

Chen Cheng

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EMPLOYMENT

Assistant Professor

Division of Social Science, Hong Kong University of Science and Technology 2022 -

Postdoctoral Researcher

Department of Psychological and Brain Sciences, Boston University 2019 - 2022
Advisor: Dr. Melissa M. Kibbe

EDUCATION

Ph.D., University of Massachusetts Boston 2014 - 2019
Developmental and Brain Sciences
Advisors: Dr. Erik Blaser & Dr. Zsuzsa Kaldy
Dissertation: The early development of visual working memory

M.A., East China Normal University 2012 – 2015
Developmental Psychology

B.S., Zhejiang University 2008 – 2012
Psychology & Finance

PUBLICATIONS

Peer reviewed publications

1. **Cheng, C.**, & Kibbe, M.M. (*accepted*). Disambiguating objects' identities in working memory through reasoning by exclusion across development. *Journal of Experimental Child Psychology*.
2. **Cheng, C.**, & Kibbe, M.M. (2023). Is non-symbolic arithmetic truly "arithmetic"? Examining the computational capacity of the approximate number system in young children. *Cognitive Science*. <https://doi.org/10.1111/cogs.13299>
3. **Cheng, C.**, & Kibbe, M. M. (2022). Development of updating in working memory in 4-7-year-old children. *Developmental Psychology*. <https://doi.org/10.1037/dev0001337>.
4. Zhang, W., Dong, Q., Gong, L., Shang Q., **Cheng C.**, Ding, X. (2022). The theoretical accounts and developmental predictors of operational momentum effect. *Advances in Psychological Science*. Advance online publication.
5. **Cheng, C.**, & Kibbe, M. M. (2021). Children's use of reasoning by exclusion to track identities of occluded objects. In *Proceedings of the 43th Annual Meeting of the Cognitive Science Society*.
6. **Cheng, C.**, Kaldy, Z., & Blaser, E. (2020). Coding of featural information in visual working memory in 2.5-year-old toddlers. *Cognitive Development*, 55, 100892.
7. **Cheng, C.**, Kaldy, Z., & Blaser, E. (2019). Two-year-olds succeed at MIT: Multiple identity tracking in 20-and 25-month-old infants. *Journal of Experimental Child Psychology*, 187,

104649.

8. **Cheng, C.**, Kaldy, Z., & Blaser, E. (2019). Focused attention predicts visual working memory performance in 13-month-old infants: A pupillometric study. *Developmental Cognitive Neuroscience*, 100616.
9. Deng, X., An, S., & **Cheng, C.** (2019). Cultural differences in the implicit and explicit attitudes toward emotion regulation. *Personality and Individual Differences*, 149, 220-222.
10. **Cheng, C.**, Kaldy, Z., & Blaser, E. (2018). Using object history to predict future behavior: are young infants essentialists? In *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*.
11. Deng, X., **Cheng, C.**, Chow, H. M., & Ding, X. (2018). Prefer feeling bad? Subcultural differences in emotional preferences between Han Chinese and Mongolian Chinese. *International Journal of Psychology*.
12. Hong, F., **Cheng, C.**, Sang, B., Ku, Y., & Pan, T. (2017). Mood and contextual effects on Facial recognition: Cultural or Cultural Advantage? *International Psychological Bulletin*, 31(3), 34-44.
13. Deng, X., Ding, X., **Cheng, C.**, & Chou, H. M. (2016). Feeling Happy and Sad at the Same Time? Subcultural Differences in Experiencing Mixed Emotions between Han Chinese and Mongolian Chinese. *Frontiers in psychology*, 7.
14. Song, Y., Hakoda, Y., Sanefuji, W., & **Cheng, C.** (2015). Can they see It? The functional field of view is narrower in individuals with Autism Spectrum Disorder. *PloS one*, 10(7), e0133237.
15. Ding, X., Coplan, R. J., Sang, B., Liu, J., Pan, T., & **Cheng, C.** (2015). Young Chinese children's beliefs about the implications of subtypes of social withdrawal: A first look at social avoidance. *British Journal of Developmental Psychology*. DOI: 10.1111/bjdp.12081
16. Ding, X., Coplan, R. J., Sang, B., Liu, J., Pan, T., & **Cheng, C.** (2015). Starting small: Revisiting young children's perceptions of social withdrawal in China. *British Journal of Developmental Psychology*, 33(2), 183-186.
17. Ding, X., Zhang T., Deng X., Sang B., Fang L., & **Cheng C.** (2015). "Alone but not lonely" or "alone and also lonely": Cultural differences on relations between unsociability and adjustment functioning. *Advances in Psychological Science (Chinese Version)* 23(3), 439-447
18. **Cheng, C.**, Hu J. W., & Sang B. (2013). Cognitive neuroscience studies on adolescence risk-taking and its implication for educational practice. *Journal of East China Normal University (education & science)* 31(2), 56-62

Under review & In preparation

Cheng C., & Kibbe, M.M. (*under review*). Development of precision of non-symbolic arithmetic operations in 4-6-year-old children.

Ren T., Wang J., Li M., Ding X., & **Cheng C.** (*under review*). Cognitive processes underlying different forms of non-symbolic subtractive operations in preschool children.

Cheng C., & Kibbe M.M. (*in prep.*). Computational capacity beyond "1+1": an investigation of young children's arithmetic skills in small numbers.

Cheng C., Feigenson L., & Kibbe M.M. (*in prep.*). Fast-mapping labels onto sets in 2-year-olds.

CONFERENCE PRESENTATIONS

Paper presentations

1. **Cheng C.**, & Kibbe M.M. (January, 2022). Infants represent an abstract "add one" operation. Talk presented at the *Budapest CEU Conference on Cognitive Development*, Budapest, Hungary.

2. **Cheng C.**, & Kibbe M.M. (November, 2021). Representation of an abstract “+1” operation in 15-month-olds. Talk presented at the *Trends in Psychological Summit* by Harvard University’s Women in Psychology, Boston, MA.
3. Deng, X., An, S., **Cheng, C.**, & You, Y. (May, 2020). Meeting cancelled due to COVID-19 outbreak. Cross-cultural emotion regulation in a social context. Talk at the annual meeting of the *Association for Psychological Science* (cancelled due to Covid19 Pandemic). Chicago, IL.
4. **Cheng C.**, Kaldy, Z., & Blaser, E. (July, 2018). Using object history to predict future behavior: are young infants essentialists? Talk given at the Cognitive Science Society, Madison, WI.

Poster presentations

1. **Cheng C.**, & Kibbe M.M. (July, 2023). How count-list knowledge relates to 3-year-olds’ exact non-symbolic addition abilities?. Poster presented at the *45th Annual Meeting of the Cognitive Science Society*.
2. **Cheng C.**, Ding X., & Kibbe M.M. (May, 2023). Costs of manipulating representations of approximate visual magnitudes stored in visual working memory. Poster presented at the *Annual Meeting of Vision Science Society*, St. Pete Beach, FL.
3. **Cheng C.**, Ren T., Li M., Wang J., & Ding X. (May, 2023). Visual working memory updating in Chinese pre-schoolers. Poster accepted at the annual meeting of the *Association for Psychological Science*.
4. **Cheng C.**, Boak E. & Kibbe M.M. (March, 2023). Backward causal reasoning about success and failures in 4-to 6-year-olds. Poster presented at *Biennial Meeting of the Society for Research in Cognitive Development*, Salt Lake City, UT.
5. **Cheng C.**, & Kibbe M.M. (January, 2023). When remembering less gets you more: 3-year-old’s use of reasoning by exclusion to infer unknown identities in working memory. Poster presented at the *Budapest CEU Conference on Cognitive Development*, Budapest, Hungary.
6. **Cheng C.**, & Kibbe M.M. (July, 2022). Representation of an abstract “+1” operation in infants. Poster presented at *International Conference on Infant Studies*, Ottawa, CA
7. **Cheng C.**, & Kibbe M.M. (April, 2022). Can children manipulate the outputs of non-symbolic arithmetic computations?. Poster presented at *Cognitive Development Society*, Madison, WI.
8. **Cheng C.**, & Kibbe M.M. (November, 2021). Fast-mapping labels onto sets in 2-year-olds. Poster presented at the *46th Boston University Conference on Language Development*.
9. **Cheng C.**, & Kibbe M.M. (July, 2021). Children’s use of reasoning by exclusion to track identities of occluded objects. Poster presented to the *43th Annual Meeting of the Cognitive Science Society*.
10. **Cheng C.**, & Kibbe M.M. (April, 2021). Development of mental manipulation in working memory in young children. Poster presented at the *Biennial Meeting of the Society for Research in Cognitive Development*, Minneapolis, MN.
11. **Cheng C.**, & Kibbe M.M. (April, 2021). Children use the solution to non-symbolic arithmetic computations to balance unequal sets. Poster presented at the *Biennial Meeting of the Society for Research in Cognitive Development*, Minneapolis, MN.
12. **Cheng C.**, & Kibbe M.M. (January, 2021). Representational precision of different non-symbolic arithmetic operations in young children. Poster presented at the *Budapest CEU Conference on Cognitive Development*, Budapest, Hungary.
13. Kaldy Z., **Cheng C.**, & Blaser E. (January, 2021). Delayed Match Retrieval for testing infants’ working memory: A five-year retrospective. Poster presented at the *Budapest CEU Conference on Cognitive Development*, Budapest, Hungary
14. **Cheng C.**, Kaldy Z., & Blaser E. (July, 2020). 9-month-old infants’ working memory tested with

multimodal stimuli with sound/shape correspondence. Poster presented at *International Conference on Infant Studies*, Glasgow, UK.

15. **Cheng C.**, & Kibbe M.M. (May, 2020). Different types of mental manipulation of visual number representations differentially impact representational precision. Poster presented at *Annual Meeting of Vision Science Society*, St. Pete Beach, FL.
16. **Cheng C.**, Kaldy Z., & Blaser E. (October, 2019). The development of Visual Working Memory over the second year of life. Poster presented at *Cognitive Development Society*, Louisville, KY.
17. **Cheng C.**, Kaldy Z. & Blaser E. (March, 2019). Robust Visual Working Memory for object features in 2.5-year olds. Poster presented at *Biennial Meeting of the Society for Research in Cognitive Development*, Baltimore, MD.
18. **Cheng C.**, Kaldy Z. Dhungana S. & Blaser E. (January, 2019). The development of Visual Working Memory over the second year of life. Poster presented at *Budapest CEU Conference on Cognitive Development*, Budapest, Hungary.
19. **Cheng C.**, Kaldy Z. & Blaser E. (June, 2018). Using eye movement and pupillometry to uncover the role of endogenous attention in VWM. Poster presented at the *International Conference on Infant Studies*, Philadelphia, PA.
20. **Cheng C.**, Kaldy Z., Dhungana S. & Blaser E. (June, 2018). Successful updating of object-location bindings in Visual Working Memory in 20- and 25-month olds. Poster presented at the *International Conference on Infant Studies*, Philadelphia, PA.
21. **Cheng C.**, Kaldy Z., & Blaser E. (October, 2017). The role of similarity in toddlers' Visual Working Memory representations. Poster presented at the *Biennial Meeting of the Cognitive Development Society*, Portland, OR.
22. **Cheng C.**, Kaldy Z., Dhungana S., & Blaser E. (April, 2017). Using Object History to Predict Future Behavior: Are Young Infants Essentialists? Poster presented at the *Biennial Meeting of the Society for Research in Child Development*, Austin, Texas
23. **Cheng C.**, Kaldy Z., & Blaser E. (May, 2016). Development of Visual Working Memory in 13- to 16-month olds in an anticipatory looking task. Poster presented at the *International Conference on Infant Studies*, New Orleans, LA
24. **Cheng C.**, Kaldy Z., & Blaser E. (May, 2016). Accounting for cognitive effort in a visual working memory task in 13- and 15-month old infants. Poster presented at the *Annual Meeting of Vision Science Society*, St. Pete Beach, Florida.
25. Hong F., Doan S., Sang B., **Cheng C.**, Ku Y. X. (July, 2014). Are Contextual Effects on Facial Recognition Altered by Participants' Mood? A Cross-Culture Study. Poster presented at the *International Society for the Study of Behavioral Development*, Shanghai, China.

INVITED TALKS

1. **Cheng C.** (August 9, 2023). The interplay of working memory storage and updating in early childhood. Talk given at the Early Minds Lab, UMass Boston.
2. **Cheng C.** (July 25, 2023). Examining the computational capacity of non-symbolic subtractive operations in preschool children. Talk given at the Developing Minds Lab, Boston University.
3. **Cheng C.** (June 24, 2023). Understanding the exact arithmetic ability in 3-year-olds. Invited talk given at the CogSci 2023 Hong Kong Meetup & Workshop. The Chinese University of Hong Kong (CUHK), Hong Kong.
4. **Cheng C.** (July 2, 2022). Mental manipulation of object representation in early development. Invited talk given at “心青年” Symposium at School of Psychological and Cognitive Sciences, Peking University.

5. Kibbe M.M., & **Cheng C.** (January 31, 2022). True arithmetic with non-symbolic representations of quantity. Talk presented at the *McDonnell combination workshop*.
6. **Cheng C.** (October 26, 2020). Mental manipulation of working memory in young children: a comparison between in-person data and online data. Invited talk given at Baby Lab at University of Massachusetts Boston.
7. **Cheng C.** (October 8, 2020). Development of representational precision of Approximate Number System solutions. Invited talk given at Cognitive Development Laboratory, Rutgers University.
8. **Cheng C.** (April, 2018). Tracking 'what' goes 'where': how do toddlers update object representations in visual working memory. Invited talk given at Developing Minds Lab, Boston University.
9. **Cheng C.** (May, 2016). Development of Visual Working Memory in 13- to 15-months old in an anticipatory looking task. Talk given at Mentored Research Presentation, Developmental and Brain Sciences Program, University of Massachusetts Boston.

TEACHING EXPERIENCE

Instructor of Record

HKUST:

Research Methods in Psychological Science (SOSC 1990)	Spring, Fall, 2023
Developmental Psychology (SOSC 2990)	Fall, 2022, 2023

UMass Boston:

Introduction to Behavioral Research (PSYCH 201)	Fall, 2017; Spring, 2018
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Teaching Assistant

Statistics (PSYCH 370) (x3)	2018 - 2019
Perception (PSYCH 255) (x5)	2014 - 2017
Infancy and Childhood Development (PSYCH 241)	Fall, 2015

Guest Lecturer

On <i>Infant Development</i> , Infancy and Child Development (PSYCH 241)	Fall, 2021
On <i>Survey Method</i> , Introduction to Behavioral Research (PSYCH 201)	Summer, 2018
On <i>Selective Attention</i> , Perception (PSYCH 255)	Spring, 2017
On <i>Emotion Regulation</i> , Developmental Psychology	Spring, 2014

MENTORING EXPERIENCE

Students mentored at HKUST:

2023-

Undergraduates:

Wailing Shek (Fall 2023 -)
 Sumin Park (Fall 2023 -)
 Hongdian Zhang (Summer 2023 -)
 Pui Ka Mui (Summer 2023 -)
 Hanyu Jiang (Spring 2023 -)
 Yishan Ding (Spring 2023 -)
 Keke Cai (Spring 2023 -)

Students mentored at Boston University:

Emma Hejtmanek (Fall 2022)	2019-2022
Mia Boak (Summer 2022)	
Eleanor Myers (Summer 2022)	

Anya Lydon (Spring 2022 – Summer 2022)
 Angela Lee (Spring 2021 – Fall 2022)
 Angelina Not (Spring 2021 – Spring 2022)
 Rakiya Washington (Spring 2021 – Spring 2022)
 Vivien Jiang (Spring 2021 – Spring 2022)
 Sharde Johnson (Summer 2021)
 Anika Kumar (Summer 2021)
 Annie Deng (Summer 2021)
 Shiba Esfand (2020-2021)
 Jiaqi Zhao (2020-2021)
 Jannellie Rivera (Fall 2019)

Students mentored at University Massachusetts Boston: 2014-2019
 Natalia Sabogal, Laurie Dervil, Virginia Gosal, Yakira Florian
 Undergraduate Mentor, Psychology Connections Committee 2014-2016

HONORS / AWARDS

The Hong Kong University of Science and Technology:

HKUST Postdoctoral Fellowship Matching Fund (HKD 162,000) 2023

University of Massachusetts Boston:

Scholarly Support Fund, Graduate Employee Organization (USD 500) 2018

Doctoral Dissertation Grant (USD2,000) 2018

Professional Development Grant, Graduate Student Assembly (USD 500) (x3) 2016 - 2018

First Year Fellowship (USD 1,000) 2014

East China Normal University:

National Prize Scholarship for Graduate Student (RMB 20,000) 2013

Zhejiang University:

National Prize Scholarship for Undergraduate Student (RMB 8,000) 2009

Overseas Exchange Fellowship 2009

PROFESSIONAL SERVICES

Service to Field:

Ad hoc review: 2018-

Developmental Psychology, Infant Behavior and Development, Frontiers in Psychology, Journal of Experimental Child Psychology, Journal of Cognition and Development, Intelligence, British Journal of Developmental Psychology (co-reviewer), Berk: Infants and Children, 6th edition (co-reviewer), Annual conference of Cognitive Science Society, Biennial conference of Cognitive Development Society, Annual conference of Cognitive Development Center at CEU

Service to University:

UMass Boston:

Internal Professional Service: Advisor & Proctor, Department of Psychology 2016

Neuroscience Graduate Student Association Treasurer 2015

Professional Affiliations

Society for Research on Child Development, International Congress of Infant Studies, Cognitive Science Society, Cognitive Development Society, Visual Science Society

References

Dr. Erik Blaser (PhD Advisor)

Department of Psychology, University of Massachusetts Boston

erik.blaser@umb.edu

Dr. Zuzsa Káldy (PhD Co-advisor)

Department of Psychology, University of Massachusetts Boston

zsuzsa.kaldy@umb.edu

Dr. Melissa Kibbe (Postdoc Advisor)

Department of Psychological and Brain Sciences, Boston University

kibbe@bu.edu