

## Education

**University of Illinois at Urbana-Champaign (UIUC)** August 2019 - present

- Ph.D. in Psychology
- Research focus: Visual Perception and Cognition
- Advisors: Dr. Alejandro Lleras and Dr. Simona Buetti

**University of Illinois at Urbana-Champaign (UIUC)** August 2017 - May, 2019

- Master of Science in Psychological Science
- Research focus: Visual Perception and Cognition
- Advisors: Dr. Alejandro Lleras and Dr. Simona Buetti

**University of Illinois at Urbana-Champaign (UIUC)** August, 2015 – May, 2017

- Master of Science in Advertising
- Thesis topic: Cultural Difference in Placebo Effects Elicited by Pharmaceutical Ads
- Thesis advisors: Dr. Brittany Duff and Dr. Patrick Vargas

**Wuhan University, China** September 2011 – June, 2015

- Bachelor of Art in Advertising
- Double-major in Psychology at Central China Normal University, China
- Thesis topic: Factors of Cross-Cultural Advertisement Translation Effectiveness

## Skillsets

- Programming: **Python** | **R** | **MATLAB** | **JavaScript** | **SQL**
- Software: **Adobe Photoshop** | **Adobe Premier** | **PowerBI** | **SPSS**
- Qualitative & Quantitative research: **Survey design** | **Experimentation** | **Eye-tracking** | **Data analysis** | **Data simulation** | **Computational modeling** | **Machine Learning** | **Neural network modeling** | **Data visualization**
- Statistics: **Hypothesis testing** | **Model fitting and comparison** | **Cross validation** | **Regression** | **Confirmatory/Exploratory Factor Analysis** | **Hierarchical Linear Modeling**
- Languages: **Chinese** (native) | **English** (proficient)

## Publications

Lleras, A., Buetti, S., & **Xu**, Z. J. (2022). Incorporating the properties of peripheral vision into theories of visual search. *Nature Reviews Psychology*, 1-15.

**Xu**, Z. J., Lleras, A., Shao, Y., & Buetti, S. (2021). Distractor-distractor interactions in visual search for oriented targets explain the increased difficulty observed in non-linearly separable conditions. *Journal of Experimental Psychology: Human Perception and Performances*, 47(9), 1274.

**Xu**, Z. J., Lleras, A., & Buetti, S. (2021). Predicting how surface texture and shape combine in the human visual system to direct attention. *Scientific reports*, 11(1), 1-13.

Buetti, S., **Xu**, Z. J., Shao, Y., & Lleras, A. (submitted). Search speed in color space is a linear function of color distance: evidence against feature-boosting and prioritization theories of attention.

Lleras, A., Wang, Z., Ng, G. J. P., Ballew, K., **Xu**, J., & Buetti, S. (2020). A target contrast signal theory of parallel processing in goal-directed search. *Attention, Perception, & Psychophysics*, 1-32.

Buetti, S., **Xu**, J., & Lleras, A. (2019). Predicting how color and shape combine in the human visual system to direct attention. *Scientific Reports*, 9(1), 1-11.

**Xu**, J., Buetti, S., & Lleras, A. (in preparation). Can visual ability skills predict search efficiency under difficult search conditions?

**Xu**, J., Yang, B., Lleras, A., & Buetti, S. (in preparation). Does the need for control in a culture impact the effect of perceived control on emotional events? A cross-cultural study comparing Asian and Westerner participants.

Buetti, S., Fei X., **Xu**, J., Hur, J., & Heller, W. (in preparation). Perceived control ameliorates cognitive disruption by emotion: behavioral investigation across the mood spectrum.

## Published Abstracts in International Conferences and Invited Talk

**Xu**, Z. J., Lleras, A., Hummel, J. E., & Buetti, S. (2022, May) Distractor heterogeneity as the cause of the linear separability effect. Poster presented at the Annual Meeting of the Psychonomic Society. Abstract published at *Journal of Vision* 2022;22(14):4435. doi: <https://doi.org/10.1167/jov.22.14.4435>.

Tan, H. J., Buetti, S., **Xu**, Z. J., Lleras, A. (2022, May) Testing feature boosting theories of visual attention in the color dimension using online experiments. Poster presented at the Annual Meeting of the Psychonomic Society. Abstract published at *Journal of Vision* 2022;22(14):4333. doi: <https://doi.org/10.1167/jov.22.14.4333>.

**Xu**, J., Lleras, A., Hummel, J. E., & Buetti, S. (2022, April). Examining the Linear Separability Effect in Orientation and Color spaces. Talk given at Attention & Perception Brown Bag.

**Xu**, Z. J., Ng, G., Lleras, A., Hummel, J. E., & Buetti, S. (2021, May) How does multidimensional complexity impact processing efficiency in visual search. Poster presented at the Annual Meeting of the Psychonomic Society. Abstract published at *Journal of Vision* 2021;21(9):2168. doi: <https://doi.org/10.1167/jov.21.9.2168>.

**Xu**, J., Lleras, A., & Buetti, S. (2020, November). A new prediction-based approach to study visual search and attention. Poster presented at the Annual Meeting of the Psychonomic Society.

**Xu**, J., Lleras, A., & Buetti, S. (2020, October). How do visual features combine to direct attention? Talk given at Attention & Perception Brown Bag.

Buetti, S., Shao, Y., **Xu**, J., & Lleras, A. (2020 May). Re-examining the linear separability effect in visual search for oriented targets. Poster presented at the Annual Meeting of the Vision Sciences Society. Abstract published at *Journal of Vision* 2020;20(11):1244. doi: <https://doi.org/10.1167/jov.20.11.1244>.

**Xu**, J., Lleras, A., & Buetti, S. (2020 May). How texture and shape distinctiveness combine in the visual system to guide attention? Poster presented at the Annual Meeting of the Vision Sciences Society. Abstract published at *Journal of Vision* 2020;20(11):1253. doi: <https://doi.org/10.1167/jov.20.11.1253>.

**Xu**, J., Lleras, A., & Buetti, S. (2020, March). How do differences across visual features combine to determine visual search efficiency in parallel search? Talk given at Cognitive Brown Bag.

**Xu**, J., Lleras, A., & Buetti, S. (2020, February) Do people's visual abilities predict their search efficiency? Talk given at Attention & Perception Brown Bag.

**Xu, J., Ballew, K., Lleras, A., & Buetti, S.** (2019, May). Do people's visual ability skill predict search efficiency under difficult search conditions? Poster presented at the Annual Meeting of the Vision Sciences Society. Abstract published at Journal of Vision 2019;19(10):233b. doi: <https://doi.org/10.1167/19.10.233b>.

Ballew, K., **Xu, J.**, Lleras, A., & Buetti, S. (2019, May). An individual differences investigation of the relationship between visuospatial working memory capacity and inefficient search. Poster presented at the Annual Meeting of the Vision Sciences Society. Abstract published at Journal of Vision 2019;19(10):316. doi: <https://doi.org/10.1167/19.10.316>.

Buetti, S., **Xu, J.**, & Lleras, A. (2019, April). How do differences across visual features combine to determine visual search efficiency in parallel search? Talk given at Attention & Perception Brown Bag.

Yang, B., **Xu, J.**, Zhang, F., Buetti, S. (2019, April) Does time perception of emotional events vary across Asian and Westerner participants? Poster presented at UIUC undergraduate research symposium.

**Xu, J.**, Lleras, A., & Buetti, S. (2018, May). Is there a relationship between object recognition ability and visual search efficiency? Poster presented at the Annual Meeting of the Vision Sciences Society. Abstract published at Journal of Vision 2018;18(10):525. doi: <https://doi.org/10.1167/18.10.525>.

Lleras, A., **Xu, J.**, & Buetti, S. (2018, May). How do differences across visual features combine to determine visual search efficiency in parallel search? Poster presented at the Annual Meeting of the Vision Sciences Society. Abstract published at Journal of Vision 2018;18(10):282. doi: <https://doi.org/10.1167/18.10.282>.

**Xu, J.**, Lleras, A., & Buetti, S. (2018, April) Predicting visual search efficiency. Talk given at Attention & Perception Brown Bag.

## **Additional Research Experience in Advertising**

### **Cultural Difference on Placebo Effects Elicited by Pharmaceutical Ads**

UIUC, February, 2016 – August, 2017

Master Thesis

- Designed experiments (including manipulation and questionnaire) to test cultural differences in people's processing of pharmaceutical ad and reaction of placebo effect
- Wrote the literature review on issues of cultural difference, placebo effect and pharmaceutical ads
- Collected and analyzed data using SPSS and R
- Authored the paper, under review at International Communication Association

### **Out of the Skip Button Dilemma: The Influence of Contextualized Cues on Video Advertising**

UIUC, September, 2015 – November, 2016

Co-investigator (PI: Brittany Duff)

- Designed and conducted the experiment measuring the video ad effectiveness in reaction to a contextualized skip button;
- Reviewed literatures and contributed writing the literature review on priming effect
- Worked with the team to collect and analyzed data using SPSS and R
- Co-authored the paper

### **Do Cohorts Matter for Social Media Use? A Comparison of Millennial and Baby-Boomer Social Media Use**

UIUC, September, 2015 – December, 2015

Co-investigator (PI: Michelle Nelson)

- Worked with research team to design and conduct qualitative research with the class to investigate whether and how millennials and baby-boomers use and perceive social media differently

- Transcribed and coded interview transcripts
- Presented the result to a Qualitative Research class
- Project was ranked No.1 by the client, Senior Vice President of Research at Starcom Media

### **Evaluation of Memory**

UIUC, February, 2015 – Present

Co-investigator (PI: Patrick Vargas)

- Working with research advisor to design experiment asking people to imagine compensating for saving their memory, measuring their evaluation of different types of memory (episodic/semantic), and memory with different levels of relevance to self-construction
- Assisting in the preparation of review of literature on people's perception of memory

### **Professional Experience**

#### **PhD Teaching Assistant**

August, 2022 - Present

- PSYC 100 Introduction to Psychology
- Preparing class materials, teaching and grading homework.

#### **PhD Research Assistant**

August, 2019 - Present

- Working with research advisors on an NSF funded project studying the role of peripheral visual system in search behavior
- Responsible for programming (using Matlab, Python and Javascript), data collection, data analysis and computational modeling (using R and Python), simulation (using R and Matlab), and preparing research report

#### **Teaching Assistant**

May, 2019 - August, 2019

- PSYC 230 Perception and Sensory Processes
- Responsible for syllabus revision, quizzes and homework gradings and communication with students

#### **Abbott Nutrition**

October, 2017-May, 2019

Emerging Issue Tracking Intern

- Conducting secondary research on food safety news and research related to Abbott Nutrition's product categories
- Writing weekly report
- Updating monthly, quarterly and annual emerging issues tracking summary dashboard using PowerBI

Public Health and Social Media Engagement Intern

- Conducted secondary research on public health policy and Abbott's external social media engagement
- Conducted secondary research on Abbott's competitor's performance public health policies and social media engagement
- Developed Abbott Nutrition 2018 public health policy and social media strategy decks
- Conducting secondary research on Abbott Nutrition's competitor's scientific publication and clinical trials
- Developing 2018 and 2019 Abbott Nutrition Competitor Intelligence dashboard using PowerBI

#### **Research Assistant (hourly)**

August, 2017-October, 2017

- Surveying literature on Terror Management Theory (TMT)
- Using R to conduct p-curve analysis on secondary data on (TMT) theory

#### **Crescent Marketing Agency**

April, 2017-October, 2017

Consumer Research Lead

- Designed questionnaires and conducted consumer research among Chinese students at UIUC

- Used Excel to analyze and interpret data in pitch proposals and client reports
- Cooperated with Account group to develop, execute, and track campaigns for BMW of Champaign, AZZIP Pizza, 310 Burnham, Bankier Property, Snooze Luxury Mattress, Pygmalion Festival
- Led the development of story-driven social media content for Crescent to engage audiences based on research data

**UIUC University Housing**

February, 2017-May, 2017

Dining Student Worker

- Dish washed and catered at university's dining halls

**China HIV/AIDS Information Network (CHAIN)**

October, 2016-January 2017

Volunteer & Translator

- Translated and summarized the Key Population Investment Fund application materials, including project logical frameworks, financial documents, grants distribution and management proposal
- Translated the book "The Remaking of Social Contracts" from English to Chinese, Chapter 8-10

**Kantar Millward Brown ACSR Beijing**

June, 2016-August, 2016

Client Services and Business Development Intern

- Worked with supervisor to develop story-driven desk research report for 2016 Huawei Manhattan and Long Island launching campaign based on primary and secondary data
- Wrote research proposals for clients, including Durex, Baidu, VOSS, Haier, Tencent, TCL and Youku
- CONTACT: Jenny Ma (Group Director of Client Services and Business Development)

**Saatchi & Saatchi Beijing**

February, 2013-June, 2013

Account Executive Intern

- Provided account service for Volkswagen, including campaign planning, brand competitive review writing, and brochure designing.

**Honors & Awards**

- Department Conference Presentation Award, 2022
- Graduate Award for Excellence in Psychological Science, 2019
- Academic Achievement Scholarship, Wuhan University, 2012-2013
- Excellence Creative Award at the Fifth College Students' Advertising Art Competition, 2012-2013

**School Activities**

**Vice minister of Public Relations Department, Student Union, Wuhan University, 2011-2013**

- Provided financial support for activities: Opening Dancing Event for School of Journalism and Communication, Wuhan University, 2011; 12<sup>th</sup> News People Competition, School of Journalism and Communication, Wuhan University, 2011; Welcome Party for School of Journalism and Communication, Wuhan University, 2012.

**Vice minister of Film Department, ZiQiang, Campus Website, Wuhan University, 2011-2013**

- Wrote the play and directed the videos for the Excellent Student Top Ten Ceremony campaign video and the opening video