

# Ting-Hao ‘Kenneth’ Huang 黃挺豪

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## Appointments

- **Pennsylvania State University**, University Park, PA, USA, 08/2018 – Present.  
*Assistant Professor*, College of Information Sciences and Technology (IST)
  - Affiliation: Center for Social Data Analytics (C-SoDA), Fall 2018 – Present
  - Affiliation: Center for Socially Responsible Artificial Intelligence (CSRAI), 10/2021 – Present
- **Carnegie Mellon University**, Pittsburgh, PA, USA, 09/2013 – 08/2018.  
*PhD Research Assistant*, Advisor: Dr. Jeffrey P. Bigham.
- **Institute of Information Science, Academia Sinica**, Taipei, Taiwan, 01/2016 – 02/2016.  
*Visiting Scholar*, Host: Dr. Lun-Wei Ku.
- **Microsoft Research**, Redmond, WA, USA, 05/2015 – 08/2015.  
*PhD Research Intern*, Host: Dr. Margaret Mitchell.
- **Carnegie Mellon University**, Pittsburgh, PA, USA, 09/2011 – 08/2013.  
*Graduate Research Assistant*, Advisor: Dr. Teruko Mitamura.
- **National Taiwan University**, Taipei, Taiwan, 09/2006 – 06/2011.  
*Undergraduate/Graduate Research Assistant*, Advisor: Dr. Hsin-Hsi Chen.

## Selected Awards and Honors

- Best Paper Award, Asian CHI Symposium 2021
- Outstanding Paper Award (Top 2.5%), IUI 2019
- Honourable Mention Award (Top 5%), CHI 2018
- Best Paper Honorable Mention Award (Top 5%), CHI LBW 2016
- Yahoo! Fellowship of the InMind project at CMU, 2014 – 2018
- Best Poster Award, LTI Student Research Symposium 2013

## Education

- **Ph.D. in Computer Science, Carnegie Mellon University, 2013 – 2018**  
Language and Information Technologies (LTI), School of Computer Science  
*Advisor: Dr. Jeffrey P. Bigham.*
- **M.S. in Computer Science, Carnegie Mellon University, 2011 – 2013**  
Language and Information Technologies (LTI), School of Computer Science  
*Advisor: Dr. Teruko Mitamura.*
- **M.S. in Computer Science, National Taiwan University, 2007 – 2009**  
The Graduate Institute of Networking and Multimedia  
*Advisors: Dr. Hsin-Hsi Chen.*
- **B.S. in Computer Science & B.A. in Chinese Literature, National Taiwan University, 2003 – 2007**

Dept. Computer Science and Information Engineering  
 Dept. Chinese Literature (Double Major)

## Peer-Reviewed Conference Papers

- [C.28] Hua Shen, Tongshuang Wu, Wenbo Guo, **Ting-Hao K. Huang**. (2022). Are Shortest Rationales the Best Explanations For Human Understanding? Proc. 60th Annual Meeting of the Association for Computational Linguistics (**ACL 2022**). May 22-27, 2022. Online and in Dublin.
- [C.27] Chi-Yang Hsu, Yun-Wei Chu, Vincent Chen, Kuan-Chieh Lo, Chacha Chen, **Ting-Hao K. Huang**, Lun-Wei Ku. (2022). Learning to Rank Visual Stories From Human Ranking Data. Proc. 60th Annual Meeting of the Association for Computational Linguistics (**ACL 2022**). May 22-27, 2022. Online and in Dublin.
- [C.26] Ting-Yao Hsu, C. Lee Giles and **Ting-Hao K. Huang**. (2021). SciCap: Generating Captions for Scientific Figures. Findings of 2021 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2021 Findings**). November 7-11, 2021. Online and in the Barceló Bávaro Convention Centre, Punta Cana, Dominican Republic. (Main Conference + Findings Acceptance Rate = 35%)  
*Poster Presentation at the 7th Workshop on Noisy User-generated Text (W-NUT 2021, together with EMNLP 2021)*
- [C.25] Zhiyu Chen, Wenhui Chen, Charese Smiley, Sameena Shah, Iana Borova, Dylan Langdon, Reema Moussa, Matt Beane, **Ting-Hao K. Huang**, Bryan R. Routledge, and William Yang Wang. (2021). FinQA: A Dataset of Numerical Reasoning over Financial Data. Proc. 2021 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2021**). November 7-11, 2021. Online and in the Barceló Bávaro Convention Centre, Punta Cana, Dominican Republic. (Main Conference Acceptance Rate = 23.3%)
- [C.24] Yanjun Gao, **Ting-Hao K. Huang** and Rebecca J. Passonneau. (2021). ABCD: A Graph Framework to Convert Complex Sentences to a Covering Set of Simple Sentences. Proc. Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (**ACL-IJCNLP 2021**). August 2-4, 2021. Virtual Conference. (Acceptance Rate = 21%)
- [C.23] Chi-Yang Hsu, Yun-Wei Chu, **Ting-Hao K. Huang** and Lun-Wei Ku. (2021). Plot and Rework: Modeling Storylines for Visual Storytelling. Findings of the Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (**ACL-IJCNLP 2021 Findings**). August 2-4, 2021. Virtual Conference. (Acceptance Rate = 36%)
- [C.22] Chieh-Yang Huang, **Ting-Hao K. Huang**. (2021). Semantic Frame Forecast. Proc. 2021 Annual Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL-HLT 2021**). June 6-11, 2021. Virtual Conference. (Acceptance Rate = 26%)
- [C.21] Yen-Chia Hsu, **Ting-Hao K. Huang**, Ting-Yao Hu, Paul Dille, Sean Prendi, Ryan Hoffman, Anastasia Tsuhlares, Jessica Pachuta, Randy Sargent, Illah Nourbakhsh. (2021). Project RISE: Recognizing Industrial Smoke Emissions. Proc. Thirty-Fifth AAAI Conference on Artificial Intelligence (**AAAI 2021**), AI for Social Impact Track. February 2-9, 2021. Virtual Conference. (Acceptance Rate = 21%)
- [C.20] Yun-Hsuan Jen, Chieh-Yang Huang, Mei-Hua Chen, **Ting-Hao K. Huang**, Lun-Wei Ku. (2020) Assessing the Helpfulness of Learning Materials with Inference-Based Learner-Like Agent. Proc. the 2020 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2020**), November 16 - 20, 2020. (Acceptance Rate = 22.4%)
- [C.19] Hua Shen, **Ting-Hao K. Huang**. (2020). How Useful Are the Machine-Generated Interpretations to General Users? A Human Evaluation on Guessing the Incorrectly Predicted Labels. Proc. the 8th AAAI Conference on Human Computation and Crowdsourcing (**HCOMP 2020**), October 26

- 28, 2020, Hilversum, NL.

- [C.18] Chieh-Yang Huang, Shih-Hong Huang, **Ting-Hao K. Huang**. (2020). Heteroglossia: In-Situ Story Ideation with the Crowd. In Proceedings of Conference on Human Factors in Computing Systems 2020 (**CHI 2020**), April 25 - 30, 2020, Honolulu, Hawai’i, USA. (Acceptance Rate = 24.31%)
- [C.17] Chao-Chun Hsu, Zi-Yuan Chen, Chi-Yang Hsu, Chih-Chia Li, Tzu-Yuan Lin, **Ting-Hao K. Huang**, Lun-Wei Ku. (2020). Knowledge-Enriched Visual Storytelling. In Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (**AAAI 2020**), February 7 - 12, 2020, New York, USA. (Acceptance Rate = 20.6%)
- [C.16] Ting-Yao Hsu, Chieh-Yang Huang, Yen-Chia Hsu, **Ting-Hao K. Huang**. (2019). Visual Story Post-Editing. In Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (**ACL 2019**), July 28 - August 2, 2019, Florence, Italy. (Short Paper Acceptance Rate = 18.2%; Overall Acceptance Rate = 22.7%)
- 👤 [C.15] Yen-Chia Hsu, Jennifer Cross, Paul Dille, Michael Tasota, Beatrice Dias, Randy Sargent, **Ting-Hao K. Huang**, Illah Nourbakhsh. (2019). Smell Pittsburgh: Community-Empowered Mobile Smell Reporting System. In Proceedings of the 24th annual meeting of the Intelligent User Interfaces (**IUI 2019**), March 17-20 2019, Los Angeles, USA. (Acceptance Rate = 25%)  
[Outstanding Paper Award, Top 2.5% \(7 out of 282 submissions\)](#)
- [C.14] Sheng-Yeh Chen, Chao-Chun Hsu, Chuan-Chun Kuo, **Ting-Hao K. Huang**, Lun-Wei Ku. (2018). EmotionLines: An Emotion Corpus of Multi-Party Conversations. In Proceedings of the 11th edition of the Language Resources and Evaluation Conference (**LREC 2018**), 7-12 May 2018, Miyazaki, Japan.
- 👤 [C.13] **Ting-Hao K. Huang**, Joseph Chee Chang, Jeffrey P. Bigham. (2018). Evorus: A Crowd-powered Conversational Assistant Built to Automate Itself Over Time. In Proceedings of Conference on Human Factors in Computing Systems 2018 (**CHI 2018**), 2018, Montréal, Canada. (Acceptance Rate = 25.8%)  
[Honourable Mention Award, Top 5% \(101 out of 2500 submissions\)](#)
- [C.12] **Ting-Hao K. Huang**, Jeffrey P. Bigham. (2017). A 10-Month-Long Deployment Study of On-Demand Recruiting for Low-Latency Crowdsourcing. In Proceedings of The fifth AAAI Conference on Human Computation and Crowdsourcing (**HCOMP 2017**), 2017, Quebec City, Canada. (Acceptance Rate = 28.9%)
- [C.11] Saiganesh Swaminathan, Raymond Fok, Fanglin Chen, **Ting-Hao K. Huang**, Irene Lin, Rohan Jadvani, Walter S. Lasecki, Jeffrey P. Bigham. (2017). WearMail: On-the-Go Access to Information in Your Email with a Privacy-Preserving Human Computation Workflow. In Proceedings of 30th ACM Symposium on User Interface Software and Technology (**UIST 2017**), 2017, Quebec City, Canada. (Acceptance Rate = 22.5%)
- [C.10] **Ting-Hao K. Huang**, Yun-Nung Chen, Jeffrey P. Bigham. (2017). Real-time On-Demand Crowd-powered Entity Extraction. In Proceedings of the 5th Edition Of The Collective Intelligence Conference (**CI 2017**, oral presentation), 2017, New York University, NY, USA.
- [C.9] **Ting-Hao K. Huang**, Walter S. Lasecki, Amos Azaria, Jeffrey P. Bigham. (2016). “Is there anything else I can help you with?”: Challenges in Deploying an On-Demand Crowd-Powered Conversational Agent. Conference on Human Computation & Crowdsourcing (**HCOMP 2016**), November, 2016, Austin, TX, USA. (Acceptance Rate = 30.3%).
- [C.8] **Ting-Hao K. Huang**, Francis Ferraro, Nasrin Mostafazadeh, Ishan Misra, Jacob Devlin, Aishwarya Agrawal, Ross Girshick, Xiaodong He, Pushmeet Kohli, Dhruv Batra, Larry Zitnick, Devi Parikh, Lucy Vanderwende, Michel Galley, Margaret Mitchell. (2016). Visual Storytelling. In proc. the 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL 2016**), June, 2016, San Diego, CA, USA. (Acceptance Rate = 29%).
- [C.7] **Ting-Hao K. Huang**, Walter S. Lasecki, Jeffrey P. Bigham. (2015). Guardian: A Crowd-

Powered Spoken Dialog System for Web APIs. Conference on Human Computation & Crowdsourcing (**HCOMP 2015**), November, 2015, San Diego, USA. (Acceptance Rate = 30%).

- [C.6] Francis Ferraro, Nasrin Mostafazadeh, **Ting-Hao K. Huang**, Lucy Vanderwende, Jacob Devlin, Michel Galley, Margaret Mitchell. (2015). A Survey of Current Datasets for Vision and Language Research. Conference on Empirical Methods in Natural Language Processing (**EMNLP 2015**), September, 2015, Lisbon, Portugal. (Acceptance Rate = 24%, 312/1315).
- [C.5] Ho-Cheng Yu, **Ting-Hao K. Huang**, Hsin-Hsi Chen. (2012). Domain Dependent Word Polarity Analysis for Sentiment Classification. Proceedings of the 24th ROCLING (**ROCLING 2012**) conference.
- [C.4] Lun-Wei Ku, **Ting-Hao K. Huang**, Hsin-Hsi Chen. (2011). Predicting Opinion Dependency Relations for Opinion Analysis. Proceeding of IJCNLP (**IJCNLP 2011**). (Acceptance Rate = 36%)
- [C.3] **Ting-Hao K. Huang**, Lun-Wei Ku, Hsin-Hsi Chen. (2010). Predicting Morphological Types of Chinese Bi-Character Words by Machine Learning Approaches. Proceedings of LREC (**LREC 2010**), Malta, pp. 844–850.
- [C.2] Lun-Wei Ku, **Ting-Hao K. Huang**, and Hsin-Hsi Chen. (2010). Construction of a Chinese Opinion Treebank. Proceeding of LREC (**LREC 2010**), Malta, pp. 1315–1319.
- [C.1] Lun-Wei Ku, **Ting-Hao K. Huang**, and Hsin-Hsi Chen. (2009). Using Morphological and Syntactic Structures for Chinese Opinion Analysis. Proceedings of EMNLP (**EMNLP 2009**), Singapore, pp. 1260–1269. (Acceptance Rate = 34%)

## Peer-Reviewed Journal Articles

- [J.5] Yen-Chia Hsu, **Ting-Hao K. Huang**, Himanshu Verma, Andrea Mauri, Illah Nourbakhsh, Alessandro Bozzon. Empowering Local Communities Using Artificial Intelligence. *Patterns*. Volume 3, Issue 3, 100449, March 11, 2022. DOI: <https://doi.org/10.1016/j.patter.2022.100449>. (Published)
- [J.4] Yen-Chia Hsu, Jennifer Cross, Paul Dille, Michael Tasota, Beatrice Dias, Randy Sargent, **Ting-Hao K. Huang**, Illah Nourbakhsh. Smell Pittsburgh: Engaging Community Citizen Science for Air Quality. *ACM Transactions on Interactive Intelligent Systems (TIIS)*. 10, 4, Article 32 (November 2020), 49 pages. DOI: <https://doi.org/10.1145/3369397>. (Published)
- [J.3] **Ting-Hao K. Huang**, Amos Azaria, Oscar Romero, Jeffrey P. Bigham. InstructableCrowd: Creating IF-THEN Rules for Smartphones via Conversations with the Crowd. *Human Computation* (2019) 6:1:113-146. ISSN: 2330-8001, DOI: 10.15346/hc.v6i1.7. (Published)
- [J.2] **Ting-Hao K. Huang**: Social Metaphor Detection via Topical Analysis. *International Journal of Computational Linguistics and Chinese Language Processing (IJCLCLP)*, 19(2) (2014). (Published)
- [J.1] Ho-Cheng Yu, **Ting-Hao K. Huang**, and Hsin-Hsi Chen. (2012). Domain Dependent Word Polarity Analysis for Sentiment Classification. *International Journal of Computational Linguistics and Chinese Language Processing (IJCLCLP)*, 17(3-4): Special Issue on ROCLING 2012. (Published)

## Position Papers

- [P.4] Andrea Mauri, Yen-Chia Hsu, Marco Brambilla, Aisling Ann O’Kane, **Ting-Hao K. Huang**, Himanshu Verma (2020). Empathy-Centric Design At Scale. Accepted at Workshops at the 2022 CHI Conference on Human Factors in Computing Systems (CHI 2022). April, 2022.
- [P.3] Yun-Nung V. Chen, **Ting-Hao K. Huang**. (2020). Gaps Between “Talking Machines” and Modern Dialogue System Research. Position paper in the Workshop on Artificial Intelligence for HCI: A Modern Approach (**AI4HCI 2020**). April 25, 2020. Honolulu, Hawaii, USA.

- [P.2] **Ting-Hao K. Huang.** (2019). On Automating Conversations. Invited position paper in the Artificial Intelligence and Work: AAAI 2019 Fall Symposium (**AAAI FSS 2019**). November 7-9, 2019. Arlington, VA, USA.
- [P.1] Patricia Simon, Suchitra Krishnan-Sarin, **Ting-Hao K. Huang.** (2019). On Using Chatbots to Promote Smoking Cessation Among Adolescents of Low Socioeconomic Status. Selected for round-table discussion in the Artificial Intelligence and Work: AAAI 2019 Fall Symposium (**AAAI FSS 2019**). November 7-9, 2019. Arlington, VA, USA.

## Workshop, Symposia, and Consortia Papers

- [W.10] Learning Clause Representation from Dependency-Anchor Graph for Connective Prediction. Workshop of Graph-based Algorithms for Natural Language Processing (**TextGraphs-15**) at NAACL 2021. Yanjun Gao, **Ting-Hao K. Huang**, and Rebecca J. Passonneau. June 11, 2021. Virtual Event.
- [W.9] Shen Hua, **Ting-Hao K. Huang.** (2021). Explaining the Road Not Taken. CHI 2021 Workshop on Operationalizing Human-centered Perspectives in Explainable AI (**HCTXAI2021**). May 8-9, 2021. Virtual Event.
- 🏆 [W.8] \*Tongan Cai, \*Chacha Chen, **Ting-Hao K. Huang**, Frank E. Ritter. (2021). What Makes A Good Reference Manager? A Quantitative Analysis of Bibliography Management Applications. Asian CHI Symposium 2021 (**AsianCHI2021**). May 7-8, 2021. Online Virtual Symposium. [Best Paper Award \(For Receiving the Highest Score from Expert Reviewers\)](#)
- [W.7] Shih-Han Chan, Tsai-Lun Yang, Yun-Wei Chu, Chi-Yang Hsu, **Ting-Hao K. Huang**, Yu-Shian Chiu and Lun-Wei Ku. (2021). Let’s Talk! Striking Up Conversations via Conversational Visual Question Generation. AAAI 2021 Workshop (W22) on Reasoning and Learning for Human-Machine Dialogues (**DEEP-DIAL 2021**). February 2-9, 2021. Virtual Conference.
- [W.6] **Ting-Hao K. Huang**, Chieh-Yang Huang, Chien-Kuang Cornelia Ding, Yen-Chia Hsu, C. Lee Giles. (2020). CODA-19: Using a Non-Expert Crowd to Annotate Research Aspects on 10,000+ Abstracts in the COVID-19 Open Research Dataset. Proc. NLP COVID-19 Workshop @ACL 2020 (**COVID-NLP 2020**). July 9-10, 2020.
- [W.5] Saiganesh Swaminathan, **Ting-Hao K. Huang**, Irene Lin, Anhong Guo, Gierad Laput, and Jeffrey P. Bigham. (2017). Epistemo: A Crowd-Powered Conversational Search Interface. In the Talking with Conversational Agents in Collaborative Action Workshop at the 20th ACM conference on Computer-Supported Cooperative Work and Social Computing.
- [W.4] Chieh-Yang Huang, **Ting-Hao K. Huang**, Lun-Wei Ku. (2017). Challenges in Providing Automatic Affective Feedback in Instant Messaging Applications. In the Designing the User Experience of Machine Learning Systems symposium (**AAAI 2017 Spring Symposium Series**), March 27-29, 2017, Palo Alto, USA.
- [W.3] **Ting-Hao K. Huang.** Crowd-Powered Conversational Agents. Doctoral Consortium of Conference on Human Computation & Crowdsourcing (**HCOMP DC 2016**), 2016, Austin, TX, USA.
- 👤 [W.2] **Ting-Hao K. Huang**, Yun-Nung Chen, Lingpeng Kong. (2015). ACBiMA: Advanced Chinese Bi-Character Word Morphological Analyzer. The 8th SIGHAN Workshop on Chinese Language Processing (**SIGHAN 2015**), July 30-31, 2015, Beijing, China. (Acceptance Rate = 29%). [Best Poster Award of LTI Student Research Symposium 2013](#)
- [W.1] **Ting-Hao K. Huang.** (2013). Social Metaphor Detection via Topical Analysis. IJCNLP 2013 Workshop on Natural Language Processing for Social Media (**SocialNLP 2013**), pages 14–22, Nagoya, Japan, 14 October 2013. (Acceptance Rate = 35%).

## Demos

- [D.5] Chi-Yang Hsu, Yun-Wei Chu, Tsai-Lun Yang, **Ting-Hao K. Huang**, and Lun-Wei Ku. Stretch-VST: Getting Flexible With Visual Stories. ACL-IJCNLP Demo Track 2021 (**ACL Demo 2021**).
- [D.4] Chao-Chun Hsu, Yu-Hua Chen, Zi-Yuan Chen, Hsin-Yu Lin, **Ting-Hao K. Huang**, and Lun-Wei Ku. Dixit: Interactive Visual Storytelling via Term Manipulation. In the Demo track of The Web Conference 2019 (**TheWebConf Demo 2019**).
- [D.3] Chieh-Yang Huang, Tristan Labetoulle, **Ting-Hao K. Huang**, Yi-Pei Chen, Hung-Chen Chen, Vallari Srivastava, and Lun-Wei Ku. MoodSwipe: A Soft Keyboard that Suggests Messages Based on User-Specified Emotions. In the Demo track of the Conference on Empirical Methods in Natural Language Processing 2017 (**EMNLP Demo 2017**), Sep, 2017, Copenhagen, Denmark.
- [D.2] Shih-Ming Wang, Chun-Hui Li, Yu-Chun Lo, **Ting-Hao K. Huang**, Lun-Wei Ku. (2016). Sensing Emotions in Text Messages: An Application and Deployment Study of EmotionPush. In the demo track of the 26th International Conference on Computational Linguistics (**COLING Demo 2016**), Dec, 2016, Osaka, Japan.
- [D.1] **Ting-Hao K. Huang**, Ho-Cheng Yu and Hsin-Hsi Chen. (2012). Modeling Pollyanna Phenomena in Chinese Sentiment Analysis. In the demo track of the COLING 2012 (**COLING Demo 2012**).

## Posters and Extended Abstracts

- [A.6] Johnna Blair, Chi-Yang Hsu, Ling Qiu, Shih-Hong Huang, **Ting-Hao K. Huang**, Saeed Abdullah. Using Tweets to Assess Mental Well-being of Essential Workers During the COVID-19 Pandemic. In CHI’21 Late-Breaking Work on Human Factors in Computing Systems (**CHI Late-Breaking-Work 2021**), 2021.
- [A.5] Ting-Yao Hsu, Yen-Chia Hsu, **Ting-Hao K. Huang**. On How Users Edit Computer-Generated Visual Stories. In CHI’19 Late-Breaking Work on Human Factors in Computing Systems (**CHI Late-Breaking-Work 2019**), 2019.
- [A.4] Jeffrey P. Bigham, Raja Kushalnagar, **Ting-Hao K. Huang**, Juan Pablo Flores and Saiph Savage. On How Deaf People Might Use Speech to Control Devices. In the Poster track ASSETS 2017 (**ASSETS Poster 2017**), October, 2017. Baltimore, Maryland.
- [A.3] **Ting-Hao K. Huang**, Joseph Chee Chang, Saiganesh Swaminathan, Jeffrey P. Bigham. Evorus: A Crowd-powered Conversational Assistant That Automates Itself Over Time. In the Poster track of the 20th ACM Symposium on User Interface Software and Technology (**UIST Poster 2017**), October, 2017. Quebec City, Canada.
- 🏆 [A.2] **Ting-Hao K. Huang**, Amos Azaria, Jeffrey P. Bigham. (2016). InstructableCrowd: Creating IF-THEN Rules via Conversations with the Crowd. In CHI ‘16 Late-Breaking Work on Human Factors in Computing Systems (**CHI LBW 2016**), May, 2016, San Jose, CA, USA.  
[Best Paper Honorable Mention Award, Top 5% \(14 out of 281\)](#)
- [A.1] **Ting-Hao K. Huang**, Walter S. Lasecki, Alan L. Ritter, Jeffrey P. Bigham. (2014). Combining Non-Expert and Expert Crowd Work to Convert Web APIs to Dialog Systems. Work-in-Progress paper in the Proceeding of Conference on Human Computation and Crowdsourcing (**HCOMP WIP 2014**), November 2-4, 2014, Pittsburgh, USA.

## Theses

- [T.2] **Ting-Hao K. Huang**. (2018). A Crowd-Powered Conversational Assistant That Automates Itself Over Time. PhD Dissertation, Language Technologies Institute, Carnegie Mellon University, Pittsburgh, PA, USA. 2018.
- [T.1] **Ting-Hao K. Huang**. (2009). Automatic Extraction of Intra- and Inter- word Syntactic Struc-

tures for Chinese Opinion Analysis (應用於中文意見分析之詞內暨詞間語法結構自動擷取研究). Master thesis, Graduate Institute of Networking and Multimedia (GINM), National Taiwan University, Taipei.

## Grants and Other Support

- [G.10] **Curating a Dataset for Common Logical Fallacies in Online Conversations**  
Meta Research (Research Award, RFP: Mephisto Dataset Collection Tool)  
*Principal Investigator*, June 2022, \$41,500 USD
- [G.9] **Captioning Charts and Insights in Adobe AEP at Scale**  
Adobe Research (Unrestricted Gift)  
*Principal Investigator*, May 2022, \$15,000 USD  
*With Dr. C. Lee Giles (Co-PI)*
- [G.8] **Promoting Algorithmic Fairness in Educational Technology**  
Penn State CSRAI Seed Fund 2021 (Research Award)  
*Principal Investigator*, Spring 2022, \$24,600 USD; IST additionally provided matching funds of \$15,000 USD  
*With Dr. Roger Beaty (Department of Psychology, Co-PI)*
- [G.7] **CODA-19: Using a Non-Expert Crowd to Annotate Research Aspects on 10,000+ Abstracts in the COVID-19 Open Research Dataset**  
Toloka (Research Award)  
*Principal Investigator*, Fall 2021, \$500 USD Toloka credit.  
*Toloka additionally sponsored my “IST597: Crowdsourcing & Crowd-AI Systems” course by providing tutorials and \$100 Toloka credit for each student.*
- [G.6] **Using Social Media to Assess and Support Mental Wellbeing of Essential Workers**  
Penn State C-SoDA Accelerator Award (Research Award)  
*Principal Investigator*, Spring 2021, \$15,724 USD  
*With Dr. Saeed Abdullah (Co-PI)*
- [G.5] **Annotating COVID-19 Papers Rapidly Using Non-Expert Crowd**  
College of IST COVID-19 Seed Fund (Research Award)  
*Principal Investigator*, Spring 2020, \$17,000 USD  
*With Dr. C. Lee Giles (Co-PI)*
- [G.4] **Annotating COVID-19 Papers Rapidly Using Non-Expert Crowd**  
Huck Institutes of the Life Sciences’ Coronavirus Research Seed Fund (CRSF) (Research Award)  
*Principal Investigator*, Spring 2020, \$30,000 USD  
*With Dr. C. Lee Giles (Co-PI)*
- [G.3] **Neural Caption Generation for Scientific Figures**  
College of Information Sciences and Technology Seed Grant (Research Award)  
*Principal Investigator*, Spring 2020, \$51,000 USD  
*With Dr. C. Lee Giles (Co-PI)*
- [G.2] **Visual Storytelling: Generation, Post-Editing, and Applications**  
College of Information Sciences and Technology Seed Grant (Research Award)  
*Principal Investigator*, Spring 2019, \$51,000 USD
- [G.1] **Regional Differences in Opinions Toward Climate Change Among Twitter Users**  
PSU Twitter Data for Social Science Research Seed Grants (Level-2) (Research Award)  
*Principal Investigator*, March 2019, \$20,000 USD; IST additionally provided matching funds of \$10,000 USD  
*With Dr. John Yen (IST, Co-PI) and Dr. Guangqing Chi (Department of Agricultural Economics, Sociology, and Education, Co-PI)*

## Professional Activity

- Demo and Work-in-Progress Co-Chairs, HCOMP 2022.
- Organizer, The First Workshop on Intelligent and Interactive Writing Assistants (In2Writing), 2022 (co-located with ACL 2022).
- Organizer, CHI2022 workshop EmpathiCH: Empathy-Centric Design At Scale.
- Associate Chair (AC), UIST 2021/2022.
- CrowdCamp Co-Chair, HCOMP 2021.
- Reviewers for an NSF panel, 2020.
- Organizer, Workshop on Storytelling 2018 (co-located with NAACL-HLT), 2019 (co-located with ACL).
- Organizer, Visual Storytelling Challenge at ICCV17’s 2nd workshop on Closing the Loop Between Vision and Language, Venice, Italy.
- Conference Paper Reviewer / PC Member: CHI 2017/2018/2019/2020/2021, CSCW 2018/2019/2020/2021, IMWUT (2017/2021), UIST 2018/2019/2020/2021, TheWebConf 2019/2020
- Workshop Reviewer / PC Member: CHI LBW 2018, SocialNLP 2016, user2agent 2019

## Selected Invited Talks

- *Visual Storytelling*. Invited Talk, **Samsung AI Center, Cambridge, UK**. May 16, 2022. (Host: Victor Escorcia)
- *Visual Storytelling*. Guest Lecture, Interactive Fiction and Text Generation (CIS 700), **University of Pennsylvania**. April 19, 2022. (Host: Dr. Lara Martin and Dr. Chris Callison-Burch)
- *Crowdsourcing and Crowd-AI Systems*. Guest Lecture, Social Data Analytics Seminar (SoDA 501), **Pennsylvania State University (University Park)**. April 7, 2022. (Host: Dr. Burt Monroe)
- *To Run Where the Brave Dare Not Go: The Future of Human-AI Systems*. Guest Lecture, Human-AI Course (EECS-598), **University of Michigan**. March 23, 2022. (Host: Dr. Anhong Guo)
- *To Run Where the Brave Dare Not Go: The Future of Human-AI Systems* (奔赴未竟之地：人與人工智慧協作的未來). Invited Talk, “**NExT Forum on AI and Next-Generation Communication**”, Taiwan (Virtual). June 6, 2021. (Host: NExT Forum)
- *Toward Future Crowd-AI Systems*. Guest Lecture, Crowdsourcing & Human Computation (NETS 213), **University of Pennsylvania**. Apr 6, 2021. (Host: Dr. Chris Callison-Burch)
- *Crowd-AI Systems that Support Story Writing*. Invited Talk, Institute of Information Science (IIS), **Academia Sinica, Taiwan**. Dec 30, 2019. (Host: Dr. Lun-Wei Ku)
- *On Automating Conversations*. Invited Panelist, Artificial Intelligence and Work: AAAI 2019 Fall Symposium (**AAAI FSS 2019**), Arlington, VA, USA. November 7-9, 2019. (Host: Dr. Kevin Crowston)
- *Crowdsourcing and Crowd-AI Systems*. Invited Speaker, **National Center for High-Performance Computing**, Taiwan. Dec 19, 2019. (Host: Dr. Yeong-Her Wang)
- *Crowd Research: Data, Workflows, and Crowd-AI Systems*. Invited Speaker, “**Information Retrieval meets Artificial Intelligence**” **Workshop**, Taipei, Taiwan. Dec 12, 2018. (Host: Dr. Lun-Wei Ku)
- *Crowd Research: Labels, Workflows, and Crowd-Powered Systems*. Invited Speaker, IEEE/IBM Watson Talk Series, **West Virginia University**. Nov 13, 2017. (Host: Dr. Saiph Savage)
- *Crowd Research: Labels, Workflows, and Crowd-Powered Systems*. Invited Speaker, Department of Computer Science and Information Engineering (CSIE), **National Taiwan University**, Taiwan. Sep 29, 2017. (Host: Dr. Hsin-Hsi Chen)
- *Crowd Research: Labels, Workflows, and Crowd-Powered Systems*. Invited Speaker, Institute of Information Science (IIS), **Academia Sinica, Taiwan**. Sep 26, 2017. (Host: Dr. Lun-Wei Ku)



## Selected Media Coverage

- [M.16] **PSU News.** Jessica Hallman. (June 09, 2021).  
Essential workers’ tweets show surprising positivity during pandemic.  
<https://www.psu.edu/news/research/story/essential-workers-tweets-show-surprising-positivity-during-pandemic/>
- [M.15] **Eyes on Place (眼底城事).** Yen-Chia Hsu (Invited Article). (Mar 19, 2021).  
社區公民科學：用開放數位平台的技術與公民合作解決都市環境問題。  
<https://eyesonplace.net/2021/03/19/16600/>
- [M.14] **PSU News.** Jessica Hallman. (October 26, 2020).  
Users don’t understand computer explanations for image labeling errors.  
<https://news.psu.edu/story/636629/2020/10/26/research/users-don't-understand-computer-explanations-image-labeling-errors>
- [M.13] **PSU News.** Jordan Ford. (April 17, 2020).  
Human and AI annotations aim to improve scholarly results in COVID-19 searches.  
<https://news.psu.edu/story/616031/2020/04/17/research/human-and-ai-annotations-aim-improve-scholarly-results-covid-19>
- [M.12] **PSU News.** Jessica Hallman. (March 13, 2020).  
Crowdsourcing plot lines to help the creative process.  
<https://news.psu.edu/story/611778/2020/03/13/research/crowdsourcing-plot-lines-help-creative-process>
- [M.11] **WTAE TV News.** Janelle Hall. (Feb 8, 2018).  
Meet the “Chorus” chatbot: Unlike Alexa or Siri, it’s powered by actual people on the other end.  
<http://www.wtae.com/article/chorus-chatbot-carnegie-mellon-university-pittsburgh/16870459>
- [M.10] **TribLive.** Aaron Aupperlee. (Feb 8, 2018).  
Chatbot developed at Carnegie Mellon uses humans to answer questions AIs can’t.  
<http://triblive.com/business/technology/13275597-74/chatbot-developed-at-carnegie-mellon-uses-humans-to-answer-questions-ais-cant>
- [M.9] **pressetext.** Sabrina Manzey. (Feb 8, 2018).  
KI-System “Evorus” wird zunehmend eigenständig: Von Menschen lernendes System beantwortet immer komplexere Fragen.  
<https://www.pressetext.com/news/20180208014>
- [M.8] **CMU SCS News.** Byron Spice. (Feb 7, 2018).  
Crowd Workers, AI Make Conversational Agents Smarter.  
<https://www.cs.cmu.edu/news/crowd-workers-ai-make-conversational-agents-smarter>
- [M.7] **EurekAlert!.** Carnegie Mellon University. (Feb 7, 2018).  
Crowd workers, AI make conversational agents smarter: Human/machine hybrid system can answer wide array of questions.  
<https://www.eurekalert.org/pub.releases/2018-02/cmu-cwa020618.php>
- [M.6] **The Register.** Thomas Claburn. (Aug 14, 2017).  
Dismayed by woeful AI chatbots, boffins hired real people – and went back to square one.  
[https://www.theregister.co.uk/2017/08/14/chat\\_bots\\_work\\_better\\_with\\_people/](https://www.theregister.co.uk/2017/08/14/chat_bots_work_better_with_people/)
- [M.5] **The Stack.** Martin Anderson. (April 14, 2016).  
Microsoft releases data-set for “emotional” automated captioning.  
<https://thestack.com/cloud/2016/04/14/microsoft-sind-dataset-captioning-narrative/>
- [M.4] **Microsoft Official Blog.** Allison Linn. (April 14, 2016).  
Teaching computers to describe images as people would.

<http://blogs.microsoft.com/next/2016/04/14/teaching-computers-to-describe-images-as-people-would/>

[M.3] **VentureBeat.** Jordan Novet. (April 14, 2016).

Microsoft researchers are teaching AI to write stories about groups of photos.

<http://venturebeat.com/2016/04/14/microsoft-ai-visual-storytelling/>

[M.2] **Wired.** Wired. (April 15, 2016).

WIRED Awake: 10 must-read articles for 15 April.

<http://www.wired.co.uk/news/archive/2016-04/15/wired-awake-15-april>

[M.1] **MIT Technology Review.** Signe Brewster. (April 27, 2016).

Will Artificial Intelligence Win the Caption Contest?.

<https://www.technologyreview.com/s/601339/will-artificial-intelligence-win-the-caption-contest/#/set/id/601340/>

## Honors as a Creative Writer

- Invited member of “Mystery Writers of Taiwan”, 2010 – Present
- Mystery Fiction Award, by “Mystery Writers of Taiwan”, 2010  
Short Story: “The Maiden’s Prayer”
- First Prize of “Taipei The Less” Essay Competition, 2005  
Flash Fiction: “Genesis in Taipei.”

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