

PROF. DR. EUGENE CH'NG

NVIDIA Joint-Lab on Mixed Reality
NVIDIA Technology Centre
University of Nottingham Ningbo China
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UNNC Aikido Society Founder and Chief Instructor
British Aikido Board Coach Level 1 Instructor
Aikido Black Belt (Shodan, Niidan), Hombu Dojo, Japan
Aikido Black Belt (Shodan), NIA Aikido Birmingham, UK
www.aikidoka.me

ABOUT

I'm a scientist and also an artist, although I think science is also art. I enjoy life and work very hard to achieve my dreams. I am a product of my environment - I socialise widely and have lived in 3 countries, travelled 30+ nations and over 200+ cities. Life is great, and I intend to experience and enjoy all aspects of it for a few more decades more than the average.

I adapt to a wide range of disciplines. In each field, I bring innovative solutions to perfection. I have a strong belief that enjoying one's work ensures its success. 20 years of combined professional and academic experience across multiple disciplines, and I'm still enjoying it!

PRESENT ROLES

Professor of Cultural Computing
Founding Director, NVIDIA Joint-Lab on Mixed Reality, NTC
Ningbo 3315 Talent (2015...)

EXTERNAL

Co-editor-in-chief, Presence: Virtual and Augmented Reality
NVIDIA AI Technology Centre Associate Member
Editorial Board, Industrial Management & Data Systems
Fellow of the Higher Education Academy (FHEA)

EDUCATION

2003-2006	Best PhD Awarded. Electronics, Electrical and Computer Engineering, University of Birmingham, UK
2008-2009	PG Cert. Learning and Teaching in the Higher Education, University of Wolverhampton, UK
1999-2001	MSc. IT. Faculty of IT, Multimedia University, Malaysia
1995-1998	BA (Hons) 1st Class, 3D Design. De Montfort University, UK (Twinning with Equator)
1995-1997	Interior Architecture, Merit. Equator Academy of Art, Malaysia
1994-1995	Fine Arts. Equator Academy of Art, Malaysia

Brief Bio

Professor of Cultural Computing and Director of the NVIDIA Joint-Lab on Mixed Reality, NVIDIA Technology Centre, the University of Nottingham's China campus. Trained as a computer scientist and artist, he is presently based within the Faculty of Humanities and Social Sciences. Prof. Ch'ng has previously served as Innovations Hub Director at the IBM Visual and Spatial Technology Centre and the Digital Humanities Hub a £3.5m strategic investment bid at the University of Birmingham where he led research in the development and application of cutting-edge technology in digital heritage and culture. Prof. Ch'ng has been invited twice to the Royal Society, and is an organiser and speaker at the Royal Society Theo Murphy Scientific meeting in 2017. He has also been invited to present his work at two British Science Festivals, at the Orkney International Science Festival, and for Darwin's Bicentenary Exhibition. He has been featured in numerous international media such as National Geographic Television, Channel Four's Time Team Special, Nature, Scientific American and the Oxford handbook of maritime archaeology among others. As one of the global consultant for the V&A's ReACH programme (Reproduction of Art & Cultural), he participated in the review and redraft of Henry Cole's 1867 Charter and the technical policy. Prof. Ch'ng was awarded the Ningbo Municipal Individual 3315 Talent award in 2015.



EMPLOYMENT HISTORY

- 2016... **Director**
NVIDIA Joint-Lab on Mixed Reality, University of Nottingham Ningbo, China [7.2016...]
- 2013-2017 **Associate Professor in Computer Science**
University of Nottingham Ningbo, China [12.2013-07.2017]
- 2014-2017 **RKE Board Member**
Faculty of Science and Technology, University of Nottingham Ningbo, China [10.2014...]
- 2013-2016 **Deputy Director**
International Doctoral Innovation Centre, University of Nottingham Ningbo, China [12.2013-10.2016]
- 2013-2016 **Visiting Professor**
Centre for Creative Content and Digital Innovation, University of Malaya, Malaysia. [09.2013-09.2016]
- 2012-2013 **Innovations Director**
IBM Visual and Spatial Technology Centre, Digital Humanities Hub, University of Birmingham, UK [04.2012...11.2013]
- 2012-2013 **Director of Innovations**
Digital Humanities Hub, University of Birmingham, UK [04.2012...11.2013]
- 2011-2013 **Senior Lecturer in Visualisation**
IBM Visual and Spatial Technology Centre, Institute of Archaeology and Antiquity, The University of Birmingham, UK [01.2011...11.2013]
- 2007-2010 **Senior Lecturer in Computer Science**
School of Computing and IT, University of Wolverhampton [09.2007... 12.2010]
- 2007 **Visiting Lecturer in Virtual Environments**
School of Computing, Communications & Electronics, Faculty of Technology, Plymouth University [01.2007...08.2007]
- 2006-2007 **Post-doctoral Research Fellow**
Artificial Life and Advanced Interactive Systems, Dept. of Electronic, Electrical and Computer Engineering, University of Birmingham [11.2006... 09.2007]
- 2003 **Visiting Lecturer in Multimedia**
Faculty of Computer Science, University Putra Malaysia [03.2003...08.2003]
- 2000-2003 **Lecturer/Tutor**
Faculty of Information Technology, Multimedia University, Malaysia [02.2000...09.2003]
- 1998 **Lecturer in Interior Architecture**
Penang College of Art, Malaysia [1998/99]
- 1997 **Assistant Lecturer in Interior Architecture**
Equator Academy of Art and Design, Malaysia [1997/98]

ROYAL SOCIETY INVITATIONS + 4 Soirees

- 2017 Royal Society Theo Murphy Scientific Meeting as Organiser and Speaker
- 2015 "Europe's Lost World" VR and Sim.
Royal Society Summer Science Exhibition, London
- 2012 "Stonehenge Hidden Landscapes" VR and Sim.
Royal Society Summer Science Exhibition, London

SCIENCE FESTIVAL INVITATIONS

- 2019 British Council SPARK Festival - The Science and Art of Creativity, Hong Kong
- 2016 Stonehenge Virtual Environments Simulation
British Science Festival, Edinburgh, Scotland
- 2015 "Stonehenge Hidden Landscapes"
British Science Festival, Birmingham, England
- 2013 Invited Talk and Exhibition "Europe's Lost World"
Orkney Science Festival, Scotland
- 2009 "Shift Life" Mixed Reality
Darwin's Bicentenary Shift-Time Festival,
Shrewsbury, England

AWARDS AND NOMINATIONS

- 2018 Nominee, Lord Dearing Award
- 2016 Nominee, Lord Dearing Award
- 2017 Faculty Teaching Excellence Award, in recognition of excellent SET score and contribution to teaching 2016-2017, Faculty of Science and Engineering UNNC.
- 2017 Winner of the International Strategy of the Year, Times Higher Leadership & Management Awards 2017
- 2016 Nominee, Lord Dearing Award
- 2015.09 Ningbo Municipal Individual 3315 Talents Award
- 2012.12 Universitas 21 Early Career Researcher Fellowship, "The Future of Ecological Civilisation", Jiaotong University, 4-6 December 2012
- 2009.01 Early Practitioner's Award 08/09, Learning and Teaching Rewarding Excellence, The University of Wolverhampton, UK [19 January 2009]
- 2007.10 Honorarium University of Birmingham - VR Educational Game - Superconductivity
- 2007.07 Best PhD Award 06/07, School of Engineering, University of Birmingham, UK
- 2007.04 Nominee, Laval Virtual Award and Virtual Scylla. Laval, France
- 2007.01 Royal Academy of Engineering Visiting Lecturship in Virtual Environments, University of Plymouth, UK
- 2006.12 Honorary Lifetime Membership at the National Marine Aquarium, Plymouth, UK for work related to Virtual Environment and Artificial Life modelling of the HMS Scylla.
- 2003.07 PhD Scholarship, School of Engineering, University of Birmingham
- 2003.03 Outstanding Personality, Multimedia University (MMU). Recorded in the MMU Year Book '03
- 1996.10 1st Student Prize Award for the South East Asian Image Competition '96 (3D Computer Graphics) in Singapore hosted by CAD User, Autodesk and Hewlett Packard
- 1997.10 Best Student Award for Academic Session 1996/97 at the Equator Academy of Art and Design, Penang, Malaysia

Global consultant for Digital Heritage, for the V&A's ReACH Programme (Reproduction of Art & Cultural Heritage), contributed to the review and redraft of Henry Cole's 1867 Charter, giving talks and participating in roundtables in Beijing, London, Abu Dhabi and the UNESCO headquarters in Paris.

EXTERNAL ROLES

2017...	Board of Directors Virtual Systems and Multimedia (VSMM)
2015...	Associate Member Nvidia APJ Technology Centre
2015...	Editorial Board Industrial Management and Data Systems
2013-2016	Visiting Professor Centre for Creative Content and Digital Innovation, University of Malaya, Malaysia. [09.2013...]
2013-2016	Council Member Complex Systems Society, Europe. [11.2013...]

Interviews

Ningbo Daily (宁波日报)
“Eugene Ch'ng - 有趣的灵魂万里挑一” (Interesting soul, one in a millionth)
Ningbo, China, 12 Dec. 2017

BBC Radio Nottingham Breakfast Show
AHRC “Curious Travellers” project
19 Sept. 2016

Xinhuanet
“AI and visualising big data in media”
Nanjing China, 1 Nov. 2016

Appearance on TV and Documentaries

Research on VR and Simulation Environments

UKRI Joint UK-China Impact Research
NVIDIA Joint-Lab on Mixed Reality
2018

“Stone Age Tsunami” Channel 4 Time
Team Special 2012

“Stone Age Atlantis” National Geographic
TV 2010

UKRI Impact

Selected together with 8 individuals and groups from 257 collaborative projects in China between more than 230 academic institutions and business in both the UK and China as having joint UK-China research impact. UKRI UK-China Impact Festival 8 Nov. 2018

GRANT FUNDING AWARDS

Principal Investigator	Cultural Heritage and Cross-Border Digital Communication in the Terrestrial and Maritime Silk Road: Facilitating the Construction of a Cloud-Based Heritage Open VR Social Database, IAMET NBSTB 300,000 RMB
Principal Investigator	“Digital Technology Enhanced Cultural and Heritage in the Development of the Knowledge Economy” AHRC Centre for Digital Copyright and IP Research in China, NBSTB, 425,000 RMB
Principal Investigator	Applied Research in VR Education Technology Acceptance Study for Historical, Cultural Contents, Institute for Asia Pacific Studies. IAPS Grant, 70,000 RMB
Principal Investigator	基于博物馆馆藏的中国文化教育虚拟现实系统开发的关键技术研发及实践, “China cultural heritage education with VR” Zhejiang Science and Technology Development Commonwealth Grant, 200,000RMB
Co-I, Local PI	ERC Advanced Grant “Lost Frontiers” exploring climate change, settlement and colonisation of the submerged landscapes of the North Sea basin using ancient DNA, seismic mapping and complex systems modelling, €2.5m
Co-I, Local PI	AHRC “Curious Travellers” Grant – crowdsourcing in mitigation of large-scale heritage damage, £305,000
Member	D-CiTi Lab BIM, Ningbo Municipal Innovation Team, 2.5m RMB
Core Member	IAMET, Real-time Structural Health Monitoring of Heavy Sea Transport Platform, 2m RMB
Principal Investigator	Human Behaviour in Surface and mobile Computing and Museum intelligent Spaces, Telekom Malaysia, Multimedia University PhD Scholarship (4 years, £130,600).
Principal Investigator	A Collaborative Environment for Assisted 3D Reconstruction of Cuneiform Tablets, collaboration with The University of Birmingham and The University of Frankfurt, Germany. 2010, £97,532 (The Leverhulme Trust F/00 094/BP)
Principal Investigator	Vivacity Flag Fen Interactive Virtual Reconstruction, Vivacity-Peterborough (10K)
Co-Investigator	“Mining the Meaning” Big Data Pump Priming Grant, University of Nottingham (£10K)
Member	RCUK, EPSRC Network Grant for Digital Economy Sub-Theme, Communities and Cultures Network+, 2012... 2015
Principal Investigator	Strategic Investment Bid (SIB), Heritage and Cultural Learning Hub, £75K
Co-Investigator	‘Grants for the Arts’ – ‘Shift-Life’ Alternate Biology and Mixed-Reality Interface, Arts Council England. Demonstrated at Shift-Time Festival, hosted at Wolverhampton Art Gallery, £10K.

CONFERENCE AND SESSION CHAIRS

2019	Industries Programme Chair, VRCAI 2019, 16th ACM SIGGRAPH Int' Conf. on VR Continuum and its Applications in Industry
2018	Scientific Committee Member Digital Heritage 2018, San Francisco USA
2017	Co-Chair and Scientific Chair 23rd International VSMM Conference, Dublin Ireland
2016	Chair and Publications Chair ACM Siggraph VRCAI - Symposium for VR in Culture and Heritage ACM Siggraph Int' Conference on VR Continuum and its Applications in Industry (VRCAI)
2015	Panel Chair VR IoT Workshop, D-CiTi Lab Launch Ceremony and International Forum on Digital Built Britain, British Consulate General Shanghai, British Centre, 11 Dec.
2015	Chair, Big Data Panel Session/Digital Economy session, Co-organiser International Conference on Operations and Supply Chain Management, ICOSCM 2015, University of Nottingham Ningbo China, (July 2015)
2014	Session Chair Advances in Technology, VSMM Conference 2014, Hong Kong, 8-12 December 2014
2013	Panel Chair Digital Heritage Technology, Tourism and the Shifting Values of Cultural Heritage, Visiting Pasts, Developing Futures - International Conference, Taipei, Taiwan. April 5 - 9 2013
2013	Panel Chair and Convenor Interpretation and Communication of Heritage Values in the Digital Domain, Tourism and the Shifting Values of Cultural Heritage, Visiting Pasts, Developing Futures - International Conference, Taipei, Taiwan. April 5 - 9 2013
2012	Ideas Panel Transforming Artist's Book Network Meeting, Tate Britain, 23 March 2012
2012	Invited Expert Panel [digital] 'The Only Way is Ethics' Conference and Parallel Debate, ICON Metals Group, Institute of Conservation, University of Cardiff 12 April 2012

PhD Supervision

Completed

Dr Andrew Lewis	A Collaborative Environment for Assisted 3D Reconstruction of Cuneiform Tablets, The Leverhulme Trust PhD Studentship, University of Birmingham (2014)
Dr Gido Harkvoort	A Complex Community of People, Objects and Devices, Carol, Kennedy PhD Scholarship, University of Birmingham (2015)
Dr Mohd Hafizuddin Mohd Yusof	A Network of Ambient Electronic Sensors as Cohesive Agents that Facilitates Personalisation of Experience and Transfer of Information, University of Birmingham (2016)
Dr Xinyu Fu	Context-Aware Sentence Categorisation: Word Mover's Distance and Character-level Convolutional Recurrent Neural Network (2018)
Dr Mengdi Li	New Directions for Sentiment Analysis in the Era of Emojis (2018)
Dr Hongliang Sun	The Identification of Influential Spreaders and Communities from Complex Networks (2018)

Ongoing (as principle supervisor)

Weiqiang Lin	Mining Consumer Feedback and Designing Features for E-commerce Platform Optimisation (expected 2019)
Cynthia Yue Li	Evaluating a Mixed Reality Framework for Social Interactions around Cultural Heritage Objects in Virtual and Public Spaces (2020)
Shengdan Cai	Identity, Memory and Nostalgia with VR (2020)
Danzhao Cheng	Investigating Mechanisms for Crowdsourcing 3D Cultural Heritage Across Geographical Locations (2021)

Ongoing (As Second Supervisor)

Boying Li	Studying the predictive power of electronic word-of-mouth on company performance (with Prof. Alain YL Chong, expected 2018)
Shuojiang Xu	Data Driven Inventory Management in the Healthcare Supply Chain (with Prof. Hing Kai Chan, expected 2019)

I have sustained the completion of 6 PhD students, examined 6 PhD Theses and >10 Masters Dissertations Internationally

Invited Keynotes and Talks

- 2019 Invited panel - "Virtual Spaces within Built Environments". Urban Repurposing: Thought Leadership and Panel Discussion, British Council SPARK, Tai Kwun, Hong Kong, 20 January 2019
- 2019 Invited Panel - "ReACH: inventing together a roadmap to embrace digital reproduction in the 21st century", Museum Connections, Paris, France. 16-17 January 2019
- 2018 Invited Keynote - Virtual Heritage: Record and share your worlds in accessible spaces, Increasing appetite for creative digital technologies among young cultural heritage defenders, UNESCO-EU NET-MED Youth Regional Workshop, Tunis, Tunisia, 13-14 Dec. 2018.
- 2018 Invited Keynote - "The Need for the Mergence of Virtual and Real World Data in VR Research and Applications", Advanced National VR and AI experimental conference, Organised by Hangzhou Normal University and hosted by Zhejiang University, 25-26 Nov. 2018
- 2018 Invited Keynote - "Strategies for the adoption and use of Digital Technologies in Present Museums", Sino-UK Museum Curation and Creative IP Development Forum, 8th Chinese Museums and Relevant Products and Technologies Exposition, Fuzhou 23-26 Nov 2018.
- 2018 Invited Speech. "Sustainable Digital Heritage" UNESCO headquarters, book launch and conference of the V&A's ReACH Programme. Paris, France, 22 June 2018.
- 2018 Invited Keynote. "New Directions for Digital Heritage", Digital Environment for Education Art and Heritage, International and Interdisciplinary Conference, Brixen, 5-6 July 2018.
- 2018 Invited Keynote. "Is Art Achievable for Artificial Intelligence?", Hong Kong University of Science and Technology HKUST-NIE Social Media Lab, 'Roundup', Hong Kong, 25-27 June 2018
- 2018 Invited Talk/Expert Panel. "The Challenges of Digital Storage" V&A ReACH Technical Policy Round-Table. Department of Culture and Tourism, Abu Dhabi 23-24 April. 2018
- 2018 UNNC Life-Long Learning Event. Virtual Time Travel: The Use of Virtual Reality Technology for the Reproduction, Storage and Sharing of the Past, University of Nottingham Ningbo China, 11 March 2017
- 2017 TEDxNingbo Talk. "The Virtual Past Within Future Cities" - in the future the past will be as accessible as the present, 10 Dec. 2017
- 2017 Invited Talk/Expert Panel. "Sustainable Sharing in the Digital Age" V&A ReACH Conference - finalisation of the new Convention for Reproduction of Art and Cultural Heritage. Victoria and Albert Museum, London 8 Dec. 2017
- 2017 Invited Speaker/Expert Panel. "Sustainable Strategies for the Digital Production and Sharing of Artworks and Cultural Heritage" ReACH Roundtable Discussion, Beijing Palace Museum, 30 Nov. 2017
- 2017 Invited XBar Speaker, "Perceived Reality in Virtual Worlds Translates to Reality in the Real World", XBar, Xian Jiaotong Liverpool University, 22 Nov 2017
- 2017 Invited Panel - Development through the Creative Economy in China, AHRC International Workshop in partnership with UNESCO Creative City (Shanghai) Promotion Office, Shanghai Theatre Academy and the Jiangsu Provincial Department of Culture, 24-26 October 2017, Le Royal Meridien Hotel, Shanghai China.
- 2017 Invited Keynote - The Integration of Science and Culture Using Virtual Reality: Opportunities and Challenges for Cultural Heritage, 12th Digital Entertainment, VR and Artistic Fusion Seminar, China Academy of Arts (中国美术学院), Hangzhou China, 14-16 October 2017



- 2017 Invited Talk - Strategies for Aligning Historic Port Development to China's 13th Five-Year Plan: The Integration of Science and Technology in the Development of Culture and Heritage. AHRC supported China Ports Network (Maritime heritage and the marine economy in China), 15 Sept. 2017, China Port Museum, Ningbo, China.
- 2017 Invited Lecture - Development and Application of Technologies in the Digital Economy: VR and AI, "Made in China 2025", 1st Ningbo Finance Industry Connection for Management and Leadership Research and Advanced Study, Ningbo Finance Society, 16 August 2017
数字经济的发展与应用：虚拟现实与人工智能，首届宁波市金融业对接“中国制造2025”管理骨干研修班，宁波市金融协会，2017年8月16日
- 2017 Invited Talk - 'The Curious Travellers Project', AHRC International Summit, British Library, UK, 7 June 2017.
- 2017 Invited Keynote - "VR Technology for Film: Approaches and Implications" SoFTA Film Festival, Xian Jiaotong Liverpool University, Suzhou 25th May 2017.
- 2017 Invited Lecture - VR Technology for Heritage Sites, Landscapes, Monuments and Objects, Museum Master Class, 9-13 January 2017, University of Nottingham Ningbo China.
- 2017 Invited Lecture - VR Technology and Film Education, Sino-UK Global Screen Industry Education and Skills Collaboration Pilot Programme, Hosted by UNUK, UNNC, Xinhua Net, 7-14 Jan. 2017, University of Nottingham Ningbo China.
- 2017 Keynote Speech - VR Technology and Film, 1st Ningbo International Microfilm Festival and Global Film & TV Industries Academic Summit, 9 Jan 2017, Ningbo Haisu Cultural Centre, Ningbo, China.
- 2016 Keynote Speech - "The Meaning of Visualisation in Big Data-Mining", The First Artificial Intelligence and Industry Innovation Conference of China (China 'Wisdom Valley' Initiatives), Hosted by Xinhuanet, 1-2 November 2016, Nanjing, China.
- 2016 Keynote Speech - Crowd Behaviour Mining with Virtual Environments, 2016 Applied Informatics and Technology Innovation Conference (AITIC 2016) 22-24 November 2016, Newcastle, Australia
- 2016 Invited Talk - AHRC Creative Economy Round Table Discussion: "High-Impact UK-China Innovation for Cultural Heritage", Pujiang Innovation Forum (Innovation is GREAT), Shanghai 23-25 September 2016.
- 2016 Invited Talk by Euraxess on the experience and process of the success of the €2.5m European Advanced Research Grant experience working with the consortium, Shanghai in 2 June 2016
- 2016 Invited Keynote and Public Seminar - "Human vs AI: Who will dictate our future?" "人脑VS电脑，谁将主导未来?" at Ningbo Science Exploration Centre, Ningbo, Zhejiang, China. 04 April 2016
- 2016 Invited Keynote - "Experience in Large-Scale 4D Projects" 13th International Learning and Technology Conference "'3 4 5 Dimensions and Beyond: Immerse into the Learning Environment!" conference, Effat University, Saudi Arabia, 10-11 April 2016
- 2015 Invited Talk, "VR and AR for BIM", D-CiTi Lab Launch Ceremony and International Forum on Digital Built Britain, British Consulate General Shanghai, British Centre, 11 Dec. 2015
- 2015 Invited Talk - Big Data and Connected Communities, SAS User Group Malaysia (SUGMa) event on Social Media Analytics: The Future of e-Business and e-Marketing, Aloft Kuala Lumpur, 8th September 2015
- 2015 Invited Panel Chair and Guest Speaker - Multimodal, Longitudinal Networks Visualisation and Community Detection, ICOSCM - 9th International Conference on Operations & Supply Chain Management, University of Nottingham Ningbo China, 12-15 July 2015.



- 2015 Invited Presentation - Big Data and Visual Analytics - Community Discovery in Social Media, JD.com, Beijing Headquarters, 2 June 2015
- 2015 Invited Presentation - Using Big Data Technologies for Social Network Analysis, Johnson & Johnson Medical, Shanghai Headquarters, 15 June 2015
- 2014 Invited Lecture - Social Information Landscapes Within Social Networks: Datasets from a Scalable Open-Source Big Data Architecture, Hong Kong University of Science and Technology, 10 December 2014
- 2014 Guest Lecture - What do Twitter Communities Look Like? Auditorium, University of Nottingham China, 27 March 2014
- 2014 Invited Lecture - Identifying and Isolating Communities in Social Media, Zhejiang University of Finance and Economics, China, 21 February 2014
- 2013 Presentation - Scalable Agent Models for Complex Systems Simulation in Large Geospatial, Ecological and Social Landscapes, Big Data and Complexity, European Conference on Complex Systems 2013, Barcelona, 16-20 September 2013
- 2013 Invited Lecture - Understanding Past Landscapes with Complex Systems Science: Agent-based models of entities and their environments, Orkney International Science Festival, Kirkwall, The Orkney Islands, 6 September 2013
- 2013 Invited Talk - Big Data and Geospatial and Social Landscapes Research, Riken, Kobe Japan, 17 June 2013
- 2013 Invited Seminar - Sundaland Project Briefing, University of Malaya, Malaysia 4 April, 2013
- 2013 Invited Seminar - Physical, Conceptual and Virtual Landscapes Research with Complex Systems Science, Kageyama Lab and CAVE VR Centre, Faculty of Science and Technology, Kobe University, 11 April 2013
- 2013 Invited Seminar - A Complex Systems Science Approach to Reconstructing Past Landscapes: Understanding and Using the Principles of Complex Adaptive Systems, University of Malaya, Malaysia 4 April, 2013
- 2012 Invited Talk - How to Progress in the Academic Career, Multimedia University, Malaysia, 18 January 2012
- 2012 Invited Lecture - Discovering Heritage, Transforming Culture: Connecting the Past with the Present through Emerging Technology, Universiti Malaya, Malaysia, 18 January 2012
- 2012 Invited Lecture - Information, Computation and Complexity: Research in Heritage and Culture, Ironbridge International Institute for Cultural Heritage (IIICH) Summer School, Birmingham 2-13 July 2012
- 2012 Invited Lecture - Strategies for Agent-Based Modelling: An Object Oriented Approach To Modelling and Simulating Complex Systems, SCIM@University of Bradford, 25 April 2012
- 2011 Invited Lecture - The Heritage Experience in the Era of Web 3.0 and Pervasive Computing, Multimedia University Malaysia, 17 November 2011
- 2011 Invited Keynote - Creative Pathways to Urban Tourism, Catania Sicilly "Digital Heritage Tourism - Reconfiguring the Visitor Experience in Heritage Sites, Museums and Architecture in the Era of Pervasive Computing", 22 September 2011
- 2011 Invited Keynote - IBM BEAR HPC PG Conference, Birmingham University "Agents in Ancient Worlds: Communicating with the Past Using the Technology of the Future", 23 April 2011

- 2011 Public Lecture - Digital Revolution in Heritage and Culture: A Paradigm Shift in the Exploration, Research and Display of Objects, Environments, Text and Behaviour. 14 April 2011 Multimedia University, Cyberjaya, Malaysia
- 2007 Robert J. Stone, Eugene Ch'ng, Robert Guest, (2007.07): "Game On" Event hosted by Computer Science. Co-presentation with Blitz Games and Computer Science. The University of Birmingham. 4th July 2007.
- 2006 Robert J. Stone, Eugene Ch'ng, Robert Guest, David White (2006.12): Serious Gaming Applications. Presentation to Boris Johnson at the Human Interface Technologies (HIT) Lab, Electronic Electrical and Computer Engineering, The University of Birmingham. 1st Dec. 2006.
- 2006 Robert J. Stone and Eugene Ch'ng (2006.11): Virtual Scylla - Using Gaming Technology to Predict the Effects of Climate Change. For the Society of Underwater Technology (SUT) Talk. Discovery Theatre, Plymouth Marine Aquarium.
- 2006 Eugene Ch'ng (2006): "Developing Artificial Life Vegetation to Support the Virtual Reconstruction of Ancient Landscapes", Developing Collective Intelligence, DECOI2006, 7-11 August 2006, Amsterdam, The Netherlands (Presentation).
- 2006 Eugene Ch'ng (2006): "Man-made reality or principles in nature?", Student Welcome Lunch, University of Technology Sydney, Australia, 27 July 2006 (Seminar).
- 2006 Eugene Ch'ng and Robert J. Stone (2006): "The Scylla: An Artificial Life Framework", Plymouth Royal Academy of Engineering Meeting, University of Plymouth, UK, 19 June 2006 (Presentation).
- 2003 Eugene Ch'ng (2003): "*Human-Computer Interaction in Virtual Reality: An Overview*", Faculty of IT, Multimedia University, Cyberjaya, Malaysia, 16 April. 2003 (Seminar).
- 2003 Eugene Ch'ng (2003): "A Survey of the use of 3D and VR in Malaysian Commercial & Research Sector", Faculty of IT, Multimedia University, Cyberjaya, Malaysia 2 July 2003 (Seminar).

International Conference Programme Committee Memberships

- 2015... **Programme Committee Member**
Virtual Systems and Multimedia (VSMM)
- 2017 **Technical Programme Committee**
2017 IEEE 2nd International Conference on Big Data Analysis (ICBDA 2017), Beijing
10-12 Mar. 2017
- 2016 **Programme Committee Member**
Applied Informatics and Technology Innovation Conference (AITIC 2016)
- 2015 **Programme Committee** Conference on Complex Systems
- 2012... **Technical Programme Committee**
IEEE/ACM International Symposium on Distributed Simulation and Real-time
Applications (DS-RT)
- 2015 **Programme Committee**
British Computer Society HCI Conference
- 2010... **Programme Committee Member**
IEEE Computer Graphics, Imaging & Vision (CGiV)

2008-2009 **Programme Chair**
International Conference on Computer Games: AI, Animation, Mobile, Educational & Serious Games 2008-2009

Academic Leadership/Administrative Roles

2014.04...2017.06 RKE Committee, Faculty of Science and Engineering, University of Nottingham Ningbo, China
 2013.12...2016.10 Deputy Director, International Doctoral Innovation Centre, University of Nottingham Ningbo
 2015.09...2017.06 Ethics Committee, School of Computer Science, University of Nottingham Ningbo China
 2014.01...2016.10 Web Manager, School of Computer Science, University of Nottingham Ningbo China
 2011-2013 Executive Member of the Management Board – Heritage and Cultural Learning Hub
 2011-2013 Internationalisation Committee
 2011-2013 Distance Learning Coordinator
 2010-2013 Personal Tutor for PhD students
 2009-2011 Personal Tutor for Postgraduate students
 2007-2009 Personal Tutor for Top-Up students
 2010-2011 Module Leader for CP3064 Artificial Intelligence for Complex Problem Solving
 2008-2011 Module Leader for CP2117 Creative Digital Media
 2008-2011 Module Leader for CP3007 Advanced Multimedia Authoring
 2008-2011 Module Leader for CP4059 Interactive Digital Media

Projects and Consultancies

2012.07...08 Vivacity Flag Fen Interactive Virtual Reconstruction, Vivacity-Peterborough
 2012.03...2012.06 ERDF – Oman Salut Bronze and Iron Age Archaeological Reconstruction, Virtual Experience Company
 2011.12...2012.04 Heritage Hub Demo – Interactive 3D Surface Computing Application –Trilobite Pit Agent-Based Model
 2011.12...2012.04 Heritage Hub Demo – Interactive 3D Surface Computing Application – i3DObject
 2011.08...2011.09 Heritage Hub Demo – Virtual Worlds – Georgetown World Heritage Site Interactive Visualisation and Avatar Tracking (position, gaze, time)
 2011.07...2011.09 VR Geldeston Archaeological Site Virtual Reconstruction
 2011.04...2011.05 VR Wooden Henge Virtual Reconstruction
 2009.06...2009.07 Shift-Life – Mixed Reality Artificial Life Interactive Digital Interface and Display, Shift-Time Festival of Ideas 3-12 July 2009 (Grant Supported by Arts Council England and Shrewsbury Council)
 2007.09...2007.10 Serious Games - Web 3D Superconductivity Learning Game, (Grant Supported by Birmingham Portfolio Partnership) , University of Birmingham
 2007.06...2007.09 VR Training Simulator - Improvised Explosive Devise (IED) Search Project – HFIDTC/MOD
 2007.01...2007.06 VR Medical Project - Post Traumatic Stress Reaction Project, University of Birmingham/King’s College London – HFIDTC/MoD
 2006.01...2007.09 Virtual Scylla Project – Using VR for predicting the impacts of marine ecosystems, University of Birmingham/University of Plymouth/National Marine Aquarium

- 2006.09...2006.11 VR Superconductivity Game, Birmingham Portfolio Partnership, University of Birmingham
- 2005.09...2005.11 UKRB Online Communications Portal, Charity Organisations (ASP.NET, C#, SQL Server)
- 2006.08...2006.12 Dillon Aero Minigun Simulator, University of Birmingham – HFIDTC
- 2006.08...2006.09 Virtual Scylla Website, The University of Birmingham (Community Server)
- 2005.03...2005.08 Online Client & Case Management Application, Harvey-Kong Associates Website (ASP.NET, C#, MS Access)
- 2004.06...2006.12 Alchemy UAV Training Simulator, University of Birmingham – HFIDTC/MoD
- 2003.10...2003.03 Web Site, The Old Mill Hotel and Fusion Chino Restaurant, Shipston-on-Stour (Flash, Javascript, HTML)
- 2003.09...2003.12 Church Management System, Church in Birmingham (ASP.NET, VB, MS Access, Flash)
- 2003.05...2003.06 Virtual Reality Interaction Subgroup Website, Faculty of IT, Multimedia University Malaysia (HTML, Javascript)
- 2002.08...2003.08 GBC Online Book Store, Gospel Book Centre, Malaysia (ASP.NET, VB, SQL Server)
- 2002.01...2003.05 Event Management Online System, Gospel Book Centre, Malaysia (ASP.NET, VB, MS Access)
- 2002.04...2003.04 Network & IT Infrastructure Assessment and Masterplanning, UMW Industries (1985) Sdn Bhd, Malaysia
- 2003.04...2003.05 Technical Adviser for Web Technologies, CSEER Bhd, Malaysia
- 2002.03...2002.06 National ICT Survey, Chip Magazine Singapore
- 2002.01...2002.03 Online Product Catalogue, Magfield.com (Coldfusion, MS Access)
- 2001.04...2001.10 Multimedia Cyberscape Online Journal Management System, Multimedia University Malaysia (Coldfusion, Borland InterBase)
- 2001.04...2001.05 Web Front, Intranet portal, Dynamic intranet art gallery, Faculty of IT, Multimedia University Malaysia (Flash, Perl CGI)
- 2001.03...2001.04 Tutor-Student online interaction system, Faculty of IT, Multimedia University Malaysia (ASP, MS Access)
- 2001.01...2001.02 Centre for Multimedia Computing Website, Faculty of IT, Multimedia University Malaysia (HTML, Javascript)
- 2000.09...2001.02 CSEER VR Architectural Walkthrough, CSEER Bhd
- 2000.07...2000.08 Inspire Sphere Music and Readers Web Interface, Inspire Sphere, Malaysia (Javascript, HTML)
- 2000.06...2000.07 Pharmvision.com web site (Javascript, HTML)
- 2000.04...2000.05 HTML Generator for Faculty Events, Faculty of IT, Multimedia University Malaysia (VB)
- 2000.02...2000.03 Ngamngam.com web portal (Javascript, HTML)
- 1999.04...2000.05 Serverbridge Corporate Identity & Website, Serverbridge, Canada (Javascript, HTML)
- 1999.04...1999.07 Website and Dynamic Picture Gallery, Church in Toronto, Canada (Perl CGI)
- 1998 Bungalow interior design and visualisation, Nobel Interior Design Penang Malaysia
- 1997 Interior design and visualisation of a condominium, Penang Malaysia
- 1997 3D Computer Animation and Multimedia Presentation, University Science Malaysia for AMD

Exhibitions

- 2019.1 Virtual Time Travel: Yuan Dynasty Sanjiangkou Silk Road Port, British Council SPARK Festival, UK-HK A shared future through creativity and innovation. Centre for Heritage and Arts, Tai Kwun, Hong Kong, 18-20 January 2019.
- 2018.12 US Delegation visit to the NVIDIA Joint-Lab on Mixed Reality, 3 Dec. 2018
- 2018.11 2018 NVIDIA Joint-Lab on Mixed Reality AHRC Funded Projects, "The Impact of Joint-Research and Innovation between the UK and China", UK Research and Innovation (UKRI) UKRI Impact Festival, Rosewood Hotel, 8 Nov., Beijing, China. Featured in Inspiring Research: <https://www.youtube.com/watch?v=4spdfDIOIWE>
- 2017.04 NVIDIA Joint-Lab on Mixed Reality VR and AR exhibition and demo class, 2017 Spring Faculty of Science and Engineering Mini-Open Day, University of Nottingham Ningbo China.
- 2017.04 NVIDIA Joint-Lab on Mixed Reality VR and AR exhibition. 2017 China (Ningbo) Cultural Industries Fair, co-organised by Ningbo Municipal Government and Zhejiang Cultural Industries Promotion Society, Ningbo 14-17 April 2017.
- 2017.04 2017 IT National Symposium on Smart Campus in Higher Education Institution, organised by Ministry of Education (China), VR and AR demo at NVIDIA Joint-Lab on Mixed Reality, 13 April 2017.
- 2016.06 2016 International Congress on ICT in Education and Innovative Achievement Exhibition of ICT in Education, Qingdao China, 22-24 June 2016
- 2016 British Science Festival - "Stonehenge Hidden Landscapes", Scotland, England
- 2015.07 Royal Society Summer Science Exhibition - "Stonehenge Underground" Interactive 3D Simulation 30 June - 5 July, 2015
- 2015 "Stonehenge Hidden Landscapes" British Science Festival, Birmingham, England
- 2013 VR and Simulation "Europe's Lost World" Orkney Science Festival, Orkney Islands, Scotland
- 2012.04...2012.07 Royal Society Summer Science Exhibition - Multitouch Table Application - Mesolithic Survival Simulation, 3-8 July 2012
- 2010.01...02 Dew Harrison, Eugene Ch'ng, Sarah Mount, Samantha Moore (2010.01): ShiftLife Alternate Life form - Interactive Digital Display, Wolverhampton Art Gallery
- 2009.07 Dew Harrison, Eugene Ch'ng, Sarah Mount, Samantha Moore (2009.07): ShiftLife Alternate Life form - Interactive Digital Display, Shift-Time Festival 4-5 July 2009
- 2006.12 Robert J. Stone, Eugene Ch'ng, Robert Guest, David White (2006.12): Serious Gaming Applications. Presentation to Boris Johnson at the Human Interface Technologies (HIT) Lab, Electronic Electrical and Computer Engineering, The University of Birmingham. 1st Dec. 2006.
- 2006.11 Robert J. Stone and Eugene Ch'ng (2006.11): Virtual Scylla - Using Gaming Technology to Predict the Effects of Climate Change. For the Society of Underwater Technology (SUT) Talk. Discovery Theatre, Plymouth Marine Aquarium.
- 2006.11 Robert J. Stone, Eugene Ch'ng, and David White (2006.11): Games & Digital Media Workshop, Engineering and Physical Sciences Research Council (EPSRC), London, UK. (Exhibition)
- 2006.07 Robert J. Stone, Rob Guest, and Eugene Ch'ng (2006): "Virtual Scylla", Plymouth Marine Aquarium, Plymouth, UK, 20 July 2006 (Exhibition).
- 2006.06 Eugene Ch'ng and Robert J. Stone (2006): "The Scylla: An Artificial Life Framework", Plymouth Royal Academy of Engineering Meeting, University of Plymouth, UK, 19 June 2006

- 2006.06 Eugene Ch'ng, Rob Guest, and Robert J. Stone (2006): "Serious Gaming", University Open Day. Electronic, Electrical and Computer Engineering, University of Birmingham, Birmingham, UK, 22 June 2006 (Exhibition).
- 2006.04 Eugene Ch'ng, David White, Robert, J. Stone (2006): "The Scylla", Research Open Day. Electronic, Electrical and Computer Engineering, University of Birmingham, Birmingham, UK, 27 April 2006 (Exhibition).
- 2006.02 Robert J. Stone, Eugene Ch'ng, Rob Guest (2006): "Serious Gaming", Digital Birmingham, Victoria Square Birmingham, UK, 14 February 2006 (Exhibition).
- 2004.04 Eugene Ch'ng and Robert J. Stone (2004): "Virtual Heritage: The Shotton River Valley", Research Open Day. Electronic, Electrical and Computer Engineering, University of Birmingham, Birmingham, UK, 27 April 2004 (Exhibition).
- 2001.03 Eugene Ch'ng and David Chek Ling Ngo (2001): "*Dynamic Symmetry in Screen Design*", Research and Development Exhibition, Multimedia University, Cyberjaya, Malaysia, 3 March 2001 (Exhibition).

Peer-Reviewed Journal Publications

1. **Ch'ng E.** (forthcoming) The First Original Copy And The Role Of Blockchain In The Reproduction Of Cultural Heritage, PRESENCE 27(1)
2. **Ch'ng E.**, Li Y., Cai S., Leow F.T. (forthcoming) The Effects of VR Environments on the Acceptance, Experience and Expectations of Cultural Heritage Learning, ACM Journal on Computing and Cultural Heritage
3. **Ch'ng E.**, Cai S., Leow F.T. and Zhang T. (forthcoming) Datasets from the Evaluation of the Adoption and Use of Digital Technologies in China Museums, Data in Brief
4. **Ch'ng E.**, S. Cai, T. Zhang and F.T. Leow (2019) Crowdsourcing 3D Cultural Heritage: Best Practice for Mass Photogrammetry, Journal of Cultural Heritage Management and Sustainable Development
5. Sun H.L., Chen D.B., He J.L., **Ch'ng E.** (2019) A Voting Approach to Uncover Multiple Influential Spreaders on Weighted Networks, Physica A: Statistical Mechanics and its Applications 519, p303-312
6. **Ch'ng E.**, Cai S, Leow FT, Zhang T (2018), Adoption and Use of Emerging Cultural Technology in China's Museums, Journal of Cultural Heritage
7. Sun H.L., **Ch'ng E.** and See S. (2018) Influential Spreaders in the Political Twitter Sphere of the 2013 Malaysian General Election, Industrial Management & Data Systems
8. **Ch'ng E.**, Cai Y and Thwaites H (2018) Guest Editors' Introduction, Special Issue on VR for Culture and Heritage, PRESENCE: Teleoperators & Virtual Environments 26(3) MIT Press
9. Li M., **Ch'ng E.**, Chong AYL, See S. (2018) Multi-Class Twitter Sentiment Classification with Emojis, Industrial Management & Data Systems
10. Woolley S., E. Gehlken, **E. Ch'ng** and T. Collins (2018) Virtual archaeology: how we achieved the first long-distance reconstruction of a cultural artefact, The Conversation, UK (Art and Culture), 28 Feb 2018
11. **Ch'ng E.**, Harrison D., Moore S. (2018) Shift-Life Interactive Art: Mixed-Reality Artificial Ecosystem Simulation, Special Issue on Arts, Aesthetics, and Performance in VR and Telepresence, PRESENCE: Teleoperators & Virtual Environments 26(2), MIT Press
12. Sun H.L., **Ch'ng E.**, Yong X., Garibaldi J.M., See S., Chen D.B. (2018) A fast community detection method in bipartite networks by distance dynamics, Physica A: Statistical Mechanics and its Applications 496, p108-120.
13. Sun H. L., **Ch'ng E.**, Yong X., Garibaldi J. M., See, S., & Chen, D. B. (2017). An improved game-theoretic approach to uncover overlapping communities. International Journal of Modern Physics C, 28(09), 1750112.
14. Li B., **Ch'ng E.**, Chong A.Y-L., Bao H. (2016) Predicting online e-marketplace sales performances: A big data approach, Computers & Industrial Engineering, 101 (2016): 565-571.
15. **Ch'ng E.** (2015) Crowd Behaviour Mining with Virtual Environments, Presence: Teleoperators and Virtual Environments 24(4). Invited article.

16. **Ch'ng E.** (2015) Social Information Landscapes: Automated Mapping of Large Multimodal, Longitudinal Social Networks, *Industrial Management & Data Systems*, Vol. 115 Iss: 9, pp.1724 – 1751
17. **Ch'ng E.** (2015). Virtual Heritage: Cultural Agents, Environments and Objects [Guest editor's introduction, Special Issue on Virtual Heritage: Cultural Agents, Environments and Objects]. *Presence: Teleoperators and Virtual Environments*, 24(3).
18. **Ch'ng E.** (2015). Guest Editor, Special Issue on Virtual Heritage: Cultural Agents, Environments and Objects. *Presence: Teleoperators and Virtual Environments*, 24(3).
19. Chong, AYL., **Ch'ng E.**, Li, B., Lee, F., (2015) Predicting consumer product demands via Big Data: the roles of online promotional marketing and online reviews, *International Journal of Production Research*
20. Chong, AYL., Ngai, E.M.M, **Ch'ng E.**, Li, B., Lee, F.(2015) Predicting online product sales via online reviews, sentiments, and promotion strategies: A big data architecture and neural network approach, *International Journal of Operations and Production Management*
21. **Ch'ng E.** (2015) The Bottom-Up Formation and Maintenance of the #FreeJahar Twitter Community, *Industrial Management & Data Systems*, Vol. 115. Iss:40, pp.612 - 624.
22. Lewis A., Woolley S.I., **Ch'ng E.**, Gehlken, R.E. (2015) Methods of Cuneiform Tablet Reconstruction in Virtual and Real World Environments, *Journal of Archaeological Science* 53 (January 2015), p. 156-165.
23. **Ch'ng E.** (2015) Local Interactions and the Emergence and Maintenance of a Twitter Small-World Network, *Social Networking* 4(2), p.33-40.
24. **Ch'ng E.**, Gaffney, V.L. and Hakvoort, G. (2014) Stigmergy in Comparative Settlement Choice and Palaeoenvironment Simulation, *Complexity* 21(3), p.59-73.
25. Gehlken RE, Collins T, Woolley SI, **Ch'ng E** (2014) Automated joining of cuneiform tablet fragments. *Nouv Assyriologiques Brèves Util [NABU]* 201.
26. V. Gaffney, S. Fitch, E. Ramsey, R. Yorston, E. **Ch'ng, E.** Baldwin, R. Bates, C. Gaffney, C. Ruggles, T. Sparrow, A. McMillan, D. Cowley, S. Fraser, C. Murray, H. Murray, E. Hopla and A. Howard (2013) 'Time and a Place: A luni-solar 'time-reckoner' from 8th millennium BC Scotland', *Internet Archaeology* 34
27. **Ch'ng, E.** (2013) Model Resolution in Complex Systems Simulation: Agent Preferences, Behaviour, Dynamics and N-Tiered Networks, *Simulation* 89(5), pp. 634 - 658.
28. Lewis, A. and **Ch'ng E.** (2012) A Photogrammetric Analysis of Cuneiform Tablets for the purpose of Digital Reconstruction, *International Journal of Cultural Heritage in the Digital Era, EuroMED Suppl.* 1(1), 49-53.
29. Hakvoort, G., **Ch'ng E.** and Beale, R. (2012) The Museum Environment: A Complex Community of Objects, People and Devices, *International Journal of Cultural Heritage in the Digital Era, EuroMED Suppl.* 1(1), 119-124.
30. **Ch'ng E.** (review) A Quadtree-based 3D Terrain Scene Management for Entity-Interaction in Agent-Based Ecology
31. **Ch'ng E.**, Chapman H., Gaffney C., Gaffney V., Murgatroyd P. and Neubauer W. (2011) From Sites to Landscapes: How Computing Technology Is Shaping Archaeological Practice. *IEEE Computer, Special Issue on Computational Archaeology* 44(7).
32. **Ch'ng E.** (2011) Spatially Realistic Positioning of Plants for Virtual Environments: Simple Biotic and Abiotic Interaction for Populating Terrains. *IEEE Computer Graphics and Applications* 99.
33. **Ch'ng E.** (2009) Experiential Archaeology: Is Virtual Time Travel Possible? *Journal of Cultural Heritage*, vol. 20, pp. 458-470, 2009.
34. **Ch'ng E.** (2009) An Efficient Segmentation Algorithm for Entity Interaction. *Biodiversity Informatics* 6: p. 5-17.
35. **Ch'ng E.** (2009). A Behavioural Agent Model for Synthesizing Vegetation Distribution Patterns on 3D Terrains. *Applied Artificial Intelligence, Taylor & Francis* 23(1): 78-102.
36. **Ch'ng E.** (2007). Modelling the Adaptability of Biological Systems. *The Open Cybernetics and Systemics Journal* 1: 13 - 20. Bentham Science Publishers, Ltd.
37. **Ch'ng E.** and Stone R.J., (2006) Enhancing Virtual Reality with Artificial Life: Reconstructing a Flooded European Mesolithic Landscape. *Presence: Teleoperators and Virtual Environments*, June 2006 Special Issue on Virtual Heritage, *Presence* 15 (3).

38. Ngo D.C.L. and **Ch'ng E.** (2005): "Screen Design with Dynamic Symmetry: A Discovery", Elsevier Science Journal: Computers in Human Behavior 21(2), pp. 307-322.
39. **Ch'ng E.** and Ngo D.C.L. (2003): "Screen Design: A Dynamic Symmetry Grid Based Approach", Elsevier Science Journal: Displays 24 (2003) 125-135.
40. Ngo D.C.L. and **Ch'ng E.** (2001): "Screen Design: Composing with Dynamic Symmetry ", Elsevier Science Journal: Displays 22 (2001) 115-124.

Peer-Reviewed Book and Book Chapters

1. **Ch'ng E.**, Li M., Chen Z., Lang J., See S. (2018) Multimodal Approaches in Analysing and Interpreting Big Social Media Data, In K.P. Seng et al. (eds) Multimodal Analytics for Next-Generation Big Data Technologies and Applications, Springer.
2. Gaffney C., Gaffney V., Neubauer W., **Ch'ng E.**, Goodchild H., Murgatroyd P., Sears G., Kirigin B., Milosevic A., and White R. (2016) Cityscapes without figures: geophysics, computing and the future of urban studies, in Federica Boschi ed., Looking to the Future, Caring for the Past: Preventive archaeology in Theory and Practice, Bononia University Press.
3. Fitch S., Gaffney V.L., **Ch'ng E.**, Ramsey E. and Buteux S. (forthcoming) Offshore Industry and Archaeology: A Creative Relationship. Syddansk Universitet.
4. **Ch'ng E.**, Gaffney V.L. and Chapman H. (2013) Visual Heritage in the Digital Age, Springer Cultural Computing Series.
5. **Ch'ng E.**, Gaffney V.L. and Chapman H. (2014), From Product to Process: New Directions in Digital Heritage, in Stephen Wu and Herminia Ding (eds.), Digital Heritage and Culture: Strategic and Implementation, World Scientific.
6. **Ch'ng E.**, Lewis A.W., Gherkin E. and Woolley S. (2013) A Theoretical Framework for Stigmergetic Reconstruction of Ancient Text, in Ch'ng E., Gaffney, V.L. and Chapman, H. (Eds.), Visual Heritage in the Digital Age, Springer Cultural Computing Series.
7. **Ch'ng E.** and Gaffney V.L. (2013) Simulation and Visualisation of Agent Survival and Settlement Behaviours in the Hunter-Gatherer Colonisation of Mesolithic Landscapes, in Ch'ng, E., Gaffney, V.L. and Chapman, H. (Eds.), Visual Heritage in the Digital Age, Springer Cultural Computing Series.
8. **Ch'ng E.** and Gaffney V.L. (2013) Seeing Things: Heritage Computing and the Arts and Humanities in Ch'ng, E., Gaffney, V.L. and Chapman, H. (Eds.), Visual Heritage in the Digital Age, Springer Cultural Computing Series.
9. **Ch'ng E.** (2013) The Mirror Between Two Worlds: 3D Surface Computing Interaction for Digital Objects and Environments, in Harrison, D. (ed.), Digital Media and Technologies for Virtual Artistic Spaces, IGI Global.
10. Harrison, D. and **Ch'ng E.** (2013) Can Duchampian and Darwinian Virtual Objects Ever Behave Themselves? in Harrison, D. (ed.), Digital Media and Technologies for Virtual Artistic Spaces, IGI Global.
11. Mehdi, Q., Elmaghraby, A., Anderson, D., **Ch'ng, E.** (2009) Proceedings of CGAMES'2009 USA. 14th International Conference on Computer Games: AI, Animation, Mobile, Interactive Multimedia, Educational and Serious Games, 29th July-2nd August 2009, Louisville, Kentucky, USA. University of Wolverhampton, School of Computing and Information Technology, 2009.
12. **Ch'ng E.** (2009) An Artificial Life-Based Vegetation Modelling Approach for Biodiversity Research. In R. Chiong (Ed.), Nature-Inspired informatics for Intelligent Applications and Knowledge Discovery: Implications in Business, Science and Engineering. Hershey, PA.: IGI Global.
13. Yeoh E.T. and **Ch'ng E.** (2003) Multimedia Programming Using Director Lingo, Prentice Hall 1st Edition 2002, 2nd Edition 2003.

Peer-Reviewed International Conference Proceedings

1. Lin W., Saleiro P., Milic-Frayling N. and **Ch'ng E.** (2018) Social Media Brand Engagement as a Proxy for E-commerce Activities: A Case Study of Sina Weibo and JD. In Web Intelligence, IEEE/WIC/ACM International Conference.
2. Cai S., **Ch'ng E.** and Li Y. (2018) A Comparison of the Capacities of VR and 360-Degree Video for Coordinating Memory in the Experience of Cultural Heritage, Digital Heritage 2018, 3rd International Congress & Expo, San Francisco, USA, 26-30 October 2018
3. Li Y., **Ch'ng E.**, S. Cai and See S. (2018) Multiuser Interaction with Hybrid VR and AR for Cultural Heritage Objects, Digital Heritage 2018, 3rd International Congress & Expo, San Francisco, USA, 26-30 October 2018
4. **Ch'ng E.** (2018) Sharing Cultural Heritage with Virtual Reality Technology [transcript of keynote speech],

5. Proceedings of the 1st International and Interdisciplinary Conference on Digital Environments for Education, Arts and Heritage (EARTH2018), Springer. Brixen, Italy, 5-6 July, 2018.
6. **Ch'ng E.** (2018) Crowdsourcing for 3D Cultural Heritage for George Town UNESCO World Heritage Site, International Conference on Managing Urban Cultural Heritage, 10th year Celebration of the UNESCO WHS. 1-4 Oct. 2018, George Town, Penang, Malaysia.
7. **Ch'ng E.**, Yang Z., See S., (2017) Real-Time GPU-Accelerated Social Media Sentiment Processing and Visualization, The 21st International Symposium on Distributed Simulation and Real Time Applications (DS-RT) October 18-20, 2017, Rome, Italy.
8. Leow F.T., **Ch'ng E.**, Zhang T., Cai S. and See S. (2017) "In-The-Wild" Observation and Evaluation of a Chinese Heritage VR Environment with the HTC VIVE, International Conference on Virtual Systems and Multimedia VSMM 2017, 31 Oct - 2 Nov 2017, Dublin, Ireland.
9. E. Gehlken, T. Collins, S.I. Woolley, L. Hanes, A. Lewis, L.H. Munoz and **E. Ch'ng** (2017) Searching the Past in the Future - Joining Cuneiform Tablet Fragments in Virtual Collections, 63rd Rencontre Assyriologique Internationale, Marburg, Germany, July 2017.
10. Collins T., Woolley S.I., Gehlken R.E. and **Ch'ng E.** (2017) Computational Aspects of Model Acquisition and Join Geometry for the Virtual Reconstruction of the Atrahasis Cuneiform Tablet, International Conference on Virtual Systems and Multimedia VSMM 2017, 31 Oct - 2 Nov 2017, Dublin, Ireland.
11. Woolley SI, **Ch'ng E.**, Hernandez-Munoz L, Gehlken E, Collins T, Nash D, Lewis A and Hanes L (2017) A Collaborative Artefact Reconstruction Environment, British Computer Society HCI, 3-6 July 2017, Sunderland UK
12. Fu X, **Ch'ng E.**, Aickelin U, See S (2017) CRNN: A Joint Neural Network for Redundancies Detection, 3rd IEEE Conference on Smart Computing, SmartComp'17, Hong Kong 29-31 May 2017
13. A.S. Wilson, T. Sparrow, A. Murgatroyd, E. Faber, V. Gaffney, C. Gaffney, R. Bates, **E. Ch'ng**, R. Cuttler, G. Sears (2017) Curious Travellers - repurposing imagery to manage and interpret threatened monuments, sites and landscapes, Global Archaeology - Threats & Solutions ClfA 2017 Annual Conference, University of Newcastle, 19-21 April 2017
14. H.L. Sun, **E. Ch'ng**, X. Yong, J. Garibaldi and S. See (2016) A Game-theoretic Approach to Uncover Overlapping Communities via Complex Networks, 2017 9th IEEE International Conference on Communication Software and Networks (ICCSN 2017), May 6-8, 2017 in Guangzhou, China.
15. **Ch'ng E.**, Gaffney VL, Garwood P, Chapman H, Bates R, and Neubauer W (2016) Merging the Real with the Virtual: Crowd Behaviour Mining with Virtual Environments, 22nd Int' Conference on Virtual Systems & Multimedia VSMM2017, 17-21 Oct. Kuala Lumpur, Malaysia.
16. Gaffney VL, Bates R, **Ch'ng E.**, Cuttler R, Gaffney C and Wilson A (2016) BradPhys to BradViz! or From Archaeological Science to Heritage Science? Keynote paper. 22nd Int' Conference on Virtual Systems & Multimedia VSMM2017, 17-21 Oct. Kuala Lumpur, Malaysia.
17. Pike M. and **Ch'ng E.** (2016) Evaluating Virtual Reality Experience and Performance: A Brain based Approach, ACM Siggraph VRCAI 2016, 1-4 Dec., Zhuhai, China.
18. Wu Z., Tang L., **Ch'ng E.**, Tang S., Zheng W., Chen C. (2016) BIM Based Virtual Reality Environment for Energy Consuming by End-users, ConVR2016, Construction in VR 2016, Hong Kong
19. Li M, **Ch'ng E.**, Chong AYL, See S (2016) Twitter Sentiment Analysis of the 2016 Presidential Election Using an Emoji Training Heuristic, Applied Informatics and Technology Innovation Conference (AITIC 2016), Newcastle, Australia, 22-24 Nov. 2016.
20. Li M, **Ch'ng E.**, Chong AYL, See S (2016) The New Eye of Smart City Novel Citizen Sentiment Analysis in Twitter, Fifth International Conference on Audio, Language and Image Processing, ICALIP 2016, Shanghai China, 11-12 July, 2016.
21. Gehlken R.E., Collins T., Woolley SI, **Ch'ng E.**, Hanes L, Hernandez-Munoz L., and Lewis A. (2016) From Uruk to Ur: Automated Matching of Virtual Tablet Fragments, Rencontre Assyriologique Internationale, Philadelphia, 11-15, July 2016
22. Li M., **Ch'ng E.**, Chong A.Y.L., and S. See (2016), The New Eye of Smart City: Novel Citizen Sentiment Analysis in Twitter, 5th International Conference on Audio, Language and Image Processing, Shanghai, China from 11-12 July, 2016.
23. Cheshmehzangi A., **Ch'ng E.**, Adkins D.A. (2015) Capturing the Realities through Digital Preservation and Scanning Techniques: The case of ZouMaTang Ancient Village, China. REHAB2015, 2nd International Conference on Preservation, Maintenance and Rehabilitation of Historic Buildings and Structures, 22-24 July 2015, Porto, Portugal.
24. Li M., Zhai S., **Ch'ng E.**, Li B. and See S. (2015) Monitoring Alcohol Consumption and Online Sentiment Using Big Data, Special Session on Big Data in the Digital Economy, the Ninth International Conference on Operations and Supply Chain Management, Ningbo, China, July 13-15
25. Fu X., **Ch'ng E.** and See S. (2015) Large Scale First Story Detection On Social Media Contexts Via Incremental Term Frequency Inverse Document Frequency Based Statistical Approach, Special Session on Big Data in the Digital

- Economy, The Ninth International Conference on Operations and Supply Chain Management, Ningbo, China, July 13-15
26. Sun H.L., **Ch'ng E.**, See S. (2015) A Proposition for Visualisation of Evolving Virtual Communities as Large Social Networks, Special Session on Big Data in the Digital Economy, The Ninth International Conference on Operations and Supply Chain Management, Ningbo, China, July 13-15
 27. Li B., Liu M.J., Chong A.Y.L., Lee F. and **Ch'ng E.** (2015) The Role of Service Recovery in Negative Word of Mouth Communication, Special Session on Big Data in the Digital Economy, The Ninth International Conference on Operations and Supply Chain Management, Ningbo, China, July 13-15
 28. Li M., **Ch'ng E.**, Li B. and Zhai S. (2015) Social-Cultural Monitoring of Smart Cities using Big Data Methods: Alcohol Consumption and Sentiments, 3rd International Conference on Smart Sustainable City and Big Data July 27-28, 2015, Shanghai, China
 29. Fu, Xinyu, **Ch'ng E.**, Aickelin U. and Zhang L. (2015) An Improved System for Sentence-Level Novelty Detection in Textual Streams, 3rd International Conference on Smart Sustainable City and Big Data July 27-28, 2015, Shanghai, China
 30. Li B., Chong A.Y.L., **Ch'ng E.** (2015), "What Triggers Sharing in Viral Marketing? The Role of Emotion and Social Feature". Pacific Asia Conference on Information Systems (PACIS) 2015, Singapore.
 31. **Ch'ng E.** and Cooke N. (2015) User Study on 3D Multitouch, Multimodal Interaction on Surface Computing, 17th International Conference on Human Computer Interaction (HCI 2015), 2-7 August, Los Angeles, CA, USA.
 32. **Ch'ng E.** (2014) The Value of Using Big Data Technology in Computational Social Science, The 3rd ASE Big Data Science Conference, 4-7 August 2014, Tsinghua University Beijing China.
 33. **Ch'ng E.**, Woolley S.I., Munoz L.H., Lewis A., Gehlken E. and Collins T. (2014) The Development of a Collaborative Virtual Environment for 3D Reconstruction of Cuneiform Tablets, 20th International Conference on Virtual Systems and Multimedia, VSMM 2014, Hong Kong, 9-12 December 2014.
 34. Collins T., Woolley S.I., **Ch'ng E.**, Gehlken E., Lewis A. and Munoz L.H. (2014) Computer-Assisted Reconstruction of Virtual Fragmented Cuneiform Tablets, 20th International Conference on Virtual Systems and Multimedia, VSMM 2014, Hong Kong, 9-12 December 2014.
 35. Yusof H., **Ch'ng E.** and Baber C. (2013) Human Sensing for Tabletop Entertainment System, International Conference on Context-Aware Systems and Applications, ICCASA 2013, Phu Quoc, Vietnam, 25-26 November 2013. Selected for Springer LNICST Series vol. 128.
 36. Hakvoort G., Beale R. and **Ch'ng E.** (2013) Connect and Connectivity: Revealing a World of Interactions, ACM SIGCHI, CHI2013, Paris, France, 27 April - 2 May, 2013.
 37. **Ch'ng E.** (2013) Digital Heritage Tourism: Reconfiguring the Visitor Experience in Heritage Sites, Museums and Architecture in the Era of Pervasive Computing, Percorsi creativi di turismo urbano (Creative Paths of Urban Tourism) Conference, Catania, 22-24 September 2011
 38. **Ch'ng E.** (2012) Macro and Micro Environment for Diversity of Behaviour in Artificial Life Simulation, Artificial Life Session, The 6th International Conference on Soft Computing and Intelligent Systems, The 13th International Symposium on Advanced Intelligent Systems, 20-24 November 2012, Kobe, Japan.
 39. **Ch'ng E.** (2012) New Ways of Accessing Information Spaces Using 3D Multitouch Tables. Proceedings of the Art, Design and Virtual Worlds Conference, Cyberworlds2012, Darmstadt, Germany, 25-27 September 2012
 40. Harrison D. and **Ch'ng E.** (2012). Duchampian and Darwinian Virtual Objects: how well can they behave? Proceedings of the Art, Design and Virtual Worlds Conference, Cyberworlds2012, Darmstadt, Germany, 25-27 September 2012
 41. D. Harrison, **E. Ch'ng**, S. Mount, and S. Moore (2009) Experiencing the Big Idea: Shift-Life Alternate Biology and Mixed Reality Interface, 8th International Conference on Digital Arts and Culture, DAC'09 12-15 December 2009, Irvine, California, USA.
 42. **Ch'ng E.** (2009) Ground Cover and Vegetation in Level Editors: Learning from Ecological Modelling, 14th International Conference on Computer Games: AI, Animation, Mobile, Interactive Multimedia, Educational & Serious Games, Louisville, Kentucky, USA.
 43. **Ch'ng E.** (2007) Using Games Engines for Archaeological Visualisation: Recreating Lost Worlds, CGames '07, The 11th International Conference on Computer Games: AI, Animation, Mobile, Educational & Serious Games, La Rochelle, France. 21-23 November 2007.
 44. Robinson P., Bell M., Gittus J., Skates G., Stone B. and **Ch'ng E.** (2007) Sustainability for the Next Generation of Engineers: A University of Plymouth Case Study, SUSTAIN'07, The 5th International Conference on Design and Manufacture for Sustainable Development, Loughborough 10-11th July 2007.

45. **Ch'ng E.** and Stone R.J., (2006) 3D Archaeological Reconstruction and Visualisation: An Artificial Life Model for Determining Vegetation Dispersal Patterns in Ancient Landscapes. IEEE International Conference on Computer Graphics, Imaging and Vision, CGiV'06, 25-28 July 2006, Sydney, Australia.
46. Stone, R.J., Guest, R., **Ch'ng, E.**, McCririe, C., Collis, C., Mannur, R., & Rehmi, I. (2006). Serious Gaming Technologies Support Human Factors Investigations of Advanced Interfaces for Semi-Autonomous Vehicles. In Proceedings of Virtual Media for Military Applications; NATO RTA HFM-136 Workshop; US Military Academy; West Point, NY; 13-15 June.
47. **Ch'ng E.**, Stone R.J., Arvanitis T.N., (2005) Evaluating Artificial Life-based Vegetation Dynamics in the Context of a Virtual Reality Representation of Ancient Landscapes. Virtual Systems and Multimedia, VSMM2005. Ghent, Belgium Oct 3-6, 2005.
48. Khor K.C., Lieong S.K. and **Ch'ng E.** (2005), Efficient Information Visualization for Intrusion Detection in Web Applications, IEEE International Conference on Computer Graphics, Imaging and Vision, CGiV'05, 26-29 July 2005, Beijing, China.
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Certificates and Courses

- 2008.09 MPI Programming Course, University of Birmingham.
- 2006.09 DECOI2006 International Summer School on Collective Intelligence and Evolution
- 2002.06 Distributed Applications with Visual Basic
- 2002.05 Windows 2000 Accelerated
- 2002.05 Mastering Visual Basic Development
- 2002.04 Mastering Visual Basic Enterprise Development
- 2001.05 Web Applications Development with Allaire (Now Macromedia) ColdFusion
- 2000.09 Macromedia Flash and Dreamweaver Faculty Training
- 2003.03 Virtual Reality for the Built Environment
- 2002.10 Communications Skills: Lecturing Large Classes
- 1998.06 CAD in the Architectural Process
- 1995.11 Autodesk AutoCAD for Architecture
- 1988.11 Speed Reading & Learning, Kenneth Learning Centre