vernacular names | Geographical information | Legal Instruments | Habitat types | Sites | External data

Scientific name	Turdus merula	Taxonomic rank	Species
Author	Linnaeus, 1758	Valid name	yes

Taxonomic information		Reference
Kingdom	Animalia	PEST webservice (simplified taxonomy) (2012)
Phylum	Chordata	
Class	Aves	
Order	Passeriformes	
Family	Turdidae	
Genus	Turdus	

Common Blackbird
Source: Metropos (CC BY-SA)

External links

[Pictures on Google](#) [GBIF page](#) [UNEP-WCMC search](#) [IUCN Red List search](#)
[Fauna Europaea page](#) [NCBI Taxonomy search](#) N2000 code: A283 [EBCC Atlas of breeding birds](#)
 EURing code: 11870 [ITIS: 179757 \(valid\)](#) [Col.: accepted name](#) [Wikipedia: Common Blackbird](#)
[PEST page \(Accepted\)](#) [Encyclopedia of Life: 1177498](#)

圖 11 歐洲環境署網站頁面(Source: Rob Lemmens, 2013)

➤ 交流成果與心得

本次邀訪與交流成果豐碩，除獲得 Dr. Lemmens 所帶來之荷蘭及歐洲各國研究經驗與實際應用案例外，利用群眾資訊搜尋力量於鳥類物種及發現位置之研究成果，亦在國科會研究成果發表會中展示，並與 Dr. Lemmens 進行意見交換與討論，為未來臺灣學術研究單位與歐洲之交流、合作奠定基礎。



圖 12 林教授介紹群眾搜尋力量於鳥類物種發現位置背景與優點



圖 13 鄧研究員介紹應用地理空間資料技術於地理資訊之擷取

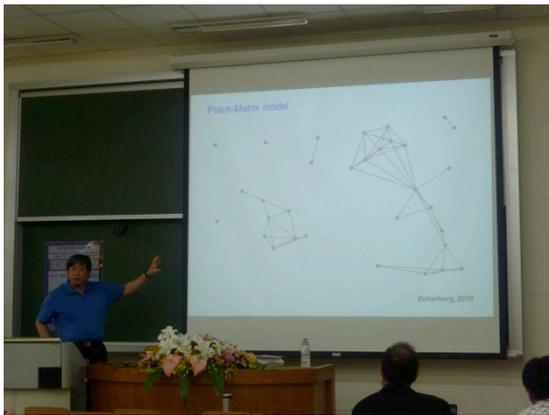


圖 14 溫教授介紹建立動態生態網絡的分析方法



圖 15 Dr. Lemmens 介紹群眾資源力量例子



圖 16 Dr. Lemmens 講解群眾資源力量所關注的面向



圖 17 演講與會人員合影

(3) 邀請歐洲氣候變遷相關學者來臺參訪與演講 2013年9月16-10月3日 Dirk S. Schmeller 來訪

- 來自德國 Helmholtz Centre for Environmental Research – UFZ 的學者 Dirk S. Schmeller，為歐盟 SCALES project 的主要發起人之一，於 2013 年 9 月 16 日抵台，走訪全台各地如溪頭等進行田野調查，並於國立臺灣大學發表演講，與臺灣研究氣候變遷與環境生態議題之學者進行交流。
- 講者介紹
 - Dr. Dirk Svan Schmeller
 - Helmholtz-Centre for Environmental Research - UFZ
Department of Conservation Biology
 - Major academic appointments



- Since December 2012
Researcher at the Environmental Research Center (UFZ) Halle - Leipzig, Department Conservation Biology (Prof. K. Henle) and affiliated researcher at the CNRS Unit EcoLab, Toulouse (JL Probst)
- August 2007 - December 2012
Researcher of the CNRS at the Station d'Ecologie Experimentale du CNRS, Moulis, France.
- August 2005 - April 2008
Coordinator of the EuMon-Project at the Environmental Research Center (UFZ) Halle - Leipzig, Department Conservation Biology (Prof. K. Henle)
- July 2005 - August 2006
EGIDE-Postdoctoral Fellow at the University of Angers, Department of Zoology, Division of Animal Ecology (Profs. T. Lodé, A. Pagano)
- November 2004 - June 2005
Cooperation with the University of Lyon I, UMR 5023, Department of Zoology, Division of Animal Ecology (Prof.P. Joly)
- September 2004 - August 2005
KONE-scholarship holder at the University of Helsinki, Department of Ecology and Systematics, Division of Population biology (EGRU, Prof. J. Merilä)
- September 2002 - August 2004
Alexander-v.-Humbolt/Academy of Finland scholarship holder at the University of Helsinki, Department of Ecology and Systematics, Division of Population biology (Prof. J. Merilä)
- June - July 2002
Postdoctoral fellow at the University of Helsinki, Department of Ecology and Systematics, Division of Population biology (Prof. J. Merilä)
- March - May 2002
Marie Curie-scholarship at the University of Jyväskylä, Department of Biological and Environmental Sciences, Evolutionary Ecology (Profs. V. Kaitala, R. Alatalo)
- May 2000 - February 2002
Assistant professor at the Fac. of Biology, Department of Nature Conservation (Prof. Dr. H. Plachter)
- February 1996 - April 2000
Scientific assistant at the chair of ecology, Department of Zoology V (Prof. Dr. A. Seitz)

➤ 參訪行程

表 2 Dirk S. Schmeller 來臺參訪行程

日期	行程	地點	陪同人員
09/16(一)	飛機抵達桃園機場 (KLM Royal Dutch Airlines 0807 2:40 PM)		
09/17(二)	National Responsibility tool meeting (歐盟 FP7 計畫 SCALES)	臺灣 大學	臺灣大學 林裕彬教授 Dr. Reinhard Klenke Dr. Adeline Loyau
09/18(三)	授課與演講 (9:00-12:00) Optimal sampling tool meeting (歐盟 FP7 計畫 SCALES)	台灣 大學	臺灣大學 林裕彬教授\臺灣大學 丁宗蘇教授
09/19(四) ~09/22(日)	溪頭實驗林採樣與觀察	溪頭 實驗 林採 樣	臺灣大學 丁宗蘇教授學生陪同
09/23(一)	歐盟 FP7 計畫討論 (10:00-12:00) National Responsibility tool meeting (歐盟 FP7 計畫 SCALES) (2:00-4:00)	臺灣 大學	博士班學生 林韋志 黃浚瑋 臺灣大學 林裕彬教授 Dr. Reinhard Klenke
09/24(二)	歐盟 FP7 計畫報告回應討論 (10:00-12:00) National Responsibility 與 Optimal sampling tools meeting (歐盟 FP7 計畫 SCALES) (2:00-4:00)	臺灣 大學	臺灣大學 林裕彬教授 Dr. Reinhard Klenke
09/25(三)	授課與演講 (9:00-12:00) 歐盟 EU-BON 計畫討論 (2:00-4:00)	臺灣 大學	臺灣大學 林裕彬教授 Dr. Reinhard Klenke
09/27(五)	歐盟 FP7 計畫報告回應論及 EU-BON 計畫 (10:00-12:00) 歐盟 FP7 計畫成果論文發表討論 及 EU-BON 計畫(2:00-4:00)	臺灣 大學	臺灣大學 林裕彬教授 Dr. Reinhard Klenke
09/30(一)	討論歐盟 EU-BON 參與及報告 (10:00-12:00) 完成 Nature Conservation Methods 論文初稿(10:00-12:00)	臺灣 大學	博士班學生 林韋志 黃浚瑋 臺灣大學 林裕彬教授 Dr. Reinhard Klenke
10/1(二)	討論歐盟 EU-BON 參與及報告 (10:00-12:00) 完成 National Responsibility Tool	臺灣 大學	博士班學生 林韋志 黃浚瑋

日期	行程	地點	陪同人員
	ArcGIS 版本(10:00-12:00)		臺灣大學 林裕彬教授 Dr. ReinhardKlenke
10/2(三)	討論歐盟 EU-BON Nature Conservation Methods 及報告 (10:00-12:00) 測試 National Responsibility Tool ArcGIS 版本(10:00-12:00)	臺灣大學	博士班學生 林韋志 黃浚瑋 臺灣大學 林裕彬教授 Dr. ReinhardKlenke
10/03(四)	演講 Impact of the environment on <i>Bd</i> prevalence 回程 KLM Royal Dutch Airlines 0808 11:20PM	臺灣大學 水工試驗所	臺灣大學 林裕彬教授\臺灣大學 丁宗蘇教授

➤ 演講內容

Dr. Schmeller 以 Impact of the environment on *Bd* prevalence 為講題，探討兩棲類皮膚受黴菌感染後，可能造成之族群滅絕而降件生物多樣性並破壞生態系統平衡等衝擊。由於世界交通之便捷與合法或非法之物種交易頻繁，使得兩棲類黴菌感染迅速擴散於世全球，使其衍生之生態問題由地區性擴展為全球需關注之議題。*Bd* 為 *Batrachochytrium dendrobatidis* 之簡稱，與其相近之菌種經由皮膚感染寄生於兩棲動物上，與其共生或侵蝕其皮膚致其死亡，如圖 16 所示。



圖 18 受 *Bd* 感染之兩棲動物

經由調查，由目前全球各研究隊採集資料，繪製成全球兩棲類 *Bd* 感染區域如圖 13 所示。且由圖中所示，*Bd* 感染已為一全球物種多樣性與生態議題。因此，Dr. Schmeller 此行主要目的之一為收集臺島兩棲類樣本，並調查臺島是否亦出現 *Bd* 感染地區。

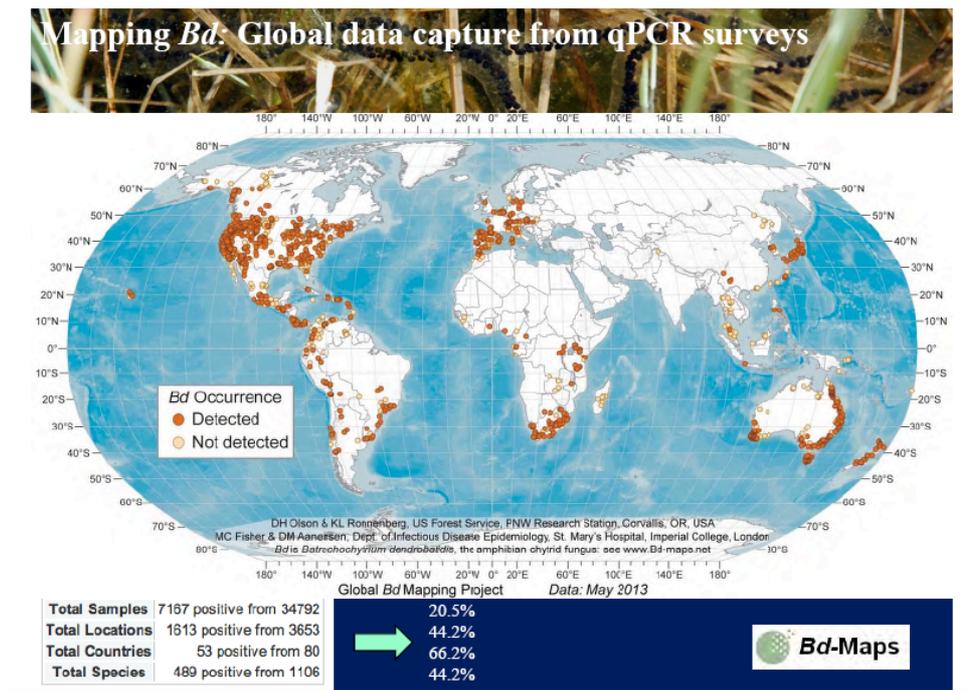


圖 19 全球兩棲類 Bd 感染區域圖

➤ 交流成果與心得

本次邀訪與交流成果豐碩，Dr. Schmeller 與台大林裕彬教授和丁宗蘇教授之研究團隊合作，進行田野調查。藉由演講與研究會進行學術交流，其中討論氣候變遷對於兩棲類流行病學之抑制、擴散、傳播等影響，並達成未來繼續合作與交流之共識。Dr. Schmeller 預計將在今年(民國 102 年)11 月再次訪臺進行交流。



圖 20 Dr. Schmeller 在台灣大學講演中簡報 Bd 於台灣的感染情形



圖 21 Dr. Schmeller 簡報於歐洲調查中 Bd 感染嚴重之區域

- (4) 邀請歐洲氣候變遷相關學者來臺參訪與演講：2013 年 9 月 13-10 月 2 日 Reinhard Klenke 來訪

➤ 來自德國 Helmholtz Centre for Environmental Research – UFZ 的學者 Reinhard Klenke，為歐盟 SCALES project 的主要發起人之一，於 2013 年 9 月 10 日抵台，並於國立臺灣大學發表演講，與臺灣研究氣候變遷與環境生態議題之學者進行交流。

➤ 講者介紹

- Dr. Arnold Reinhard Klenke
- Helmholtz Centre for Environmental Research – UFZ
- Department of Conservation Biology
- Third party projects, scientific coordination and management
- Broad experience in management and coordination of third party research projects on various levels (e.g. species conservation program for the Eurasian otter, EU-Project FRAP) as well as in interdisciplinary cooperation, particularly with regard to interfaces between biology and other natural sciences like geography, landscape ecology, remote sensing or mathematics.
- EU FP 7 “Securing the Conservation of biodiversity across Administrative Levels and spatial, temporal, and Ecological Scales” (SCALES, <http://www.scalesproject.net>, Grant: 226852)
- EU FP 5 “Framework for Biodiversity Reconciliation Action Plans” (FRAP, <http://www.frap-project.ufz.de>, Grant: EVK 2-CT-2002-00142-FRAP)
- - 4 -Rich experience in conception and planning of research projects as well as successful acquisition of necessary third party funding from the German Ministry of Education and Research (BMB+F), the Federal Agency for Nature Conservation (BfN) or several State Ministries and State Offices.
- Membership of Scientific Societies
- German Society of Mammalogy (DGS), member since 1991
- German Ornithologists' Society (DO-G), member since 1992
- International Association for Landscape Ecology (IALE), member of the German section
- since 2000
- IUCN Otter Specialist Group (OSG), member since 2009

➤ 演講內容

Dr. Klenke 以“Loss of the Night”- An overview with a special focus on artificial night light and traffic noise impact on European Blackbird 為講題，探討都市化所帶來之光害和噪音對鳥類族群分布、遷徙，甚至於演化方向等面向之影響。以“光污染”為主要

議題，探討都市化所帶來之“光害”對於鳥類族群、天空和大氣環境造成之衝擊。如圖 22 所示，“光污染”可能帶來不同面向的衝擊，包括社會經濟、生態和生理等方面。

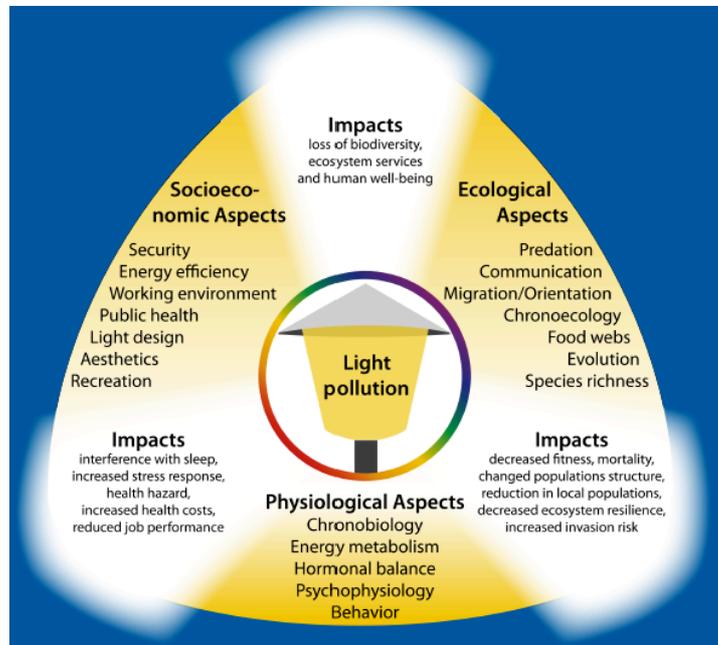


圖 22 光污染造成之衝擊 (after Hölker et al., 2010)

其中，Dr. Klenke 及其研究團隊致力於光污染對鳥類族群及其動物行為之影響，藉由觀測鳥類鳴唱的起迄時間，發現都市化所帶來之光害改變了鳥類睡眠行為模式 (圖 23)。由於都市化使夜晚天空黑暗的時間減少，影響該地區鳥類生理時間與行為，使其相較於其他處於森林的同種鳥類提早鳴叫。

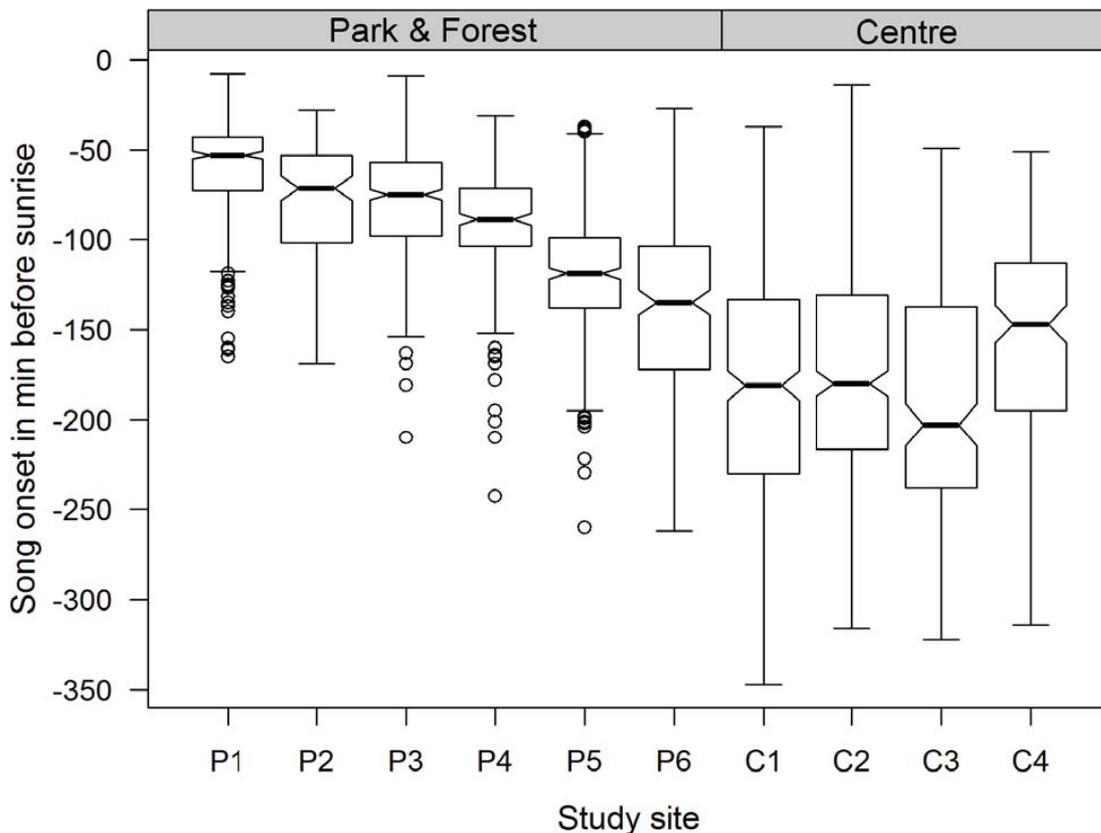


圖 23 鳥類開始鳴叫時間受到都市化影響

僅管目前研究仍有許多尚待深入探討之問題，如都市化所帶來之光線和噪音污染，確實對生態環境造成衝擊，且台灣本島西半部都市化程度嚴重，此問題值得研究。

➤ 交流成果與心得

本次邀訪與交流成果豐碩，Dr. Klenke 與林裕彬教授之研究團隊，除目前正在合作之 SCALES 計畫外，將持續合作，致力於生態環境保育與永續經營等議題之研究與學術論文及成果發表。同時討論未來進行國際研究及合作的可性。



圖 24 Dr. Klenke 於台灣大學演講簡報

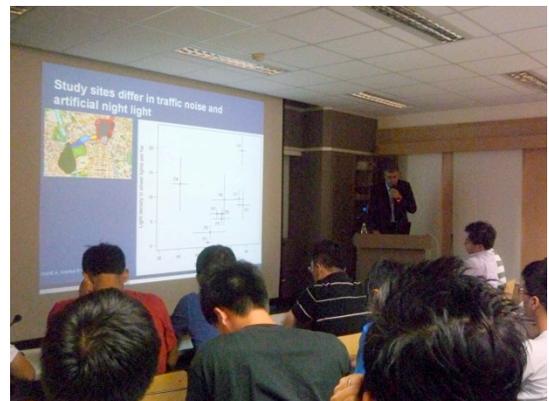


圖 25 Dr. Klenke 介紹交通噪音與人

不同地區鳥類鳴叫調查結果

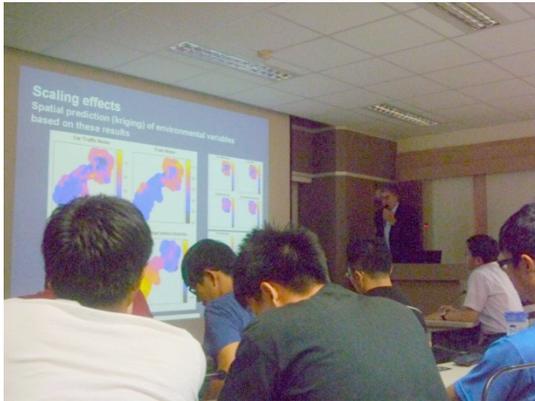


圖 26 Dr. Klenke 簡報以克利金方法空間預測之結果

工夜光不同地區調查結果



圖 27 Dr. Klenke 與台灣大學生工系教授與同學交流

(5) 舉辦國際研討會(GLP 亞洲區研討會)

國際土地計畫 (Global Land Project) 為 International Geosphere-Biosphere Programme (IGBP) 和 International Human Dimensions Programme (IHDP) 之聯合計畫。主要目的在於測量、模擬並瞭解人類與環境交互影響之系統。GLP 辦公室總部位於巴西 São José dos Campos，且目前於台北、北京和日本設有分部。GLP 執行概念如圖 28 所示。

GLP 台北辦公室成立於 2012 年，致力於「管理並發展土地利用、生態系統及其個者在不同尺度之交互作用等相關知識」。作為 GLP 科學計畫重要成員之一，台北辦公室主要任務之一在於透過國際合作與發展，包括 GLP 亞洲區域研討會之舉辦，達成知識與資訊管理之目標。其具體項目如下：

- 展示 GLP 台北辦公室成員與其他 GLP 相關研究人才之研究成果。
- 分享與土地用變遷及土地管理等相關議題之最新知識與資訊。
- 促進 GLP 區域性成員與國際夥伴之學術交流。

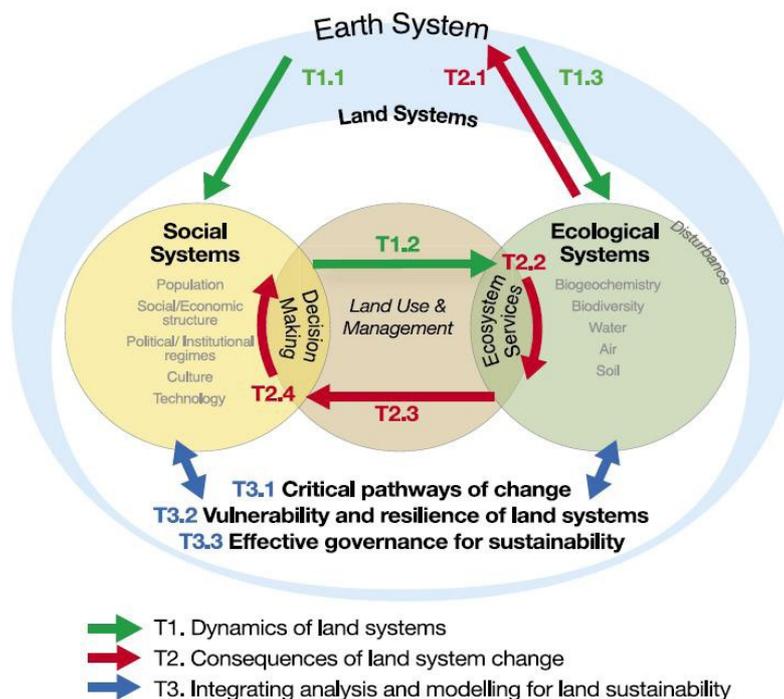


圖 28 GLP 執行概念與分析結構 (Source: GLP ,2008)

➤ 預期效益

即將於 2014 年 9 月舉辦之 GLP 亞洲區研討會，已邀請 20 位土地利用與生態系統管理等領域之國際學術先進，如 Prof. Peter Verburg (GLP Chair, VU University Amsterdam)、Prof. Teiji Watanabe (Executive Director of GLP Sapporo Nodal Office, Hokkaido University)、Prof. Hideaki Shibata (Hokkaido University)、Prof. Takashi Kohyama (Chair of the GLP Sapporo Nodal Office, Hokkaido University)、Dr. Masae Ishihara (Hokkaido University)、Dr. Satomi Shiodera (Hokkaido University)、GLP 主要委員、GLP 北京辦公室成員和其他海外專業研究人才等。此外，將邀請 30 篇由台北 GLP 辦公到委員及研究人才之學術論文 30 篇，在研討會中與國際學者交流。因此，2014GLP 亞洲研討會除邀請國際 GLP 成員與學者參與外，將開放於所有非 GLP 成員之相關專業研究人才，如土地規劃、生態系統管理及其相關領域。本研討會之預期成果如下：

- 達成永續土地利用與生態系統管理之最新研究發現、資訊與經驗等國際交流。
- 為提升臺灣在土地相關科學研究之國際聲譽與研究成果以及學術交流提供有效率之平台。
- 使相關領域之年輕研究人才增加規劃及參與國際性研究會之經驗。

- 促進高學術品質之 SCI 論文之產生與發表機會。

主協辦單位



(6) 舉辦國際研討會(The 9th APRU Research Symposium on Multi-Hazards around the Pacific Rim. 第九屆環太平洋複合型災害研討會)

➤ 緣起

在全球氣候變遷環境下，近年來接連不斷的天災人禍，使得災害管理與應變更為重要。從臺灣歷年發生的重要災害事件來看，如九二一大地震、八八風災、凡那比水災、梅姬颱風等，皆反應了政府災害應變措施改善與精進是必須持續性地推動的，唯有透過不斷的知識培養、實況模擬、經驗學習以及討論才能使得危機災害管理制度，以及災後復原制度見趨完善與彈性。

➤ 目的

國內學術單位及政府機關為因應類似的颱風事件，已積極投入人力及資源，進行有關水庫整體治理、環境監測研發及應用、環境模擬及河川環境營造等工作，目前已有相當豐碩之成果。為增進臺灣面臨複合性災害之防救災能力及專業，國立臺灣大學氣候天氣災害研究中心特邀集專家學者齊聚一堂，透過環太平洋大學聯盟之國際合作，促進交換與分享複合型災害研究之跨領域知識，以研討會方式深入瞭解相關研發及應用成果。本次研討會由國立臺灣大學氣候天氣災害研究中心主辦，邀請會員校之專家學者及臺灣相關單位，就相關複合性災害相關議題進行研討。期望本研討會能嘉惠國內水利防災及災害管理相關人員有實質幫助與貢獻。

➤ 環太平洋地區大學協會介紹

環太平洋地區大學協會（以下簡稱 APRU）成立於 1997 年，以促進學術、研究、產業合作為目標，致力於環太平洋地區的經濟、科學與文化各方面的提升與交流。共有 42 個會員校，包括美國史丹福、柏克萊、加州理工、澳洲墨爾本大學、東大、首爾大、北大、清華等，皆為環太平洋地區之頂尖大學，秘書處設於新加坡國立大學，臺大則是臺灣唯一受邀參加的學校。

➤ 研討會主題說明

- **Multi-hazards induced by extreme weather**
(極端氣候所引發之複合型災害)
- **Multi-hazards induced by earthquake**
(地震所引發之複合型災害)
- **Multi-hazards induced by volcanic activity**
(火山活動所引發之複合型災害)
- **Air pollution and haze related issue**
(空氣污染與霾害之相關議題)
- **Disaster risk assessment and impact analysis**
(災害風險評估及衝擊分析)
- **Advanced research on monitoring, sensing, nowcasting and forecasting**
(災害監測與預報之研發進展)
- **Disaster management and education**
(災害管理及教育推廣)
- **Post-disaster recovery and reconstruction**
(災後復原與重建)
- **Disaster health and emergency management**
(災害之民眾健康與應急管理議題)

➤ 辦理成效

- 氣候變遷日遽，未來與氣候相關的複合型災害機率愈來愈高，災害尺度也愈來愈大。透過研討會中所得的新觀念、新作為面對未來一定會來到的大型災害。
- 災害風險評估是災害風險管 及研擬減災策 之重要 考依據；藉本研討會交流以提昇災害風險評估技術，發展具前瞻預測能 的防減災科技。
- 定 雨預報與監測是防災、救災及減災體系 的關鍵環節；透過本研討會之交流，了解環太平洋各國在定點定 雨預報研究之進展，以提供國內技術之改進。
- 透過本研討會了解其他國家教育社會大眾對於災害風險有正確認 之創新作法，使各項減災、防災工作之推動能達事半功倍之效。



➤ Program

October 28, 2013

Time	Agenda	
08:20-09:20	Registration	
09:20-10:00	Opening Ceremony Group Photo	
10:00-10:30	Coffee Break	
10:30-11:10	Keynote Speech [Hong-Yuan Lee] (Socrates Chamber)	
11:10-11:50	Keynote Speech [Roger Wakimoto] (Socrates Chamber)	
11:50-12:10	Discussion	
12:10-13:10	Lunch (Socrates Chamber)	
	Nietzsche Chamber	Michelangelo Chamber
13:10-13:50	Invited Speech [Chien Wang]	Invited Speech [Wei-Fu Yang]
13:50-14:30	Invited Speech [Douglas Paton]	Invited Speech [Hugo Romero Aravena]
14:30-14:50	Coffee Break	
14:50-15:30	Invited Speech [Tso-Chien Pan]	Invited Speech [Robert Fovell]
15:30-16:10	Invited Speech [John Rundle]	Invited Speech [Tetsuya Sumi]
16:10-17:10	Student Poster Competition (Alexandria Chamber)	
18:00-20:00	Symposium Dinner	

October 29, 2013

Time	Nietzsche Chamber	Michelangelo Chamber	Rafael Chamber
08:20-10:00	Session: Disaster health and emergency management	Invited Speech [Chung-Ming Liu] Session: Disaster risk assessment and impact analysis	Session: Disaster management and education
10:00-10:30	Coffee Break		
10:30-12:10	Session: Air pollution and haze related issues + Multi-hazards induced by earthquake	Invited Speech [Masumi Yamada] Session: Advanced research on monitoring, sensing, nowcasting and forecasting	Session: Multi-hazards induced by extreme weather
12:10-13:10	Lunch (Nietzsche Chamber, Michelangelo Chamber, Rafael Chamber)		
13:10-14:50	Session: Post-disaster recovery and reconstruction	Invited Speech [Jeremy David Bricker] Session: Multi-hazards induced by earthquake	Session: Disaster risk assessment and impact analysis
14:50-15:10	Coffee Break		
15:10-15:50	Special Session of APRU (Michelangelo Chamber)		
15:50-16:35	Closing Ceremony (Michelangelo Chamber)		
16:35-17:35	Core Meeting of APRU (Nietzsche Chamber)		

➤ Organization and Sponsors



➤ Promotion on APRU website (apru.org)



The APRU symposium series on Multi-Hazards around the Pacific Rim is having its ninth symposium from 28 to 29 October 2013 at National Taiwan University in Taipei, Taiwan.

The 9th APRU symposium is hosted by the Center for Weather Climate and Disaster Research (WCDR) at National Taiwan University. For general information, please refer to the website <http://www.apru2013.com/>

The 9th APRU symposium aims to convene scholars and experts from countries around the Pacific Rim. The inter-disciplinary knowledge on multi-hazard researches can be exchanged and shared through APRU collaboration. The symposium will focus on related topics of multi-hazards induced by extreme weather, earthquake, volcanic activity and haze pollution. Other issues are also included such as advanced monitoring and forecasting techniques, risk assessment, disaster health and emergency management, as well as education on disaster reduction. All the participants are encouraged to join discussion and exchange experience throughout the symposium.



➤ Website (<http://www.apru2013.com/>)



Welcome to APRU2013

- ▶ Welcome Letter
- ▶ General Information
 - ▶ Themes and Topics
 - ▶ Venue
 - ▶ Organization and Sponsors
- ▶ Online Submission
 - ▶ Key Dates
 - ▶ Abstract Submission Policies
 - ▶ Poster Session Presenter Guidelines
 - ▶ Student Poster Competition
- ▶ Program

News

- 05-03-2013 [Call for papers \(English\) \(中文\)](#)
- 05-03-2013 [Abstract submission](#)
- 07-01-2013 [Online registration is available](#)
- 07-05-2013 [Abstract submission has been extended to 31 August, 2013](#)
- 07-10-2013 [Student Poster Competition \(English\) \(中文\)](#)
- 07-10-2013 [Poster submission](#)
- 10-01-2013 [Keynote and Invited Speakers](#)
- 10-09-2013 [Poster Award](#)
- 10-16-2013 [Field Trip](#)
- 10-20-2013 [Last day to pay registration](#)
- 10-24-2013 [Final Program \(download\) \(Group Session\)](#)
- 10-30-2013 [2013 APRU photos](#)

➤ Poster



WELCOME

The APRU symposium series on Multi-hazards around the Pacific Rim will hold its ninth symposium from 28-29 October 2013 at National Taiwan University in Taipei, Taiwan. The 9th APRU symposium is hosted by the Center for Weather Climate and Disaster Research (WCDR) at National Taiwan University, and it aims to convene scholars and experts from the country around the Pacific Rim. The inter-disciplinary knowledge on multi-hazard researches can be exchanged and shared through APRU collaboration.

CALL FOR PAPER

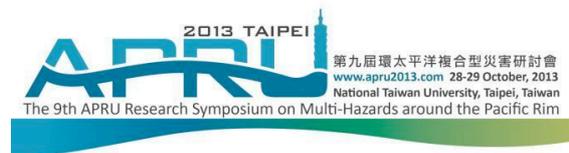
The abstract submission is now available at <http://www.apru2013.com/>. All papers will be peer reviewed by an international scientific committee.

THEMES & TOPICS

- ▶ Multi-hazards induced by extreme weather
- ▶ Multi-hazards induced by earthquake
- ▶ Multi-hazards induced by volcanic activity
- ▶ Air pollution and haze related issue
- ▶ Disaster risk assessment and impact analysis
- ▶ Advanced research on monitoring, sensing, nowcasting and forecasting
- ▶ Disaster management and education
- ▶ Post-disaster recovery and reconstruction
- ▶ Disaster health and emergency management

KEY DATES

- 5 May, 2013..... Abstract submission will open
- 31 August, 2013..... Deadline for abstract submission
- 7 September, 2013..... Notification of review results / abstract acceptance
- 14 September, 2013..... Deadline for early-bird registration
- 30 September, 2013..... Deadline for late online registration
- 5 October, 2013..... Final Program to be released online
- 28-29 October, 2013..... Symposium period
- 30-31 October, 2013..... Field trip



環太平洋大學聯盟將於2013年10月28-29日假臺灣大學召開第九屆環太平洋複合型災害研討會。本次國際研討會由臺灣大學氣候天氣災害研究中心主辦，其目的係彙集環太平洋國家之專家學者，透過環太平洋大學聯盟之國際合作，促進交換與分享複合型災害研究之跨領域知識。

邀稿

請透過本研討會網址 <http://www.apru2013.com/> 提交論文摘要。

研討會主題

- ▶ Multi-hazards induced by extreme weather
極端氣候所引發之複合型災害
- ▶ Multi-hazards induced by earthquake
地震所引發之複合型災害
- ▶ Multi-hazards induced by volcanic activity
火山活動所引發之複合型災害
- ▶ Air pollution and haze related issue
空氣污染與霾害之相關議題
- ▶ Disaster risk assessment and impact analysis
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災後復原與重建
- ▶ Disaster health and emergency management
災害之民眾健康與應急管理議題

重要期程

- 5月05日..... 開放論文摘要提交系統
- 8月31日..... 論文摘要提交截止
- 9月07日..... 論文審查結果通知
- 9月14日..... 早鳥註冊截止
- 9月30日..... 線上註冊截止
- 10月5日..... 線上公告研討會議程
- 10月28-29日..... 第九屆APRU複合型災害研討會
- 10月30-31日..... 實地考查

地點與時間

地點：臺北市臺灣大學思會議中心
時間：2013年10月28-29日





➤ Keynote Speakers & Invited Speakers



KEYNOTE SPEAKERS



Global Climate Change—Integration, Coherence and Governance (Taiwan Experience)
Hong-yuan Lee, PhD
Minister
Ministry of the Interior, Taiwan



Roger Wakimoto, PhD
Assistant Director
National Science Foundation Assistant Director for Geoscience, USA



Atmospheric Haze: Why should we care about it and how can we assess its impacts on climate and air quality
Chien Wang, PhD
Senior Research Scientist
MIT Center for Global Change Science & Singapore-MIT Alliance for Research and Technology (SMART), USA



Disaster Prevention, Preparedness, Response, Resilience, and the Community Role
Douglas Paton, PhD
Professor
School of Psychology, University of Tasmania, Tasmania, Australia



Evolving Catastrophe Risks of Asia
Tso-Chien Pan, PhD
Executive Director
Institute of Catastrophe Risk Management, Nanyang Technological University, Singapore



Role of the World Wide Web in Disaster Forecasting, Planning, Management and Response: Challenges and Promise
John Rundle, PhD
Distinguished Professor
Department of Physics, University of California, Davis, USA



JW Eco-technology and Adaptation of Climatic Change
Chung-Ming Liu, PhD
Doctor
The Chinese Association of Low Carbon Environment, Taiwan



Compound Disasters Caused by Flood and Typhoon
Wei-Fu Yang, PhD
Director-General
Water Resources Agency, Ministry of Economic Affairs, Taiwan



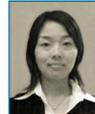
Multiscalarity of Natural and Social Factors Producing Vulnerability in Disasters Occurrence, Coping And Recovery in Latin America
Hugo Romero Aravena, PhD
Associate Professor
Investigador responsable, Nucleo Milenio CIVDES, Universidad de Chile, Santiago de Chile



Forecasting Severe Downslope Windstorms in Southern California
Robert Fovell, PhD
Professor
Department of Atmospheric and Oceanic Sciences, University of California, Los Angeles, USA



Reservoir Watershed Management Due to Extreme Weather
SUMI Tetsuya, PhD
Professor
Disaster Prevention Research Institute, Kyoto University, Japan



Seismology of Landslides: Real-time Monitoring of Large Slope Failures
Masumi Yamada, PhD
Assistant Professor
Disaster Prevention Research Institute, Kyoto University Earthquake Hazards Division, DPRi, Kyoto University, Japan



The 2011 Great East Japan Earthquake and Tsunami: Preparedness, Response, Reconstruction, and Lessons Learned
Jeremy David Bricker, PhD
Associate Professor
Hazard and Risk Evaluation Research Division, International Research Institute of Disaster Science, University of Tohoku University, Japan

➤ Submission Status

1. Total submission: 97 (included 31 student posters)	
2. All submission topics	
Topics	Count
Multi-hazards induced by extreme weather	10
Multi-hazards induced by earthquake	16
Multi-hazards induced by volcanic activity	1
Air pollution and haze related issue	5
Disaster risk assessment and impact analysis	17
Advanced research on monitoring, sensing, nowcasting and forecasting	4
Disaster management and education	28
Post-disaster recovery and reconstruction	9
Disaster health and emergency management	7
3. All submission countries:	
Australia*2, Canada*1, China*22, Japan*19, Korea*1, Malaysia*1, Nepal*1, New Zealand*4, Philippines*2, Singrpora*3, Taiwan*37, and United States*4	

➤ Student Poster Competition

The Gold Award	Yuan-Chien Lin	
The Silver Award	Fong-Zuo Lee	
The Bronze Award	Tzong-Hann Wu	
The Excellent Award	Bruno Adriano Cheng-Chia Huang Chin-Wei Liu	Shin-Min Huang Er-Xuan Sung

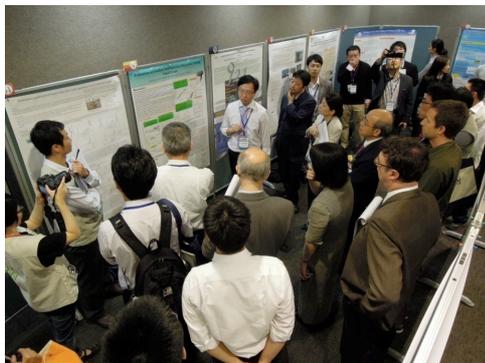


圖 29 Student Poster Competition

➤ Core Meeting(核心會員會議)

- The criteria of being a member of the APRU MH core group. (Note: core group member: Tohoku Univ., Taiwan Univ., UC Davis, Tsinghua Univ. China, Univ. of Chile, Thailand.目前 45 會員中僅有 6 個是核心委員)

- Summer School in July 2014 at Tohoku University. (APRU 希望核心會員大學應派員參加)
- Reviewing the Taiwan host symposium. (給與台大極高評價)
- Recommendation to University of Chile for 10th MH symposium.



圖 30 Core Meeting(核心會員會議)

3. 「工程視覺化期刊」執行報告 Executive report of Visualization in Engineering

與澳洲科廷大學 (Curtin University Australia) 合作，已辦一個新的期刊：International Journal Visualization in Engineering，並且立辦公室，Springer 允諾會協助中心，希望用兩年時間進到 SCI。

在本校土木系康仕仲教授努力下，規劃「工程視覺化期刊」，如下述：

Position: Executive Editor: Prof. Shih-Chung Kang, Executive

Secretary: Dr. Meng-Han Tsai

Journal of Visualization in Engineering

a SpringerOpen Journal

<http://www.viejournal.com>

Society affiliations

Visualization in Engineering is affiliated with Curtin University, National Taiwan University and Northeastern University.

Editor-in-Chief

Xiangyu Wang, Curtin University

Editors

Shih-Chung Kang, National Taiwan University
Liyun Ding, Northeastern University

All author charges waived throughout 2013

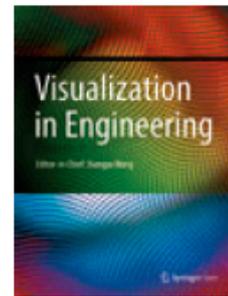
First Issue will publish in 2013

Now accepting submissions

Visualization in Engineering is accepting submissions; please use the online submission system to submit your manuscript. If you are submitting a manuscript to a particular Special Issue, please refer to its specific name in your covering letter. For all enquiries about the journal, please contact: editorial@viejournal.com.

Aims & scope

The aim of *Visualization in Engineering* is to disseminate original and high quality research results on the visualization paradigms, models, technologies, and applications that have significant contributions to the advancement of all aspects of design and engineering. The journal is devoted to scholarly research on improving all aspects of design and engineering (including civil, architecture, mechanical, manufacturing, industrial, aerospace, medical, etc.) through the applications of visualization technologies.



Editorial Board

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Visualization in Engineering data up to and including September 2013: The average time from submission to acceptance was 151 days. The articles in this issue have been accessed an average of 424 times since publication - nearly 10 per day. The following tables were shown the statistics of journal data:

表 3 Submissions and acceptances

	Submissions		Acceptances
	2012	2013	2013
January	0	4	0
February	0	6	0
March	0	5	0
April	0	1	0
May	0	1	0
June	0	0	5
July	0	0	2
August	0	1	2
September	0	1	1
October	0	0	0
November	0	0	0



December	2	0	0
Total	2	19	10

表 4 Acceptances and rejections - all time

Average time to acceptance		151 days
Accepted	10	55.56 %
Rejected	6	33.33 %
Withdrawn	2	11.11 %
Total	18	100.00 %

表 5 Registration

Registrants all time	87
New registrants during September 2013	8

Articles

All articles
Most viewed
Archive

Last 30 days | Last year | All time

Page 1 of 1

Display/download options Articles per page: 25 | 50 | 100

1. **Research article** Open Access

1267 **High-precision vision-based mobile augmented reality system for context-aware architectural, engineering, construction and facility management (AEC/FM) applications**

Accesses Hyejoon Bae, Mami Golparvar-Fard, Jules White
Visualization in Engineering 2013, 1:3 (13 June 2013)
Abstract | Full text | PDF
2. **Research article** Open Access

1116 **Visualization of CCTV coverage in public building space using BIM technology**

Accesses Huan-Ting Chen, Si-Wei Wu, Shang-Hsien Hsieh
Visualization in Engineering 2013, 1:5 (13 June 2013)
Abstract | Full text | PDF
3. **Research article** Open Access

795 **SMART: scalable and modular augmented reality template for rapid development of engineering visualization applications**

Accesses Suyang Dong, Vineet R Kamat
Visualization in Engineering 2013, 1:1 (12 June 2013)
Abstract | Full text | PDF
4. **Research article** Open Access

750 **Combining photogrammetry and robotic total stations to obtain dimensional measurements of temporary facilities in construction field**

Accesses Ming-Fung Siu, Ming Lu, Simaan AbouRizk
Visualization in Engineering 2013, 1:4 (13 June 2013)
Abstract | Full text | PDF
5. **Research article** Open Access

669 **Uncertainty-aware visualization and proximity monitoring in urban excavation: a geospatial augmented reality approach**

Accesses Xing Su, Sanat Talmaki, Hubo Cai, Vineet R Kamat
Visualization in Engineering 2013, 1:2 (12 June 2013)
Abstract | Full text | PDF
6. **Research article** Open Access

520 **A visual energy performance assessment and decision support tool for dwellings**

Accesses Amit Mhalas, Mohamad Kassem, Tracey Crosbie, Nashwan Dawood
Visualization in Engineering 2013, 1:7 (9 July 2013)
Abstract | Full text | PDF | ePUB
7. **Research article** Open Access

444 **Empirical assessment of a RGB-D sensor on motion capture and action recognition for construction worker monitoring**

Accesses SangUk Han, Madhav Achar, SangHyun Lee, Feniosky Peña-Mora
Visualization in Engineering 2013, 1:6 (9 July 2013)
Abstract | Full text | PDF | ePUB
8. **Research article** Open Access

286 **Tangible mixed reality for remote design review: a study understanding user perception and acceptance**

Accesses Xiangyu Wang, Phillip S Dunston
Visualization in Engineering 2013, 1:8 (13 August 2013)
Abstract | Full text | PDF | ePUB
9. **Review** Open Access

242 **Review and analysis of augmented reality literature for construction industry**

Accesses Sara Rankohi, Lloyd Waugh
Visualization in Engineering 2013, 1:9 (29 August 2013)
Abstract | Full text | PDF | ePUB
10. **Research article** Open Access

125 **Spatial and visual data fusion for capturing, retrieval, and modeling of as-built building geometry and features**

Accesses Zhenhua Zhu, Sara Donia
Visualization in Engineering 2013, 1:10 (3 September 2013)
Abstract | Full text | PDF | ePUB

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圖 31 Top 10 most accessed articles (upload date: 2 October 2013)