

Welcome to 13th Asia Pacific Conference on Vision

Dear APCV 2017 participants,

On behalf of the organizing committee, I am delighted to welcome you all to the 13th APCV, in Tainan, the birthplace of Taiwan. This is the second Taiwan has hosted APCV, and we hope all of you have a good stay.

Following previous events, the APCV2017 committees have put together a full and exciting meeting this year, with over 197 presentations, including 3 keynote speakers, 6 invited symposia, 4 self-organized symposia, 6 oral sessions, 3 poster sessions, 1 public lecture, and 1 public activity.

As vision scientists, we are obligated to share our work, not only with our professional colleagues, but with the broader public. APCV2017 local committees have worked with other institutions to organize two free events, public lectures, and Escape Room, a public event to promote vision science. Furthermore, 2 of our symposia related to public issues will also be open to the public.

The program could not have been made without the help of many people. I appreciate all the people who proposed symposia, submitted abstracts, and who are attending the conference. I sincerely hope this conference will be as successful as the previous APCVs in Australia, Singapore, Japan, Korea, and China. We also sincerely hope that all APCV2017 participants enjoy both the scientific sessions and social events.

Pi-Chun Huang

Chair of APCV2017 Organizing committee

Department of Psychology, National Cheng Kung University

Board, Review Committee and Staff

APCV Council

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Mowei Shen	Department of Psychology, Zhejiang University

APCV2017 Local Organizing Committee

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Program Committee

Chien-Chung Chen	National Taiwan University, Taiwan
Su-Ling Yeh	National Taiwan University, Taiwan

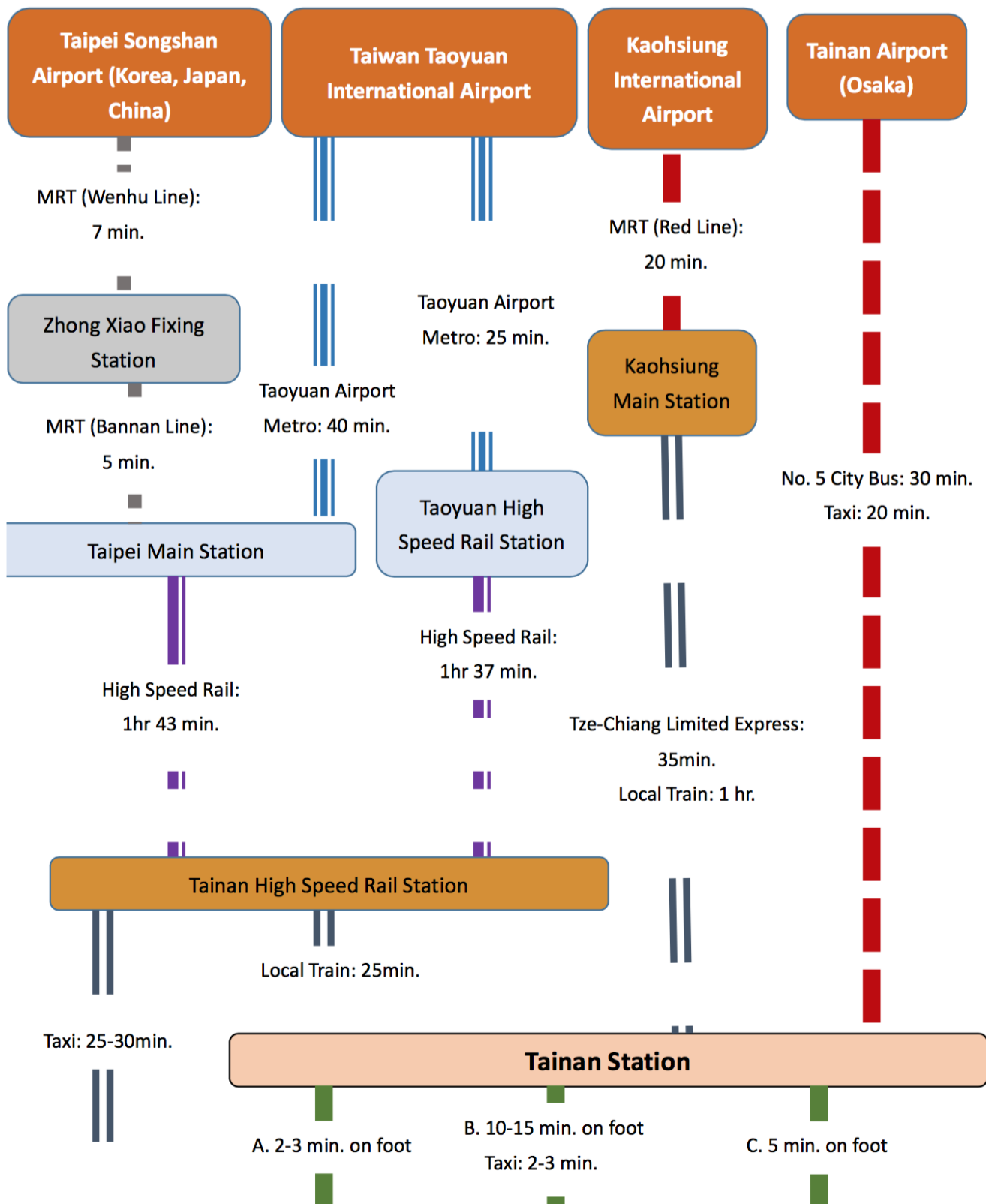
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Conference Secretariat

Hsiao-Chu Chen, Fang-Ting Kuo, Ting-Jui Yeh, and Ren-Yi Lin (National Cheng Kung University)

Transportation Information

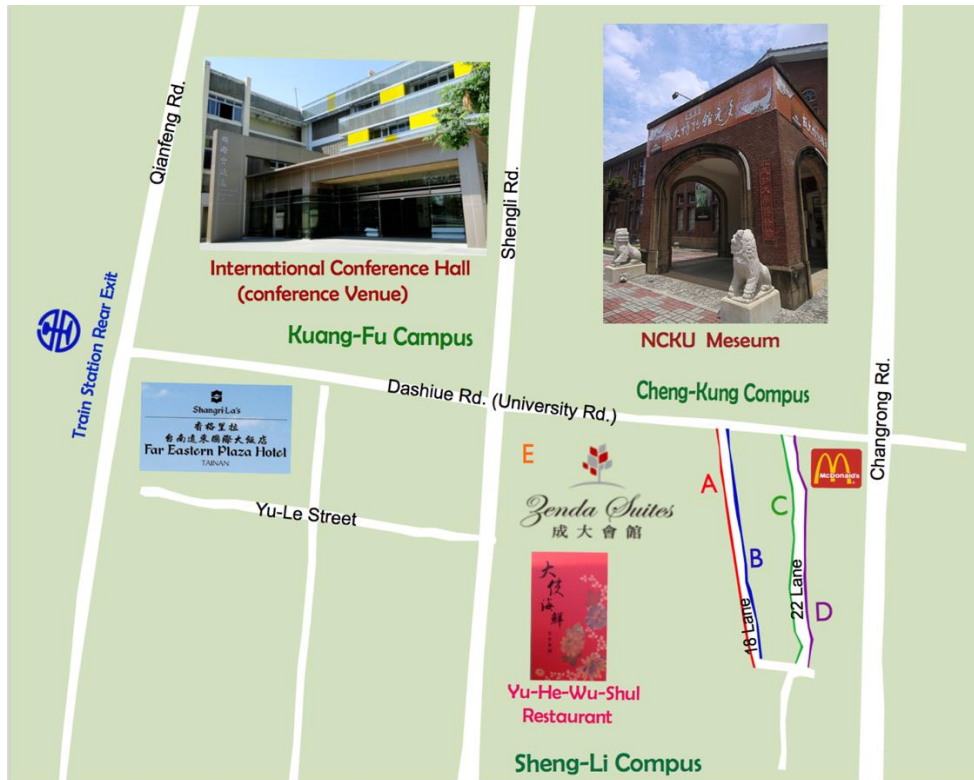


- A. International Conference Room in Kuang-Fu Campus, Cheng Kung University**
- B. Chong-Hua Hall in Li-Lsing Campus, Cheng Kung University**
- C. Hotel Tainan (1 Cheng Kung Road, Tainan 70050, Taiwan)**

Area Map



Restaurant Guide



Region	Restaurant Name	Style	Region	Restaurant Name	Style
A	Delicious Opera 綠橄欖	Italian Food	E	大使雨荷舞水餐廳 Ambassador Yuhe Dancing Water Restaurant	Chinese food
	South of the Border 國境之南	Coffee shop		陶板屋 Terracotta House	Japanese food
	Villaggio Pasta 義式坊	Italian Food		21世紀風味館 Museum of the 21st century flavor	Fast food
	Spot Life	Pizza		品田牧場 Pintain ranch	Japanese food
	尹賀日本料理	Japanese food		異人館咖啡部屋 Ezkin coffee	Chinese food
B	町之井	Japanese food			
	Noah's Ark 諾亞方舟	Steak house			
	Belle Vie 食尚坊	Italian Food			
	十八巷花園餐廳	Steak house			
C	is義式餐廳 La Mia Bella Case	Italian Food			
	Corner	Steak house			
	Yellow Bee	Hamburger			
	貓吐司	Sandwich			
D	Keukenhof Garden 庫肯花園	Italian Food			
	Kaffe @ Home	Coffee shop			
	Rainbow Castle 彩虹城堡	Sandwich			
	London Pie 倫敦派	Sandwich			
	New New	Italian Food			
	Shark Bites Toast	Brunch			
	McDonald's	Fast food			

Attendee Resources

Abstract Book

A printed Abstract book is no longer provided to each attendee. You can download an electronic copy of each abstract in PDF format from the APCV website or through the **APCV2017** app.

ATM

An ATM is located in the post office near the conference hall.

Copying and Printing

Copying and printing are not provided by the APCV. There are several printing services around the campus. Please inquire the registration desk.

Lost-and-Found

The lost-and-found is located at the APCV registration desk.

Internet Access

APCV provides free wireless Internet access in the meeting areas, including Lecture Room 1, Lecture Room 2, and the multifunction room. Please connect to **TANetRoaming**.

Username: **APCV2017**

Password: **ncku46545**

Parking

Parking space is very limited on the campus. We will provide 10 parking licenses for attendees. Please contact the registration desk for more information. There is a paid parking lot near the Zanda suite.

Restroom

The restroom located near the 4th meeting room is an all-gender restroom.

Business Meeting

The APCV2017 Business Meeting is in Lecture Room 1 on Monday, July 17, from 12:15 p.m. to 1:45 pm. All APCV members are encouraged to attend. This is your opportunity to hear about APCV, ask questions, and give feedback.

Food Service/Catering

Coffee, tea, and refreshments are served during each coffee break timeslot. Lunch is available on Friday, Saturday, and Sunday in the multifunction room. Your APCV registration also includes a reception. The

Opening Night Reception is on Friday night, at the NCKU History Museum. Attendees may purchase a Day Pass, which will allow their guests to attend the dining and social events. See “APCV Day Pass” for details.

APCV Day Pass

The APCV Day Pass will allow your family and friends to enjoy some of our scientific and social events. For NTD 2,000, your travel companions can attend the day’s scientific sessions, reception, coffee breaks, and the lunch. Passes are only NTD 1,000 for each additional family member. To purchase a Day Pass, please visit the APCV Registration desk on-site. Passes will be required for entrance to all social events and meals.

Guests

Guests are allowed complimentary entry into one APCV session to see the poster session or talk of the person they are guests of. Guests must register at the registration desk upon arrival and be accompanied by a APCV attendee. Guests must wear their guest badges for entrance into a session. To attend social functions, including the reception, coffee breaks, or lunch, guests will need to purchase a Day Pass, available at the APCV Registration Desk.

Photographing/Videotaping Presentations

Unless otherwise noted, photographing or videotaping poster sessions and talks is permitted at APCV. Presenters who do NOT wish to be photographed or videotaped should indicate this by displaying our “No videos and photos” image on their poster or on the title slide at the beginning of their talk. You can also pick up a printed version of the image at the registration desk.

Local Transportation

Public transportation

Six main and branch lines of the city bus and Taiwan Tourist Shuttles can provide you fun and convenient trips in Tainan. You can download traveling apps for more information.

Ticket Price: NTD18 per ride

Taxi

In the downtown area, you can hail a taxi by standing at a curb and raising your hand. Available taxis will pull over and let you in. You can also arrange for taxi service by making a domestic call or asking your hotel to write your destination’s address in Chinese to show to a taxi driver. Fares are determined by the meter: NT\$ 85 for the first 1.5 km and NT\$ 5 for every 250 m afterward. Most taxi companies only accept cash payments, but some do accept credit cards.

Disclaimer

The Program Committee reserves the right to change the meeting program at any time without notice. Please note that this program was correct at the time of printing.

Public Events

APCV2017 Public lecture

Dr. Gert Jakobus van Tonder



More than a blank: The shape of Empty Space in Japanese Gardens

Host: Prof. Jong-Tsun Huang, China Medical University

Thursday, July 13, 15:00 – 17:00

Chong-Hua Hall, Li-Hsing Campus, National Cheng Kung University

A founding ideal of garden design in East Asia over the past two millennia has been to capture the 'essence of nature'. In Japan, this art form was influenced by the aesthetic of Zen Buddhism, achieving an unprecedented level of abstraction and minimalism. Today, these gardens remain as examples of how the essential visual signature of complex natural forms can be captured and presented in a sparse and stylized manner. As a consequence, a significant proportion of space in such gardens is left 'empty'. The shape of empty spaces compliments the forms of rocks, trees and moss to convey naturalistic structure. In our everyday visual experience of the world, we hardly concentrate on looking at the shape of empty space, partly because object form predominates the content of perception. Sharing some insights from more than twenty years working in Japanese gardens, the presenter here shows how a bit of mental origami can guide an understanding of these otherwise enigmatic empty spaces.

Co-organizers:

Colleague Social Science, National Cheng Kung University
Art Center, National Cheng Kung University

An Incredible Adventure of Our Senses - Escape Room for learning human mind

To promote visual science to the public, a free Room Escape game with the theme of the Japanese Tanabata Festival will be held in Tainan during APCV. The public can experience a physically adventure game while exploring the wonderland of human mind. We have reserved some slots for APCV participants to also experience this physically adventure game. This game is free of charge and reservation is required. Participants must register as a group of 4 – 6 people. Places are limited and will be allocated on a first-come-first-served basis!



When is Room Escape?

13-18 July 2017 (10:00am - 9:00pm every day)
Length of time: 1 hour per session

Where is Room Escape?

2F, South Block, College of Social Science, Li-Hsing Campus, National Cheng-Kung University (Enter from Xiaodong Rd. Between NCKU hospital and the magic school of green technologies)

Registration website

<https://apcvonly.simplybook.me/v2/>

Event website

<https://www.facebook.com/RoomEscapeAPCV2017/>

Who designs this Room Escape?

This project is initiated by three scientists: Drs. Chia-huei Tseng, Hsin-Ni Ho, and Junji Watanabe.

Organizer:

Psychology Department, National Cheng-Kung University, Taiwan
Innovative Shitsuakan Science and Technology Research group, Japan
The JPS committee for developing teaching materials for high school students

Co-organizer:

Shioiri Vision Laboratory, Tohoku University, Japan
Asia Pacific Conference on Vision (APCV) 2017
Special thanks to Sakamoto laboratory, The university of Electro-Communications, for providing display materials

Banquet and Culture event

Date & Time: 7/16 (Sun) 17:20-21:00pm

Itinerary

17:20	Gathering at Banyan Garden at Campus
17:30 - 17:40	Drive to Downtown
17:40 - 18:40	Historic Walking Tour
19:00 - 19:30	Traditional glove puppetry show
19:20 - 21:00	Taiwanese-style banquet
21:00	Drive back to APCV venue



Description

The APCV2017 Organization Committee has prepared a banquet for you to get acquainted with other participants and experience Taiwanese culture during the conference. The banquet will be held at Chendejyu Shrine, a historic site built in 1664. It was the residence of an official until 1713, when it was changed into the earliest ancestral shrine in the Tainan area.

For the historic walking tour, there are three different routes (East, West and South). Our attendees will be randomly assigned to one of the routes, and the English-speaking tour guides will lead us slowly around the cultural capital in Taiwan. The four groups will meet back at Chendejyu Shrine for a traditional glove puppetry show and banquet. A traditional Taiwanese-style banquet, called roadside banquet (literally 'to arrange tables') will be prepared for our guests.

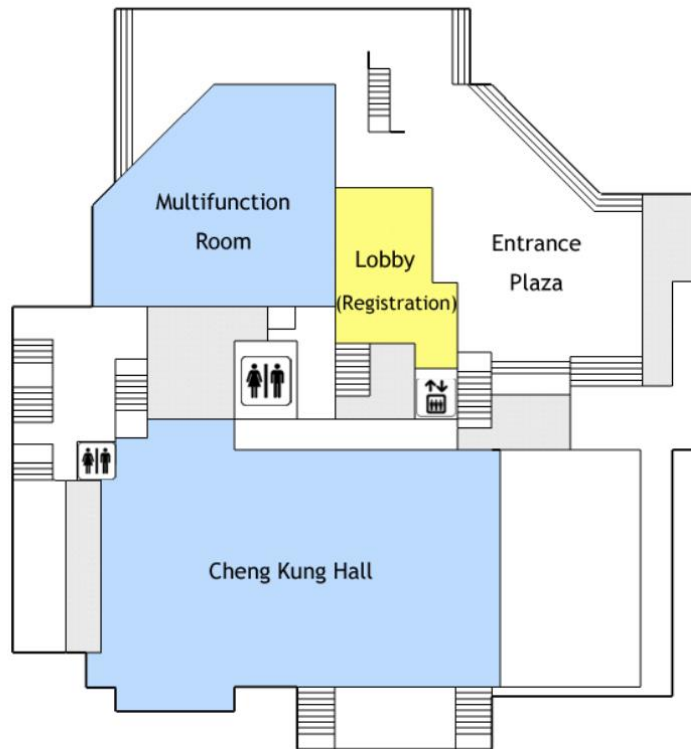
Space will be limited. Don't miss your chance to experience Tainan culture. If you missed the first registration, you can still register at the registration desk.

Price / person: NTD 2000

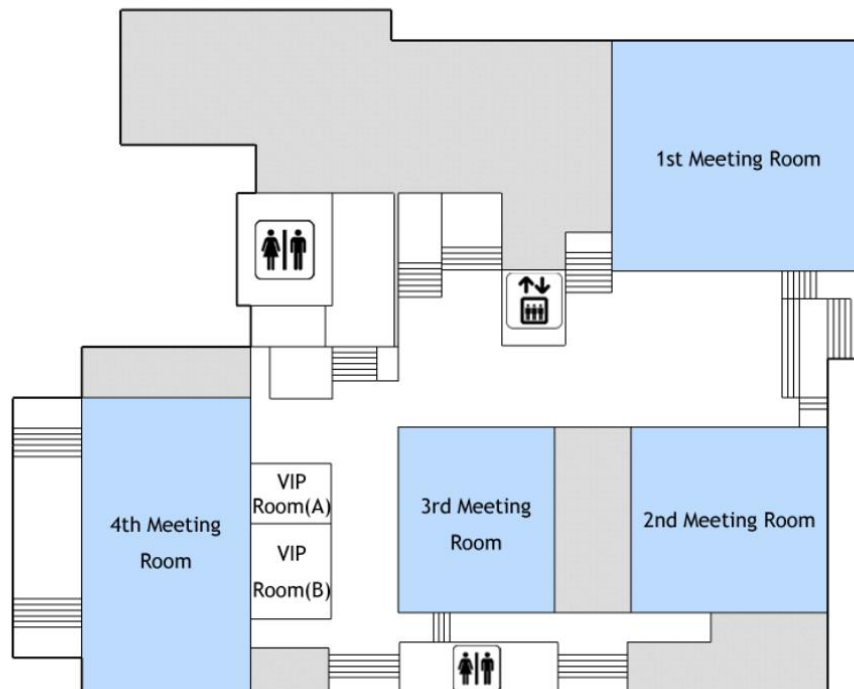
The banquet charge includes shuttle buses, a short, guided walking tour for nearby historic sites, roadside banquet, and the traditional glove puppetry show.

Conference Hall Floorplan

◆ Floor Plan – International Conference Hall (1st Floor)



◆ Floor Plan – National Conference Hall (Ground Floor)



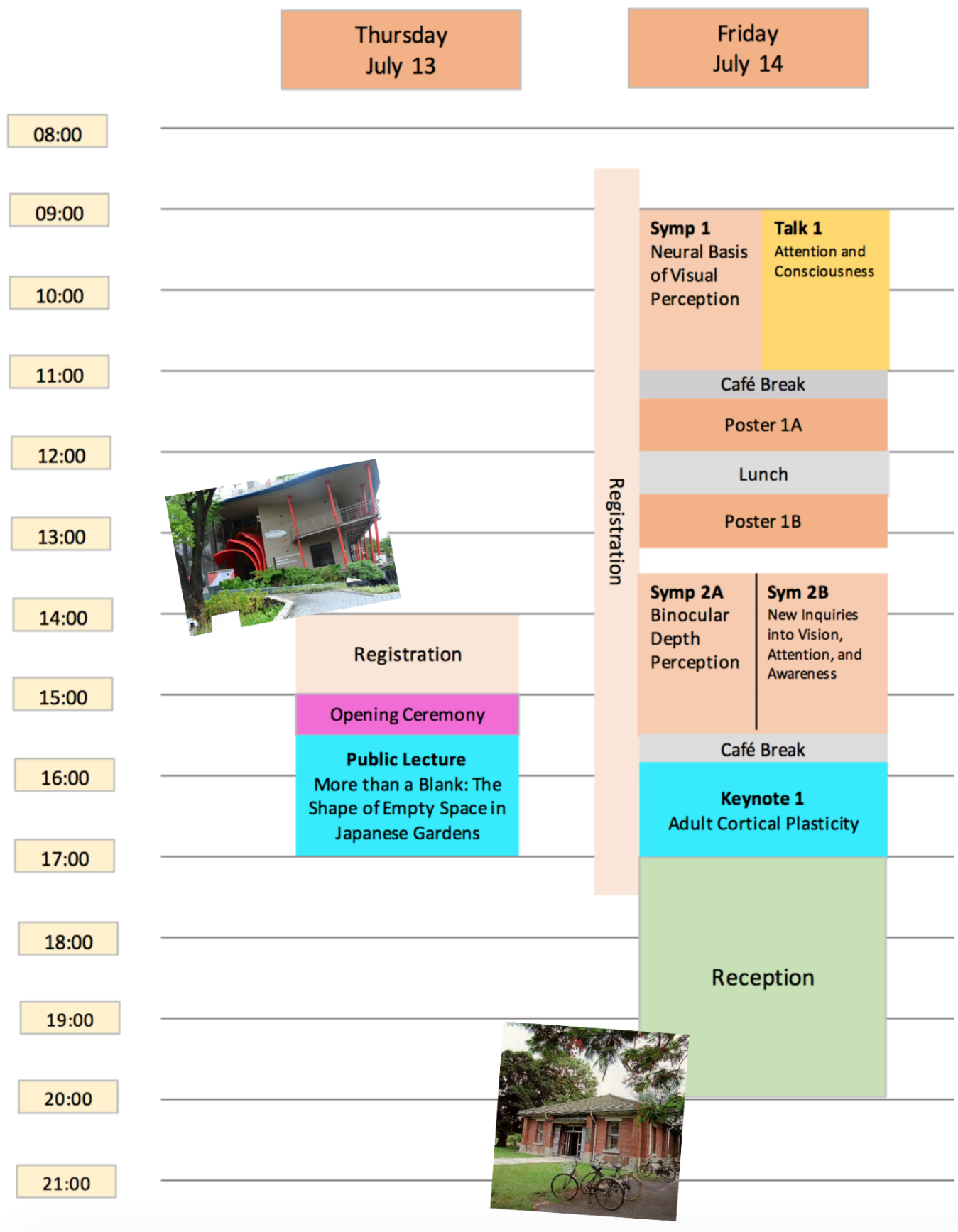
Guideline for Presenters

Oral presentation

- For regular papers (neither symposium nor keynote): Speakers should prepare slides for a 15 minute slot, including 3 minutes for discussion and Q&A.
- For symposium speakers: contact the organizer of each symposium for details.
- Bring your own laptop for the slide presentation, or contact the APCV2017 organizing committee in advance to arrange for a laptop for your presentation.
- An analog VGA (D-Sub 15 pin) connector is available. Bring your interface adapter, if necessary. Bring all of your backup files for the slide presentation, including movies, in a USB memory device or CD/DVD just in case.
- The screen resolution depends on the laptop. Please check the connection in each room between sessions. We have no slide-preparation room.
- Remember that additional setup delays will cut into your presentation time. Two oral sessions are running in parallel, and strict time control will be required.

Poster Presentation

- Poster-board size: 90cm (width) x 150 cm (height) at a maximum. However, the actual usable board space is 86 cm x 146 cm.
- All posters for each day should be put up starting in the morning (no later than 10:30AM) to the evening (no earlier than 5:00PM), regardless of your assigned duty hours. Note that the poster hall closes at 6:00PM.
- No AC power outlet is available in the poster hall. Please fully charge your demo laptop before duty hours. Chairs are available for each poster in the hall.



Schedule-at-a-glance

Saturday
July 15

Sunday
July 16

Monday
July 17

Registration

Symp 3
Attractiveness and Bodily Interactions at Implicit Levels - Reading Social Evaluation from Eyes and/or Bodily Interactions

Talk 3
Neural Mechanisms

Café Break

Poster 2A

Lunch

Poster 2B

Symp 4
Stopping the Rise of Myopia in Asia

Talk 4
Space, Time and Motion

Café Break

Keynote 2
Understanding Human Vision with Fast Periodic Stimulation

Registration

Symp 5A
Contemporary Questions in the Psychophysics of Spatial Vision

Symp 5B
Understanding Individual Differences in Eye Movement Patterns

Café Break

Poster 3A

Lunch

Poster 3B

Symp 6
A New World in Primate Vision Research: The Marmoset as a Model Animal

Talk 6
Objects and Form

Café Break

Keynote 3
Object Recognition in Inferotemporal Cortex: from

Registration

Symp 7
Artificial Vision

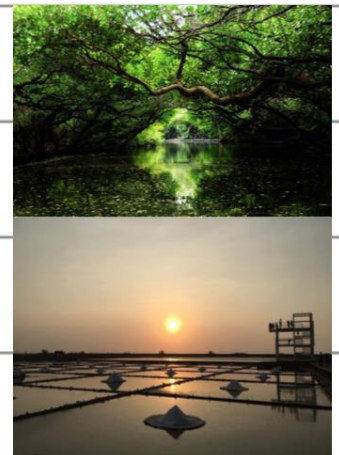
Talk 7
Face Perception

Café Break

Talk 8
Color and Surface

Symp 8
Visual Science and Its Outreach to General Public

Business Meeting



Tour and Banquet



Meeting Schedule

Thursday, July 13

14:00 - 15:00	Registration	Chong-Hua Hall
15:00 - 15:30	Opening Ceremony	Chong-Hua Hall
15:30 - 17:00	Public Lecture More than a blank: The shape of Empty Space in Japanese Gardens	Chong-Hua Hall

Friday, July 14

08:30 - 17:30	Registration	Multifunction Room
09:00 - 11:00	Symp 1 Neural Basis of Visual Perception	1st Lecture Room
	Talk1 Attention and Consciousness	2nd Lecture Room
11:00 - 11:15	Café Break	Multifunction Room
11:15 - 12:00	Poster 1A	Multifunction Room
12:00 - 12:30	Lunch	Multifunction Room
12:30 - 13:15	Poster 1B	Multifunction Room
13:30 - 15:30	Symp 2A Binocular Depth Perception	1st Lecture Room
	Symp 2B: New Inquiries into Vision, Attention, and Awareness	2nd Lecture Room
15:30 - 15:50	Café Break	Multifunction Room
15:50 - 17:00	Keynote 1 Adult Cortical Plasticity	1st Lecture Room
17:00 - 20:00	Reception	NCKU History Museum

Saturday, July 15

08:30 - 17:00	Registration	Multifunction Room
09:00 - 11:00	Symp 3 Attractiveness and Bodily Interactions at Implicit Levels - Reading Social Evaluation from Eyes and/or Bodily Interactions	1st Lecture Room
	Talk 3 Neural Mechanisms	2nd Lecture Room
11:00 - 11:15	Café Break	Multifunction Room
11:15 - 12:00	Poster 2A	Multifunction Room
12:00 - 12:30	Lunch	Multifunction Room
12:30 - 13:15	Poster 2B	Multifunction Room
13:30 - 15:30	Symp 4 Stopping The Rise of Myopia in Asia	1st Lecture Room
	Talk 4 Space, Time and Motion	2nd Lecture Room
15:30 - 15:50	Café Break	Multifunction Room
15:50 - 17:00	Keynote 2 Understanding Human Vision with Fast Periodic Stimulation	1st Lecture Room

Sunday, July 16

08:30 - 17:30	Registration	Multifunction Room
09:00 - 11:00	Symp 5A Contemporary Questions in the Psychophysics of Spatial Vision	1st Lecture Room
	Symp 5B Understanding Individual Differences in Eye Movement Patterns	2nd Lecture Room
11:00 - 11:15	Café Break	Multifunction Room
11:15 - 12:00	Poster 3A	Multifunction Room
12:00 - 12:30	Lunch	Multifunction Room
12:30 - 13:15	Poster 3B	Multifunction Room
13:30 - 15:30	Symp 6 A New World in Primate Vision Research: The Marmoset as A Model Animal	1st Lecture Room
	Talk 6 Objects and From	2nd Lecture Room
15:30 - 15:50	Café Break	Multifunction Room
15:50 - 17:00	Keynote 3 Object Recognition in Inferotemporal Cortex: from Visual Features to Semantics	1st Lecture Room
17:00 - 20:00	Banquet	CHENDEJYU Shrine

Monday, July 17

08:30 - 12:00	Registration	Multifunction Room
09:00 - 11:00	Symp 7 Artificial Vision	1st Lecture Room
	Talk 7 Face Perception	2nd Lecture Room
11:00 - 11:15	Café Break	
11:15 - 12:15	Talk 8 Color and Surface	1st Lecture Room
	Symp 8 Visual Science and Its Outreach to General Public	2nd Lecture Room
12:15 - 12:45	Business Meeting	1st Lecture Room

Keynote Lecture 1

Prof. Robert F. Hess

McGill Vision Research, Dept. Ophthalmology, McGill University, Canada

Professor Robert Hess received his Ph.D. from the University of Melbourne in Australia, then served as a postdoctoral fellow and had a faculty position at Cambridge University. In 1991, he was invited to set up a vision research center at McGill University in Montreal. Since then, he has served as director of McGill Vision Research Unit in the Department of Ophthalmology at McGill University in Canada. His research spans the broad field of visual perception, with particular emphases on cortical visual processing of space, motion, and stereo, and susceptibility to developmental disruption. He has published more than 300 articles in scholarly journals and books, and his work has received more than 17,000 citations (h-index = 69). He is also a world leader in amblyopia. His trials to treat amblyopia in adults and children combine a monocular approach—wearing an eye patch over the “good” eye—with a dichoptic approach and involve playing video games. In 2013, he received an H. Barry Collin Research Medal from Optometrists Association Australia.



Adult Cortical Plasticity

Friday, July 14, 15:50 – 17:00,

International Conference Room, 1st Lecture Room, Kuang-Fu Campus, National Cheng Kung University

Hubel and Wiesel, Nobel Laureates in 1981, were the first to discover that columns exist in the visual cortex representing left and right eye inputs (*ocular dominance columns*), and they also found that there is a *critical period for visual development* that occurs within the first year of life. More recently, however, it has become clear that some plasticity remains into adulthood. Recent work shows that this plasticity extends to monocular contrast sensitivity as well as ocular dominance (OD) in adults, which could potentially lead to direct therapeutic benefit. Neuroplastic changes can occur as the result of perceptual training, non-invasive brain stimulation or short-term visual deprivation. Short-term visual deprivation in adults improves sensitivity of the deprived eye and reduces sensitivity of the non-deprived eye, allowing the two eyes' inputs to be rebalanced at the level of binocular integration. In this talk, I will review the evidence for adult cortical plasticity using a variety of approaches.

Keynote Lecture 2

Prof. Bruno Rossion

University of Louvain, Belgium

Professor Bruno Rossion completed his undergrad, master, and Ph.D. work at Université Catholique de Louvain (1996-2000). He then did postdoctoral work in the department of Cognitive and Linguistic Sciences at Brown University (2000-2002). He has been in the Cognitive Neuroscience Research Unit of the Université Catholique de Louvain as a Senior Researcher (2004), Master of Research (2012), and now Director of Research (2016). He is also an associated researcher at the University of Maastricht in the Netherlands, the Center de Recherche en Automatique (CRAN), and University de Lorraine's University Hospital in France. His main interests are face and color perception, object and scene categorization, blindsight, and cross-modal integration. Through August of 2016, he had more than 170 peer-reviewed papers, 9 edited book chapters, grants and prizes. He received the Samuel Sutton Award for Early Distinguished Scientific Contribution to Human ERPs and Cognition in 2004, the Award from the Queen Elisabeth Foundation for Medical Research in 2008, and the Royal Prix "Dubois-Debauque" Award for 2010-13 relating to his outstanding contribution to human electrophysiology. Dr. Rossion has always been fascinated by human faces and how it is processed by the human brain, and he has used a variety of methods, including psychophysical experiments, PET, fMRI, EEG/ERP, and eye movements on normal adults, infants, toddlers, and acquired prosopagnosia patients. Recently, Dr. Rossion and his colleagues have developed an innovative approach, frequency-tagging, to present stimuli and analyze specific frequency-related brain signals. In recent years, they have gained fruitful results in understanding both lower and higher visual processing in developing populations.



Understanding Vision with Fast Periodic Visual Stimulation

Saturday, July 15, 15:50 – 17:00,

International Conference Room, 1st Lecture Room, Kuang-Fu Campus, National Cheng Kung University

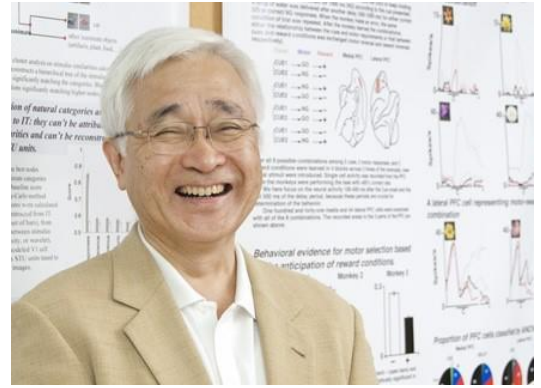
When the human brain is stimulated at a rapid periodic frequency rate, it synchronizes its activity to this frequency, leading to periodic responses recorded in the EEG (Adrian & Matthews, 1934). In vision, periodic stimulation has been used essentially to investigate low-level processes and attentional effects in the primary visual cortex, under the term "Steady-State Visual Evoked Potentials" (ssVEPs; Regan, 1966; Norcia et al., 2015 for review). This approach has now been extended and refined to understand higher-level visual functions, in particular the categorization of complex visual forms such as human faces, objects and words. This talk will summarize studies carried out over the last few years illustrating the unique strengths of this fast periodic visual stimulation approach: (1) the objective (i.e., exactly at the experimentally-defined frequency rate) definition of neural activity related to visual recognition; (2) the very high signal-to-noise ratio allowing to rapidly measure visual recognition processes in difficult to test populations (e.g., infants and children, patients); (3) the independence from explicit behavioral responses; and (4) the first identification of objective markers of visual integration ("binding"). Contrary to widespread assumption, this approach also provides precise information in the time-domain, and has started to fully characterize the spatio-temporal course of visual recognition in a rapidly changing natural scene.

Keynote Lecture 3

Dr. Keiji Tanaka

RIKEN Brain Science Institute, Japan

Dr. Keiji Tanaka received his Ph.D. from the University of Tokyo in 1983. He has worked at RIKEN since 1989 and is currently Deputy Director at RIKEN Brain Science Institute. Dr. Tanaka has made many important contributions to our understanding of the mechanisms of higher brain functions, such as visual object recognition and goal-directed behavior. He conducts experiments with non-human primates and functional MRI with a 4T system on normal human subjects. His work has received more than 11,000 citations (h-index = 46) and he has been recognized with many awards and honors, such as the Neuronal Plasticity Prize of the Foundation IPSEN in 2007.



Object Recognition in Inferotemporal Cortex: from Visual Features to Semantics

Sunday, July16, 15:50 – 17:00,

International Conference Room, 1st Lecture Room, Kuang-Fu Campus, National Cheng Kung University

The inferotemporal cortex (IT) of the monkey brain is the final stage of the ventral visual pathway, which is thought to be responsible for visual object recognition. Because our visual recognition is categorical in nature, object categories may be represented in IT and earlier stages. However, by carefully determining the stimulus selectivity of individual cells in the monkey IT, we previously found that single IT cells' selectivity was determined by moderately complex features, defined by physical parameters. A remaining possibility is that object categories are represented by the response pattern of a population of IT cells. By recording responses of many IT cells to a fixed set of 1084 object images, we examined this possibility. Responses of only one or two cells were tested at a time, but by repeating the recording for several months in two monkeys, we obtained responses of 674 cells to the stimulus set. By seeing the response table from the stimulus side, we can analyze the response pattern evoked by each of the stimuli over the 674 cells. We found that two stimuli belonging to the same category tended to evoke similar response patterns whereas those belonging to distant categories evoked different response patterns. When the 1084 objects were plotted according to the dissimilarity of response patterns, objects of the same category clustered. Even the hierarchical structure of object categories appeared there. Thus, although the stimulus selectivity of individual IT cells is determined in the domain of moderately complex features, which is still physical, by having multiple cells with selectivity for various features, responses of a population of IT cells represent object categories, which is semantic.

We have also examined the nature of local clustering of cells in the monkey IT. We previously found that cells responding to similar features clustered in a columnar local region in monkey IT. Is the local clustering of cells in monkey IT determined only in the domain of features? Since animals care about object categories rather than features, the local clustering of cells may be organized toward the representation of object categories. More concretely, we ask whether there are multiple groups of cells responding to different features yet associated with the same object categories in a local IT region. To record many (~50) cells in a local region, we have developed a technique for chronic recordings with an electrode that remains in the brain for a few weeks and is advanced day by day. Responses of recorded cells were examined with a fixed set of 850 object images (50 images each for 17 object categories). Most pairs of cells recorded from a local IT region showed similar categorical selectivity. When we examined their responses to the members of their commonly effective object category, whereas many of the pairs also had similar selectivity, others showed no similar or even complimentary selectivity. These results suggest that multiple groups of cells responding to different features yet associated with the same object categories cluster in a local IT region.

Symposia and Talks

Schedule Overview

1st Lecture Room

2nd Lecture Room

July 14

09:00 – 11:00

Symposium 1

Neural Basis of Visual Perception

Talk 1

Attention and Consciousness

13:30 – 15:30

Symposium 2A

Binocular Depth Perception

Symposium 2B

New Inquiries into Vision, Attention, and Awareness

July 15

09:00 – 11:00

Symposium 3

Attractiveness and Bodily Interactions at Implicit Levels-reading Social Evaluation from Eyes and/or Bodily Interactions

Talk 3

Neural Mechanisms

13:30 – 15:30

Symposium 4

Stopping the Rise of Myopia in Asia

Talk 4

Space, Time and Motion

July 16

09:00 – 11:00

Symposium 5A

Contemporary Questions in the Psychophysics of Spatial Vision

Symposium 5B

Understanding Individual Difference in Eye Movement Patterns

13:30 – 15:30

Symposium 6

A New World in Primate Vision Research: The Marmoset as a Model Animal

Talk 6

Objects and Form

July 17

09:00 – 11:00

Symposium 7

Artificial Vision

Talk 7

Face Perception

11:15 – 12:15

Symposium 8

Visual Science and Its Outreach to General Public

Talk 8

Color and Surface

Friday Morning

July 14, 09:00 - 11:00

Symposium 1 - Neural Basis of Visual Perception

1st Lecture Room

Organizer(s): Chun-I Yeh, National Taiwan University

How does the primary visual cortex encode elementary features such as contrast, spatial frequency, and color? By using both electrophysiological and imaging techniques, this section will try to provide a comprehensive picture of recent findings on neuronal coding of these basic characters at primary and secondary cortical levels, its possible mechanisms, its interaction with other modalities, and its possible role in visual perception. The section will also question how these encoding schemes are related to other stages of visual processing.

S11.11 Adaptation Maintains Population Homeostasis in Primary Visual Cortex

Speaker: Andrea Benucci, RIKEN Brain Science Institute

S11.12 3D Topology of Orientation Columns in Visual Cortex Revealed by Functional Optical Coherence Tomography

Speak: Manabu Tanifuji, RIKEN Brain Science Institute

S11.13 Cross-model Sensory Integration of Visual-tactile Motion Information

Speaker: Yu-Cheng Pei, Taoyuan Chang Gung Memorial Hospital

S11.14 Visual Attention Mechanisms in the Pulvinar-cortex Circuits

Speaker: Huihui Zhou, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences.

S11.15 Receptive Field Structures of Color-responsive Neurons in Macaque Monkey V1

Speaker: Chun-I Yeh, National Taiwan University

Talk 1 - Attention and Consciousness

2nd Lecture Room

Moderator: Yaffa Yeshurun, University of Haifa

T11.21 09:00 Paying Attention to Time is Faster Than Paying Attention to Space. Yaffa Yeshurun, Shira Tkacz-Domb

T11.22 09:15 Effect of Aging on the Collinear Masking Effect in Visual Search. Li Jingling, Sung Nan Lai, Yen-Ting Liu

T11.23 09:30 Temporal Selection Revisited: What Processes are Disrupted by the Attentional Blink? Alon Zivony

T11.24 09:45 Can Gaze Cues Induce Inhibition of Return Under Different Task Demands? Chen Syuan Rong, Li Jingling

T11.25 10:00 Steady State EEG Response Correlates of Cross-modally Facilitated Transitions During Binocular Rivalry. Naotsugu Ysuchiya, Matthew Davidson, David Alais, Jeroen van Boxtel

T11.26 10:15 Continuous Flash Suppression is Strongly Tuned for Low Temporal Frequencies and High Spatial Frequencies. David Alais, Shui'er Han, Claudia Lunghi

T11.27 10:30 Hacking into Sleep to Enhance Visuospatial Memory. Ken Paller

T11.28 10:45 Abstract Withdrawn

Friday Afternoon

July 14, 13:30 - 15:30

Symposium 2A - Binocular Depth Perception

1st Lecture Room

Organizer(s): Christopher W. Tyler; Smith-Kettlewell Eye Research Institute./ Division of Optometry, City University of London.

Almost all of our actions are take place in specific relationships to our perception of the three-dimensional structure of the world we inhabit. The goal of this symposium is to present recent studies and analysis on the functional organization of binocular disparity processing and its integration with the array of other depth cues that contribute to our perception of the three-dimensional world. These studies range from the human perception of the variety of cues to depth structure and their processing dynamics to the advanced analysis of the dynamics of the local binocular disparity information in primary visual cortex.

S12.11 Reconciling Pictorial Depth with Stereopsis

Speaker: Dhanraj Vishwanath, University of St Andrews.

S12.12 Integration of Monocular and Binocular Cues to Depth Perception

Speaker: Christopher W. Tyler, Smith-Kettlewell Eye Research Institute. /Division of Optometry, City University of London.

S12.13 Binocular Correlation and Matching Computations Determine Depth Perception in a Weighted Parallel Manner

Speaker: Ichiro Fujita, Osaka University. /Center for Information and Neural Networks.

S12.14 Pooling in V1 Parameter Space Enhances Accuracy of Binocular Matching

Speaker: Izumi Ohzawa, Osaka University. /Center for Information and Neural Networks.

Symposium 2B - New Inquiries into Vision, Attention, and Awareness

2nd Lecture Room

Organizer(s): Li Jingling, China Medical University

How visual inputs being effectively processed is one of the hottest research questions. Recent progress on this issue includes (1) extended to the senses other than vision, (2) understanding of the processes without attention, and (3) distinction between processing depending on attention or consciousness. This symposium invited 5 distinctive researchers to present their serial studies on the related issues. The findings provide new inquiries into vision, attention, and awareness.

S12.21 Multisensory Influences on Visual Attention

Speaker: Marcia Grabowecky, Northwestern University.

S12.22 Concealed by the the Most Salient Structure in Visual Search

Speaker: Li Jingling, China Medical University.

S12.23 Attention at Locations Unattended

Speaker: Satoshi Shioiri, Tohoku University.

S12.24 Consciousness Without Attention and Large Capacity Conscious Memory, Investigated with Metacognition

Speaker: Naotsugu Tsuchiya, Monash University.

S12.25 Consciousness at a Price: The Attentional Blink is a Cost of Awareness

Speaker: Dominique Lamy, Tel Aviv University.

S12.26 Behavioral Influences and Temporal Dynamics of Unconscious Salience Processing

Speaker: Po-Jang(Brown) Hsieh, Duke-NUS Medical School

Saturday Morning

July 15, 09:00 – 11:00

Symposium 3 - Attractiveness and Bodily Interactions at Implicit Levels-reading Social Evaluation from Eyes and/or Bodily Interactions

1st Lecture Room

Organizer(s):

Shinsuke Shimojo, California Institute of Technology.

Hsin-I Liao, NTT Communication Science Laboratories.

We do social evaluation all the time. We like a particular person, but we may not know the actual reasons. We may give 'explicit' reasons but those could be post-hoc reconstructions (e.g., Johansson et al., 2005). In the current symposium, we convey an idea that social evaluation is affected by various 'implicit' factors – gaze/pupil and bodily synchrony on top of implicit visual processing. These factors were studied independently under different framework, but they are in fact closely related. First of all, we show evidences that preference decision making or attractiveness judgment is a dynamic process (Watanabe's talk) that could be even formed unconsciously (Hung's talk). Second, the decision/judgment formation could be reflected and affected by physiological responses such as gaze (Shimojo et al., 2003) or pupillary response (Liao's talk). Finally, we demonstrate a practical approach that the preference and/or facial attractiveness judgment can be predicted by these physiological responses (Kashino's talk).

S21.11 Facial Preference, Gaze/Pupil, and Interpersonal Synchrony - How are They Related?

Speaker: Shinsuke Shimojo, California Institute of Technology.

S21.12 Dynamics of Attractiveness Judgments

Speaker: Katsumi Watanabe, Waseda University. / University of Tokyo.

S21.13 There is No Hidden Beauty: Unconscious Processing of Facial Attractiveness

Speaker: Shao-Min (Sean) Hung, Duke-NUS Medical School.

Authors: Shao-Min (Sean) Hung, Duke-NUS Medical School. Chih-Hsuan Nieh, National University of Singapore. Po-Jang (Brown) Hsieh, Duke-NUS Medical School.

S21.14 How does Pupillary Response Contribute to Interpersonal Preference Evaluation?

Speaker: Hsin-I Liao, NTT Communication Science Laboratories.

Authors: Ying-Chun Chen, California Institute of

Technology./ National Taiwan University of Science and Technology.

Makio Kashino, NTT Communication Science Laboratories.

Shinsuke Shimojo, California Institute of Technology.

S21.25 Decoding Preference Decision Making from Footsteps and Eyes.

Speaker: Makio Kashino, NTT Communication Science Laboratories./ Tokyo Institute of Technology./ JST CREST

Talk 3 - Neural Mechanisms

2nd Lecture Room

Moderator: Ichiro Kuriki, Tohoku University.

Nicholas Price, Monash University.

T21.21 09:00 Increased ipRGC Stimulation Enhances Spatial Contrast Sensitivity at Low Spatial Frequencies in Peripheral Vision. Sung-en Chien, Akiko Matsumoto, Wakayo Yamashita, Sei-ichi Tsujimura, Su-Ling Yeh

T21.22 09:15 Difference in Brain Activities for Unique and Cardinal Hues Investigated by fMRI. Ichiro Kuriki, Wakiko Maemura, Kazumichi Matsumiya, Satoshi Shioiri

T21.23 09:30 Monocular Orientation-deprivation in Nature Viewing Strengthens the Deprived Eye. Yonghua Wang, Reza Farivar, Jia Qu, Jiawei Zhou, Robert Hess

T21.24 09:45 Orientation Tuning in V1 is Contrast Invariant on Short, but not Long, Timescales. Masoud Ghadrati, Elizabeth Zavitz, Marcello Rosa, Nicholas Price

T21.25 10:00 Receptive Field Mapping in the Dorsolateral Frontal Cortex of Marmosets (Callithrix jacchus). Azadeh Feizpour, Declan Rowley, Tristan Chaplin, Piotr Majka, Leo Lui, Nicholas Price, Hsin-Hao Yu, Marcello Rosa

T21.26 10:15 Visuotopy and Feature Selectivity of Neurons in the Extrastriate Dorsomedial (DM) Area of the Marmoset Monkey. Hsin-Hao Yu, Declan Rowley, Elizabeth Zavitz, Nicholas Price, Marcello Rosa

T21.27 10:30 Visual Responses of Primate Orbitofrontal Neurons Contribute to Preference Judgment. Shintaro Funahashi

July 15, 13:30 – 15:30

Symposium 4 – Stopping the Rise of Myopia in Asia

1st Lecture Room

Organizer(s): Lothar Spillmann, University Hospital Freiburg.

Myopia (short-sightedness) is on the rise worldwide. In East and Southeast Asia, up to 90 per cent of young people between 6-16 yrs. require eyeglasses. Up to 20 percent are highly myopic, with a substantially increased risk of pathological myopia, irreversible visual impairment and blindness.

The numbers affected are staggering. Recent projections suggest that about 50% of the world's population will be shortsighted by 2050. Of those, 10% will have high myopia, resulting in as many as 1 billion myopes worldwide and as many as 100 million high myopes in China alone.

The rapid changes must be due to powerful environmental factors as documented by vision science. Close-up work (reading) and poor lighting promote myopia development, while increased time outdoors (2 hours/day) slows it by stimulating retinal dopamine release and blocking excessive growth of the eyeball. Progression of myopia can be further slowed with low-dose atropine or specially designed lenses.

The immediate aim is to reduce the prevalence of high myopia. Only 4 years after new guidelines were introduced in Taiwan schools, the steep increase in myopia has been reversed. This is the first step in bringing high and pathological myopia under control. But the measures that have been shown to be effective must be put into practice by governments and their health and education authorities everywhere.

S22.11 The Epidemic of Myopia: Prospects for Prevention

Speaker: Ian Morgan, Australian National University.

S22.12 Light-induces Dopamine Release Prevents the Development of Experimental Myopia

Speaker: Regan Ashby, University of Canberra.

S22.13 A Novel Wearable Device to Quantify Myopia-related Behavior Pattern: Analysis of the Data

Speaker: Weizhong Lan, Aier Institute of Optometry and Vision Science. / Aier Eye Hospital Group.

S22.14 Successful Attempts to Prevent Myopia in Taiwan

Speaker: Pei-Chang Wu, Kaohsiung Chang Gung Memorial Hospital.

Talk 4 - Space, Time and Motion

2nd Lecture Room

Moderator: Hiroshi Ashida, Kyoto University.

Satoshi Shioiri, Tohoku University.

T22.21 13:30 Stimulus Structure Impacts Population Codes for Motion within and between Visual Areas V1 and MT. Elizabeth Zavitz, Maureen A. Hagan, Marcello G.P. Rosa, Hsin-Hao Yu, Keo L. Lui, Nicholas S.C. Price

T22.22 13:45 The Spinner Illusion and the Effect of Harmonic Components. Hiroshi Ashida, Alan Ho, Asiyoshi Kitaoka, Stuart Anstis

T22.23 14:00 Illusory Motion at the Photoreceptor Level: Insights from a Computational Model of Visual Transduction Dynamics. Gert Jakobus Van Tonder, Hiroshi Ashida

T22.24 14:15 Impaired Sensitivity in Recognizing Biological Motions and Goal-Intentions in Patients with Parkinson's Disease & Dementia. Mary Wen-Reng Ho, Shu-Fei Yang, Chun-Man Chen, Chon-Haw Tsai, Hsien-Yuan Lane, Sarina Hui-Lin Chien

T22.25 14:30 Serial Dependence in Interval Timing. Huihui Zhang, David Alais, Xiaolin Zhou

T22.26 14:45 Time Stays Still under Blue Light: Subjective Time Expansion with Increased Stimulation Level of Intrinsically Photosensitive Retinal. Pei-Ling Yang, Sei-ichi Tsujimura, Akiko Matsumoto, Wakayo Yamashita, Su-Ling Yeh

T22.27 15:00 Modeling the Learning Process of Object Locations in Natural Scenes. Satoshi Shioiri, Zhengxiong Yuan, Kazumichi Matsumiya, Ichiro Kuriki

Symposium 5A – Contemporary Questions in the Psychophysics of Spatial Vision

1st Lecture Room

Organizer(s): Tim S. Meese, Aston University.

Visual perception begins with an image on the back of eye, pixelated by our receptors. We don't see a collection of points of course, but a continuous coherent meaningful display of the outside world. One of the first processing stages in the journey from retina to seeing is the analysis of image contrast and features over space; we call this spatial vision. Spatial vision has been the bedrock of psychophysical enquiry into visual perception for the last forty years or more and during this time, numerous techniques, paradigms and models have been developed to investigate and describe human vision at contrast detection threshold and above. Here we shall review some of the major developments in the field looking both backwards and forwards to evaluate some of their strengths and weaknesses, to celebrate the success of the disciplined enquiry that has emerged, and to raise questions and issues for future research in the field.

S31.11 Divisive Inhibition as a Solution to the Correspondence Problem

Speaker: Chien-Chung Chen, National Taiwan University

S31.12 Early Spatial Vision: A View through Two Eyes

Speaker: Mark A. Georgeson, Aston University

S31.13 Curiosities in Spatial Vision

Speaker: Tim S. Meese, Aston University

S31.14 The Psychophysical Function for Contrast

Speaker: Josh A. Solomon, City University of London.

Symposium 5B – Understanding Individual Difference in Eye Movement Patterns

2nd Lecture Room

Organizer(s): Janet Hsiao, University of Hong Kong

In many daily life activities, eye movements provide a strong cue about the underlying cognitive processes. Hence, eye movement measures play an important role in many research fields related to human cognitive behavior. Recent research has reported substantial individual differences in eye movement patterns in visual tasks. These individual differences may reflect differences in cognitive styles or abilities and may consequently lead to different task performances. Findings on the associations between eye movement patterns and cognitive styles, performances, or abilities will provide valuable information on factors contributing to these individual differences and related cognitive deficits, and on how to improve people's learning and performances. In this symposium, we will first illustrate how differences in culture, autistic traits, attention control, age, and cognitive abilities are associated with differences in eye movement patterns through examinations in face processing. We will then introduce how the related methodologies can be applied to the understanding of eye movement patterns in other tasks including video watching and decision making.

S31.21 Culture Reveals a Flexible System for Face Processing

Speaker: Roberto Caldara, University of Fribourg

S31.22 Subclusters of Autistic Traits: Links with Looking at the Eyes, and Face Identity Recognition Ability

Speaker: Romina Palermo, University of Western Australia

Authors: Romina Palermo, Joshua Davis, Richard O'Kearney, Deborah Apthorp, Marc Zirnsak, Tirin Moore, and Elinor McKone.

S31.23 Understanding Eye Movement Patterns in Face Recognition Using Hidden Markov Models

Speaker: Janet Hsiao, University of Hong Kong

S31.24 Classifying Eye Gaze Patterns and Inferring Individuals Preferences Using Hidden Markov Models

Speaker: Antoni B. Chan, City University of Hong Kong

Authors: Antoni B. Chan and Antoine Coutrot. London

July 16, 13:30 – 15:30

Symposium 6 – A New World in Primate Vision Research: The Marmoset as a Model Animal

1st Lecture Room

Organizer(s): Elizabeth Zavitz, Monash University
Hsin-Hao Yu, Monash University

The New World marmoset monkey is becoming a popular primate model in a range of biological sciences. In visual neuroscience in particular, the marmoset offers several key advantages for researchers. The marmoset has an elaborate visual cortex with an organisation that is broadly similar to that of other primates. However, its cortex is smooth and not convoluted as in other larger primates, leaving almost the entire cortex exposed on the dorsal surface. This makes it accessible to modern research techniques such as two-photon imaging, surface electrode recording, and optogenetics. The marmoset is suitable for developmental studies due to its accelerated reproductive cycles, and it can be trained to perform complex visual tasks. Furthermore, it is presently the only primate model with multiple established transgenic lines, which opens up the possibility of applying the powerful genetic techniques commonly found in rodent studies to a primate model.

This symposium will explore the breadth of vision research using the marmoset model. The speakers will highlight studies that focus on the cortical/sub-cortical circuits (Dr. Zeater) of the visual cortex, the plastic reorganisation of the cortex following lesions (Dr. Hagan), optogenetic manipulation (Prof. Angelucci) and two-photon imaging (Prof. Yamamori) of cortical activities, as well as the behaviour of the marmoset monkeys trained to perform visual tasks (Dr. Yates).

The multidisciplinary program should be appealing to the broad audience of APCV, with interests in animal psychophysics, brain mapping, electrophysiology, plasticity, and imaging. Our goal is not only to promote collaboration and communication between marmoset researchers, but also to create the opportunity for primate researchers to interact with the broader vision research community.

S32.11 The Role of Feedback in Early Visual Processing
Speaker: Alessandra Angelucci, University of Utah

S32.12 Complex Visual Processing in Subcortical Visual Pathways
Speaker: Natalie Zeater, University of Sydney

S32.13 Two-photon Ca Imaging in the Marmoset Cortex
Speaker: Tetsuo Yamamori, RIKEN Brain Science Institute

S32.14 Motion Sensitivity of MT Cells after V1 Lesions
Speaker: Maureen Hagan, Monash University

S32.15 Motion Estimation in the Common Marmoset
Speaker: Jake Yates, University of Rochester

Talk 6 - Objects and Form

2nd Lecture Room

Moderator: Kenzo Sakurai, Tohoku Gakuin University.
David Keeble, University of Nottingham Malaysia Campus.

T31.21 13:30 Abstract Withdrawn

T31.22 13:45 The Developmental Trajectory of Susceptibility to Optical Illusions. Philippe Chouinard, Kayla Landry, Sheila Crewther, Irene Sperandio

T31.23 14:00 Effect of Display Density on the Collinear Masking Effect in Visual Search. Yen-Ting Liu, Li Jingling

T31.24 14:15 Visual Phantoms Induced by Contrast-modulated Plaids. Kenzo Sakurai

T31.25 14:30 Do Different Patterns of Orientation Change Influence Performance in Texture Segmentation & Detection Tasks? David Keeble, Shumetha Sidhu

T31.26 14:45 Size Statistics of the Background Texture Modulates Perceived Target Size. Chia-Ching Wu, Chien-Chung Chen

T31.27 15:00 Psychophysically-based Enhancement of Features in Medical Images. Juno Kim, Maria Markoulli

T31.28 15:15 Abstract Withdrawn

Symposium 7 – Artificial Vision

1st Lecture Room

Organizer(s): Chuan-Chin Chiao, National Tsing Hua University

Blindness afflicts millions of people worldwide. Although a number of approaches are currently being pursued in the hope of preventing blindness, once vision is totally lost, retinal transplantation and bioelectronic visual prosthesis are only two of the existing strategies for restoring vision. Several groups in past decade have developed electrical implants that can be attached directly to the retinas of patients suffering from retinal degeneration, and have shown promise of retinal prostheses that can be used clinically. In this symposium, leaders of retinal prosthesis around the world will present recent advances in artificial vision, and discuss major obstacles in improving these prosthetic devices.

S41.11 Challenges in the Arrival of Prosthetic Vision

Speaker: Gregg Suaning, University of South Wales

S41.12 A Smart Electrode for Retinal Stimulator with the Large Number of Stimulus Electrodes

Speaker: Jun Ohta, Nara Institute of Science Technology

S41.13 The Design of Subretinal Implant Chip with Shared IrO₂ Electrodes and Adaptive Background Current Cancellation Techniques

Speaker: Chung-Yu Wu, National Chiao Tung University

S41.14 A High-density and Flexible Imaging Sensor Retinal Prosthesis

Speaker: Long-Sheng Fan, National Tsing Hua University

Authors: L.-S. Fan, Z.-T. Lai, J. Huang, C. Y. Liu, Y. T. Cheng, Y. J. Lai, L. Chiang, H. Chan, J. Hong, Y. C. Chen, Z. Y. Hsiao, J. Huang, F. Wu, K. Yew, A. Bauquet, M. Sheu, S. Chen, F. S. Hsu, L. J. Lee, C. G. Cheng, C. H. Yang, T. C. Chen, and C. M. Yang.

Talk 7 - Face Perception

2nd Lecture Room

Moderator: Li-Chuan Hsu, China Medical School

T41.21 09:00 Face Matching Requires Holistic Processing: Evidence from a Gaze-contingent Task.

Alejandro J. Estudillo

T41.22 09:15 Exploring Taiwanese Young Children's Perception and Categorization of Racially Ambiguous Faces.

Chun-Man Chen, Sarah Gaither, Sarina Hui-Lin Chien

T41.23 09:30 Bilingualism Shapes Face and Music Perception in Developmental Prosopagnosia.

Edwin James Burns, Alice H. D. Chan, Hong Xu

T41.24 09:45 The Magical Number 10 in Face Recognition.

Daisuke Matsuyoshi, Katsumi Watanabe

T41.25 10:00 Brain Activities in Face-Selective Regions Predict Performances on Face Recognition and Memory.

Gary C.-W. Shyi, Peter K.-H. Cheng, Varden C.-S. Hung, Becky Y.-C. Chen, S.-T. Tina

T41.26 10:15 Abstract Withdrawn

T41.27 10:30 Abstract Withdrawn

T41.28 10:45 Confusion between Disgust and Anger! The Problem Stems from the Upper Part of a Face!

Li-Chuan Hsu, Yu-Pei Lin, Yi-Min Tien, Chia-Yao Lin

Monday Noon

July 17, 11:15 – 12:15

Talk 8 - Color and Surface

1st Lecture Room

Moderator: David P Crewther, Swinburne University.

T42.21 11:15 **Abstract Withdrawn**

T42.22 11:30 **Temporal Structure of Blue Colour Processing – a MEG Multifocal Study.** David P Crewther, Laila Hugrass

T42.23 11:45 **Glossiness Perception not Depending on Specular Highlights - Impacts of Luminance Edges.** Hiroaki Kiyokawa, Tomonori Tashiro, Yuki Kawashima, Yasuki Yamauchi, Takehiro Nagai

T42.24 12:00 **Visual Perception of Pigmentation on Facial Skin-color Distribution.** Yu Fang, Yoko Mizokami, Hirohisa Yaguchi

Symposium 8 – Visual Science and Its Outreach to General Public

2nd Lecture Room

Organizer(s): Chia-Huei Tseng, Tohoku University.
Hsin-Ni Ho, NTT Communication Laboratories.
Junji Watanabe, NTT Communication Laboratories

The goal of the workshop is to evoke the importance of scientific outreach to general public, in particular in the aspects of getting research funding, collecting user data and promoting scientific education. This workshop will invite researchers about current status of research fund for outreach and data collection during public exhibition, and a science museum staff to provide insight into these three aspects. As a practice/realization of these notions, the organizers will introduce a new type of outreach activity that will be run during the APCV conference. This outreach activity takes the form of “escape room,” which aims to create a unique interactive adventure using puzzles largely based on vision and shiftsukan science, with the goal of showing that science can be fun, relevant, and accessible to all. Finally, a panel discussion will be held to sum up the deliberations of this symposium.

S42.11 Developing Media Workshops for Understanding Human Mind

Speaker: Junji Watanabe, NTT Communication Laboratories

S42.12 Data Collection through the Media Workshop: Find out Your Face

Speaker: Shigeo Yoshida, The University of Tokyo

S42.13 Escape Room Meets Scientific Education: A New Way for Public Scientific Outreach

Speaker: Chia-Huei Tseng, Tohoku University

S42.14 From Cloud to Ground: Designing Accessible Exhibition for Science Communication

Speaker: Hsin-Drow Huang, National Museum of Natural Science

Posters Session

Schedule overview

July 14, Friday

11:15 – 12:00, 12:30 – 13:15

- Face Perception
- Motion Perception
- Objects
- Spatial Vision

July 15, Saturday

11:15 – 12:00, 12:30 – 13:15

- Binocular Vision and Space Perception
- Color and Lightness
- Retinal Mechanism
- Visual Cognition

July 16, Sunday

11:15 – 12:00, 12:30 – 13:15

- Attention
- Multisensory Perception
- Social Interaction and Preference

Poster Setup and Takedown

- ✓ All poster sessions are held in a multifunction room. The first digit of your poster number indicates the day of your presentation. The last two digits indicate the number of your poster board.
- ✓ All posters for each day should be put up in the morning (no later than 10:30AM) or in the evening (no earlier than 5:00PM), regardless of your assigned duty hours. Note that the poster hall closes at 6:00PM.
- ✓ Authors of even-numbered posters are expected to be present during the entire Poster A session; and authors of odd-numbered posters during the entire Poster B session. Authors may stay longer, if desired.
- ✓ Pushpins are available for your use and are located at the registration desk.

Friday Poster

July 14, 11:15-12:00, 12:30 -13:15

Multifunction Room

Face Perception

P1.01 The Surrounding Emotion Faces Influenced the Responding Time but not the Discriminating Ability in Facial Expression Detection. Po-Shiuan Tsai, Pi-Chun Huang

P1.02 Development and Validity Study of the Korean Version of Cambridge Mindreading Face Battery(Yonsei-CAM). Donghyun Oh, Eunsin Chung

P1.03 The influence of head orientation on perceived gaze direction and eye region information. Yumiko Otsuka, Colin Clifford

P1.04 Taiwanese Face Database 2.0. Claire Y.-J. Li, Vicky Y.-H. Chen, Gary C.-W. Shyi

P1.05 The Effect of Context in Facial Emotion Recognition in Children with Autism Spectrum Disorder. Jiyoung Noh, Kyongmee Chung

P1.06 Not All Races are Preferred Equally: Exploring the Development of Race-based Social Preferences in Taiwanese Children. Pei-Chun Hsu, En-Yun Hsiung, Sarina Hui-Lin Chien

P1.07 The Importance of the First Fixation for Recognising Own- and Other-Race Faces: An Eye-Tracking Study. Hoo Keat Wong, Ian Stephen, David Keeble

P1.08 Parts-based Facial Attractiveness Judgment is Modulated by Attention to Detail. Chihiro Saegusa, Katsumi Watanabe

P1.09 Representation of Facial Identity and Expression in Persons with Autism Spectrum Disorder: Identity- and Expression- Contingent Aftereffect. Hyangkyeong Oh, Kyong Mee Chung

P1.11 Yawning Face Detection Sensitivity and Yawning Contagion. Hiu-Ming Chan, Chia-Huei Tseng

P1.12 Abstract withdrawn

Motion Perception

P1.13 Vertical Size Disparity Processing on Elements Moving in Opposite Directions. Yuta Miyanishi, Hirohiko Kaneko

P1.14 Measurement of Visual Attraction Strength to Object Motion by Gaze-state and Method of Paired Comparison. Sae Nakanishi, Keizo Shinomori

P1.15 Surface Properties and the Perception Self-motion. Andrew-Charbel Salloum, Stephen Palmisano, Juno Kim

P1.17 Randomly Updating Images on Coherence Global Motion. Xirui Yang, Chien-Chung Chen, Hiroshi Ashida

Objects

P1.18 The Effect of Training Paradigm in Greeble Expertise Acquisition: A Multi-voxel Pattern Analysis (MVPA) Approach. Han-Shin Jo, Kuo Liu, Chiu-Yueh Chen, Chun-Chia Kung

P1.19 Perceptual Expertise Predicts Both Gray Matter Thickness and Density In The Human Fusiform Gyrus: A Cross-Country MRI Study On Bird Experts. Yi Lin, Chun-Chia Kung, Nian-Ting Yang

Spatial Vision

P1.20 Recognition Thresholds for One-letter vs. Two-letter Stimuli in the Periphery. Pei-Shan Sung, Wei-Ming Huang, Chun-I Yeh, Lothar Spillman

P1.21 Tilt Illusion from Interocular Grouping: Can Conscious Grating Induce the Tilt Illusion? Young Hun Sun, Woo Hyun Jung

P1.22 The Competition between Gestalt Similarity and Closure Laws. Ya-Ching Su, Chien-Chung Chen

P1.23 The Spatial Frequency Effect on Blackshot Mechanisms for Texture Perception. Da Li, Chien-Chung Chen

P1.24 Oblique Effects Measured Using the Method of Adjustment in Young Adults and Children. Hiroko Sumida, Goro Maehara

P1.25 Examining the Relative Strength of Proximity and Similarity Laws Using Tripole Glass Patterns. Lee Lin, Chien-Chung Chen

P1.26 Using the Oculus Rift to Understand the Perception of Shape from Material Flow. Masakazu Ohara, Juno Kim, Kowa Koida

Saturday Poster

July 15, 11:15-12:00, 12:30 -13:15

Multifunction Room

Binocular Vision and Space Perception

P2.01 Interactive Processing of 2D and 3D Cues in Stereopsis Vision. Jy-Chyi Yuan

P2.02 Walking on Sunshine – Anisotropy of Egocentric Distances Perceived By Walking. Oliver Toskovic

P2.03 Evaluation of Shape-level Depth Adaptation by Using Disparity-specified Structures and Noise-shape Stimuli. Shufang He, Hiroaki Shigemasa

P2.04 Can “Mean Luminance Deprivation” Modulate Ocular Dominance Plasticity? Jiawei Zhou, Zhimo Yao, Yonghua Wang, Jia Qu, Robert Hess

P2.05 Individual Differences in Lower and Upper Limits of Disparity Detection for Depth Perception. Hirohiko Kaneko, Atsumi Momose, Masayuki Sato, Kei Kanari

P2.06 Effect of Inter-ocular Contrast Ratio on Perceived Depth from Disparity. Pei-Yin Chen, Chien-Chung Chen

Color and Lightness

P2.07 Evaluation Consistency and Image Statistical Analysis on Skin Transparency. Yuna Nakanishi, Katsunori Okajima, Takanori Igarashi

P2.08 Effect of Spatial Structure Defined by Disparity with Uniform Luminance on Lightness. Kei Kanari, Hirohiko Kaneko

P2.09 Would the Phenomenon of 'The Dress' Exist in Simple-patterned Picture? WanYu Chen, Shojiro Sakurai

P2.10 Consideration of Relationship between Word Impression and Color Impression Using Color Paired Comparison Method. Honami Komatsu, Keizo Shinomori

P2.12 Which Regions in the Human Brain are Involved in Lightness Perception? Yuichi Sakano, Yoshiaki Tsushima, Atsushi Wada, Hiroshi Ando

P2.14 Enhanced Saturation Contrast Caused by Saturation Gradients. Yuki Kobayashi, Soyogu Matsushita, Kazunori Morikawa

Retinal Mechanism

P2.15 Encoding the Light Intensity in Retina’s Firing. Jo-Fan Chien, Kevin Sean Chen, Yu-Ting Huang, Chun-Chung Chen, Chi Keung Chan

P2.16 A Memporal Difference between Cone- and melanopsin-mediated Signals in Pupillary Pathway. Wakayo Yamashita, Sei-ichi Ysujimura

P2.17 Pathway Analysis Implicates Altered Mitochondrial Metabolism, and Neurotransmission and Complement Cascade in Retina/RPE/choroid in Form-deprivation Myopia. Sheila Crewther, Loretta Guimmarra, Nina Rlddell, Melanie Murphy

P2.18 Spatiotemporal Integration of Visual Stimuli in the Divisional Power Supply Scheme of the Retinal Prosthesis. Yueh-Chun Tsai, Bo-Jyun Lin, Pin-Shiou Wang, Ching-Hsiang Liu, Chuan-Chin Chiao

P2.19 Mild Stress Promotes Neurite Outgrowth of Retinal Explants. Grace Chan, Chuan-Chin Chiao

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P2.22 A New Paradigm for Studying Inter-ocular Competition with Amplitude Modulated Flicker. Victor Lee, Kien Nguyen, Wen-Sheng Chang, Wei-Kuang Liang, Chi-Hung Juan

P2.23 Visual Model Shows That Activity Retrieved From Memory Could Resemble Sensory Responses Despite Decay. Thomy Nilsson

P2.24 A New Method to Quantify Visual Response Latency with Steady-state Visually Evoked Potentials in Human. Kien Nguyen, Victor Lee, Wen-Sheng Chang, Wei-Kuang Liang, Chi-Hung Juan

P2.25 Impact of Putamen and/or Thalamus Lesions on Oddball P300 Generation. Yi-Min Tien, Li-Chuan Hsu, Sui-Foon Lo, Chia-Yao Lin

P2.26 Transfer of Multi-Attribute Stimulus-Response Mappings. Yumiko Fujii, Masahiko Morita, Hiromi Morita

P2.27 Individual Difference in Statistical Learning of Dependency between Nonadjacent Visual Shapes in Sequence Correlates with Sentence Reading. Kenyu Xu, YuHuei Lian, Denise Wu

P2.28 How Scene Changes Influence Eye Movements. Esther X. W. Wu, Shih-Cheng Yen, Fook-Kee Chua

P2.30 Abstract withdrawn

Sunday Poster

July 16, 11:15-12:00, 12:30 -13:15

Multifunction Room

Attention

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P3.02 The Influence of Invisible Local Information on the Integration of Global Form and Motion Coherence. Charles Chung, Sieu Khuu

P3.03 The Aging Effect on Time Perception: An ERP Study. Hsing-Hao Lee, Shulan Hsieh

P3.04 Visual Perception in Peripheral Visual Field is Modulated by Eccentric Gaze. Ryoichi Nakashima

P3.05 Shared and Distinct Information Processing Limitations across Attentional Forms and Modalities. Gwenisha J. Liaw, Takashi Obana, Tiffany T.Y. Chia, Christopher L. Asplund

P3.06 Measuring Attentional Facilitation Related to Preparation of Hand Movements. Takumi Miura, Kazumichi Matsumiya, Ichiro Kuriki, Satoshi Shioiri

P3.07 Spatial Compression at Peripheral Vision without Saccades and Visual masks. Masahiko Terao, Fuminori Ono

P3.08 Perceived Depth and Accommodation. Harold Hill, Trent Koessler

P3.09 A Linear Mathematical Model of Attentional Modulation in Visual System. Akihiro Masaoka, Takeshi Kohama

P3.10 The Neural Activity for Reloading vs. Uploading Conscious Representations during Motion-induced Blindness. Li-Ting Tsai, Hsin-Mei Sun, Rufin VanRullen, Chien-Te Wu

P3.11 Attentional Capture is Affected by Upright or Inverted V-shape. Po-Pin Lin, Yang-Ming Huang

P3.12 Attention-modulated Interactions between Statistical Summary Perception & Statistical Learning. Wen Tai, Tsung-Ren Huang

P3.13 Unconscious Perceptual Grouping Modulated by Top-down Attention. Shih-Yu Lo

P3.14 Predicting Direction of Motion in Depth by a Model with Lateral Motion Detectors. Wei Wu, Kazumichi Matsumiya, Ichiro Kuriki, Satoshi Shioiri

P3.15 The Effect of Attentional Focus on Motor Learning in a Mirror Drawing Task. Shi-Sheng Chen, Li Jungling

Multisensory Perception

P3.16 Shift of Visual Attention to the Illusory Hand Location. Moe Nonomura, Chia-Huei Tseng, Kazumichi Matsumiya, Ichiro Kuriki, Satoshi Shioiri

P3.17 Neural Correlates of Sound-induced Visual Experience in Acquired Auditor-visual Synesthesia. Zixin Yong, Po-Jang Hsieh, Dan Milea

P3.18 The Different Effects of Visual Perceptual Grouping on the Fission and Fusion Illusions. Riku Asaoka, Yasuhiro Takeshima

P3.19 Sensation Transference from Plateware to Food: The Sounds and Tastes of Plates. Yi-Chuan Chen, Andy Woods, Charles Speance

P3.20 Self-Motion Perception Induced by Visual Motion without Luminance Modulation. Shinji Nakamura

P3.21 Dissociating the roles of background color and ipRGCs on audiovisual integration. I-Tan Weng, Yi-Chuan Chen, Li Chu, Akiko Matsumoto, Wakayo Yamashita, Sei-Ichi Tsujimura, Su-Ling Yeh

P3.22 The Influence of Sound on Visual Global Motion Directional Discrimination: An Equivalent Noise Approach. Ang-Ke Ku, Pi-Chun Huang

P3.23 Approaching Auditory Trees Make Wooden Sticks Feel Shorter. Maiko Uesaki, Hiroshi Ashida, Akiyoshi Kitaoka, Achille Pasqualotto

P3.24 The Validity of Facial and Vocal Cues: Testing the Backup Signal Hypothesis. Zhi-Yun Liu, Wei-Lun Chou

P3.25 Approaching Sounds Dilate Perceived Time. Achille Pasqualotto

Social Interaction and Preference

P3.26 Transcranial Direct Current Stimulation over the Medial Prefrontal Cortex Affects the Subjective Experience of Beauty. Koyo Nakamura, Hideaki Kawabata

P3.27 Neuro-behavioral Assessment of Visual Performance and Discomfort in High Luminance Displays. Shun-Nan Yang, Ju Liu, Manho Jang

P3.28 Landscape Preference in Taiwanese School-aged Children. Chien Kai Chang, Hui-Lin Chien, Shu-Fei Yang, Li-Chih Ho

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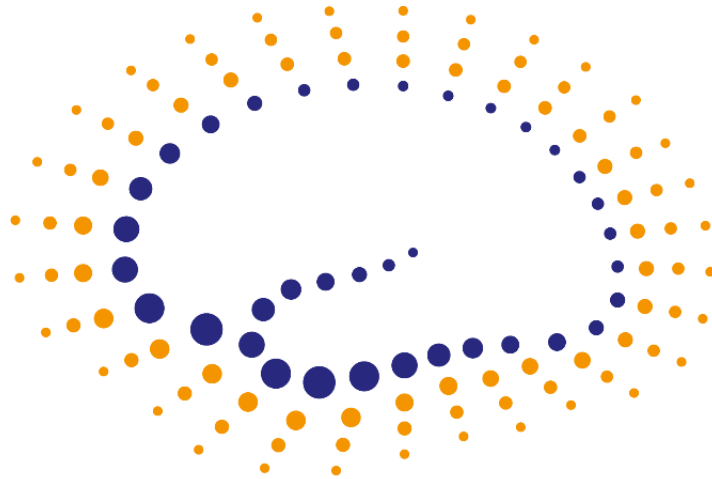
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- Tainan City Government Tourism Bureau



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**NATIONAL CHENG KUNG UNIVERSITY
MIND RESEARCH AND IMAGING**

Tour Guide

Tainan Half-Day Trip

Date: 2017/07/17(Mon)

Duration: 13:30~19:30

Fee: NTD 1,100 per person

* Price includes tour guide fee, bus, dinner, and insurance

Link of booking: <https://dana187.typeform.com/to/ZrUJSL>

(Minimum 17 people are necessary for tour to take place)



Itinerary:

13:30	Departure from NCKU
14:00 - 15:30	Sicao Mangrove Green Tunnel
16:30 - 17:30	Jing-Zai-Jiao Tile-Paved Salt Fields
18:30 - 19:30	Chih Kan Dan Zai Noodles
19:30	Back to NCKU

Description:

Sicao Mangrove Green Tunnel-- A Mini Amazon

Sicao Green Tunnel in Tainan was used to transport salt products from the drying field to the storage back in the days. The canal is 750 meters long and 20 meters wide. The rich habitat of the mangrove the canal cuts through is the wetland environment with the most variety of species and plants in Taiwan. You are able to examine closely to the plants and the species and experience this well reserved wetland along the way. It takes 30 minute raft ride through the well preserved mangrove with greeneries covering the sides and rare species resting randomly in the woods is very relaxing. With a professional guide explaining the history and ecological facts, the ride is also very educational. Even though the ride through the Sihcao Green Tunnel is only around 30 minutes, but most visitors find it romantic and compelling.

Jing-Zai-Jiao Tile-Paved Salt Fields-- A Spectacular Sunset Not To Be Missed

Along the seashore of Tainan in southern Taiwan there are a large number of lands that were traditionally used for making salt. Jingzaijiao tile-paved salt field is the only field in this area where visitors can gain an impression of how traditional salt was made many years ago. The site was originally a barren desert. Lying on the sandy beach is a small sand dune, where underground water gushes out from low-lying ground forming a well-like structure. The name Jingzaijiao was essentially derived from this particular landscape formation. Under the sunshine, the Pottery Salt Pan displays a resplendent, mosaic-like pattern. These features make it a unique cultural landscape of the homeland of salt. It has become an excellent site to experience salt drying.