參與國際頂尖會議與世界接軌

文稿整理／林珮雯

近年來資訊領域學術發表重心逐漸移到頂尖國際會議論文，本院師生在人機互動、電腦視覺及人工智慧等領域的頂尖會議論文發表展現良好成效。本院透過鼓勵研究生參與國際頂尖會議等學術活動，以開拓國際視野，為未來創造更多機會。以下為邀請幾位參與其中同學分享心得：

▌發表論文："I Got Some Free Time": Investigating Task-execution and Task-effort Metrics in Mobile Crowdsourcing Tasks

▌作者：Chia-En Chiang, Yu-Chun Chen, Fang-Yu Lin, Felicia Feng, Hao-An Wu, Hao-Ping Lee, Chang-Hsuan Yang, Yung-Ju Chang

▌指導教授：張永儒老師

▌國際會議名稱：ACM CHI Conference on Human Factors in Computing Systems 2021

▌該會議重要性：ACM CHI 是人機交互領域中最負盛名的會議，囊括許多跨領域的研究，其中主要包含設計、心理、人因、社會學、資訊與傳播等領域。

▌蔣佳恩同學心得分享：

我們實驗室研究訓練紮實，張永儒老師希望我們每個人都有自己的 Project，從選訂題目、實驗設計、執行及結果分析，最後到寫論文，整個走一遍讓我學習到很多，也學會承擔壓力及負責任，不因為遇到挫折放棄，這對我之後在申請到 UC Berkeley 有很大的幫助。我對 HCI 領域還滿有興趣，線上國際會議是很多不同的 session，有報告發表、問答等互動，在 CHI 發表是難得經驗。

▌發表論文：An Unsupervised Video Game Playstyle Metric via State Discretization

▌作者：Chiu-Chou Lin, Wei-Chen Chiu, I-Chen Wu

▌指導教授：吳毅成老師 邱維辰老師

▌國際會議名稱：The Conference on Uncertainty in Artificial Intelligence (UAI 2021)

▌該會議重要性：UAI 是關於人工智慧中不確定性之知識表達、學習與推理解釋領域之頂級國際會議。此會議自 1985 開辦，屬於人工智慧領域中深具歷史且重要的國際會議。本年度共有 777 篇完整投稿，205 篇被接受，接受率約為 26%。

▌林九州同學心得分享：

這是我第一篇成功投稿到 A 級國際會議的論文，也是第二次投稿 UAI 會議，這兩次的審查人員都提供了專業且具體的意見，我個人認為非常適合想研究人工智慧議題的研究者投稿。此次線上會議使用了 Underline.io 這個平台，所有投稿的口說影片都可隨時瀏覽，並可透過網頁平台進行互動，另有一個小鎮互動網頁系統，所有參與者可透過此小鎮進行直接的語音與視訊交流。但因系統方便，同一時間人較少，社交互動仍不如實體會議。

▌發表論文：Bridging the Visual Gap: Wide-Range Image Blending

▌作者：Chia-Ni Lu, Ya-Chu Chang, Wei-Chen Chiu
指導教授：邱維辰老師

▌國際會議名稱：IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021

▌該會議重要性：CVPR 為電腦視覺領域中最頂尖的會議。今年一共約有 5900 篇有效投稿，其中有 1660 篇被接受，接受率為 27% 左右。近年來深度學習與人工智慧越來越熱門，而電腦視覺也被認為是該領域中很重要的發展方向。因此 CVPR 也被公認為是 AI 領域中的頂尖會議之一。

▌呂佳倪同學心得分享：

CVPR 是電腦視覺領域中最頂尖的會議，所以當初得知投稿的論文被接受真的非常開心，但由於疫情的關係，很遺憾的今年依舊是以線上會議的方式舉行，無法實際到美國與其他學者面對面交流。我的報告時段是台灣的晚上十一點到半夜一點半，一開始就有蠻多人進來我的聊天室問問題的，大部分都是針對研究方法的疑問，雖然很緊張但幸好都有順利的解決各國學者的疑惑。到了後半場來的人就比較少，而且比較多是針對研究概念的討論或是提供不同的想法，也有覺得我們的研究很有趣，專程來表達對我們論文的欣賞的人，讓我很驚喜也覺得很榮幸。這次 CVPR 是一次非常愉快的交流經驗，我得到了很多寶貴的建議，也對自己和研究更有信心，並學到如何更清楚地闡述研究概念與想法。

▌發表論文：Collaborative Learning of Multiple-Discontinuous-Image Saliency Prediction for Drone Exploration

▌作者：Ting-Tsan Chu, Po-Heng Chen, Pin-Jie Huang and Kuan-Wen Chen

▌指導教授：陳冠文老師

▌國際會議名稱：IEEE International Conference on Robotics and Automation (ICRA2020)

▌該會議重要性：ICRA 為機器人領域中最重要的會議之一，在 google scholar 的排名也長年盤踞榜單第一名，歷史悠久並且影響力強大。

▌黃品傑同學心得分享：

第一次投稿就可以順利錄取 ICRA 讓我非常開心，以前知道這是個機器人領域的頂級期刊，沒想到有一天可以收錄自己的研究內容。本篇論文將顯著性預測應用在無人機探勘上，以往的顯著性偵測都只應用在單張影像或是一段影片上，但對於無人機自動探勘而言，四周的資訊都需要被考慮，所以我們將顯著性預測應用在多張不連續影像上，同時也是第一篇這類型的研究，我們認為這是一個新穎並且非常值得研究的領域，並且建了一個新的 dataset，以利後續能有更多相關研究。

Attending International Conferences Connecting Students to the World

Over the past few years, publishing academic papers in computer science is more centered around top international conferences. The students and faculty of the College of Computer Science have received significant recognition by presenting their research accomplishments at top international conferences in human-computer interaction, computer vision, and artificial intelligence. Our college encourages graduate students to participate in academic activities such as top international conferences in order to broaden their global vision and further create more opportunities in the future. Some students share their experiences of attending the international conferences as follows:

▌ **Title of Article:** **"I Got Some Free Time": Investigating Task-execution and Task-effort Metrics in Mobile Crowdsourcing Tasks**
▌ **Author:** Chia-En Chiang, Yu-Chun Chen, Fang-Yu Lin, Felicia Feng, Hao-An Wu, Hao-Ping Lee, Chang-Hsuan Yang, Yung-Ju Chang
▌ **Advisor:** Dr. Yung-Ju Chang
▌ **International Conference:** ACM CHI Conference on Human Factors in Computing Systems 2021
The Significance of the conference: The 2021 ACM CHI Virtual Conference on Human Factors in Computing Systems is the premier international conference on Human-Computer Interaction, which

is a multidisciplinary field of study, including design, psychology, human factors, sociology, computer science and communication fields, etc.

▌ **The experience of Chia-En Chiang:**
Our lab has established a solid research and training program. Professor Yung-Ju Chang expects that everyone in the lab has their own project. Starting from choosing a topic, designing an experiment procedure, conducting the execution and result analysis, and finally compiling a paper, I have learned a lot and taken the responsibility from the process, so I would not give up when facing difficulties and challenges. Meanwhile, this experience is a great help for my admission to UC Berkeley. I am very interested in the HCI field. Online international conferences comprise a lot of different sessions, such as presentations and Q&A, etc. It is a memorable experience to present at the CHI Virtual Conference.

▌ **Title of Article:** **An Unsupervised Video Game Playstyle Metric via State Discretization**
▌ **Author:** Chiu-Chou Lin, Wei-Chen Chiu, I-Chen Wu
▌ **Advisor:** Dr. I-Chen Wu, Dr. Wei-Chen Chiu
▌ **International Conference:** The Conference on Uncertainty in Artificial Intelligence (UAI 2021)

▌ **The Significance of the conference:**
The Conference on Uncertainty in Artificial Intelligence (UAI) is one of the premier international conferences on research related to learning and reasoning in the presence of uncertainty. The conference has been held every year since 1985. This year, 777 papers were reviewed and approximately 205 papers were accepted, with an overall acceptance rate of 26%.

▌ **The experience of Chiu-Chou Lin:**
This is not only my first paper that got accepted at a top international conference but also the second paper I have submitted for the UAI conference. The reviewers' comments on both papers provided professional and specific opinions, which, I personally think, benefits greatly to researchers in artificial intelligence. UAI 2021 uses a conference platform (underline.io) this time so every illustration film of paper can be viewed anytime during the opening period and readers can interact one another over a web platform. In addition, participants can utilize a gather.town system to communicate with each other directly by streaming services. However, due to the time difference, less people get online at the same time. Therefore, it is still much easier to build social relations in a face-to-face conference than in a virtual conference.

▌ **Title of Article:** **Bridging the Visual Gap: Wide-Range Image Blending**
▌ **Author:** Chia-Ni Lu, Ya-Chu Chang, Wei-Chen Chiu
▌ **Advisor:** Dr. Wei-Chen Chiu
▌ **International Conference:** IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021
▌ **The Significance of the conference:**
CVPR is one of the top international conferences on computer vision. In this year's CVPR conference, 5,900 papers were reviewed, and 1,660 papers were accepted, with an acceptance rate of 27%. In recent years, deep learning and artificial intelligence have become more and more popular. Computer vision is also considered to be one of a very important developmental direction in the field. Therefore, CVPR is well recognized as one of the top conferences in the AI field.

▌ **The experience of Chia-Ni Lu:**
CVPR is the top international conference on computer vision, so I was so excited when I was informed that my paper was accepted. However, due to the COVID-19 pandemic, I felt sorry that CVPR 2021 was still held online and the

opportunity to the United States to communicate with other scholars was missed. My presentation was between 11:00pm to 1:30am (local time). When the session started, a lot of people flooded into my chat room and raised questions, most of which were related to research methods. At first, I was very nervous, but fortunately I was able to explain details to scholars from various countries so that everything went well. In the second half of session, Fewer people came in. Some of them chatted about my research concepts and the others proposed different ideas. Furthermore, it was not only a surprise but also an honor to me that some people particularly jumped in to express appreciation for our presentation because they thought our research was really inspiring. In summary, it was a very pleasant experience to attend CVPR 2021. In addition to the precious suggestions I have received, I felt more confident about my research and have learned how to present my ideas and research well.

▌ **Title of Article:** **Collaborative Learning of Multiple-Discontinuous-Image Saliency Prediction for Drone Exploration**
▌ **Author:** Ting-Tsan Chu, Po-Heng Chen, Pin-Jie Huang and Kuan-Wen Chen
▌ **Advisor:** Dr. Kuan-Wen Chen
▌ **International Conference:** IEEE International Conference on Robotics and Automation (ICRA 2020)
▌ **The Significance of the conference:**
ICRA is one of the largest robotics meetings in the world. With a long history and great impact, ICRA is the flagship conference of the IEEE Robotics & Automation Society in Google scholar.
▌ **The experience of Pin-Jie Huang:**
I was very happy when I was informed that my very first paper was accepted at ICRA 2020. I knew that ICRA is a top international journal on robotics research, but I never expected to present my research at ICRA. My research applied a saliency prediction method to drone exploration. In the past, saliency detection methods were applied to a single image or a video. However, regarding automated drone exploration, all the surroundings should be taken into consideration. Therefore, we applied a saliency prediction method to multiple discontinuous images, which was the first trial to take this approach on drone exploration over the world. We strongly believe that it is a novel and research-worthy topic, and we have built a new dataset to facilitate the follow-up studies.