

# DAR-WEI CHEN, Ph.D.

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Areas of (some) expertise:

Learning sciences  
Human factors  
Research methods

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## Personal data

- Citizenship: United States of America | Birthplace: Ann Arbor, MI (1990) | Gender: Male
- Languages: Speak **English** and **Mandarin Chinese** fluently, passed International Baccalaureate **Spanish** exam

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## Recent work experience

*Senior cognitive engineer, MITRE Corporation*

December 2019 – present

- **IRS online services:** Improving the **online user experience** of the Taxpayer Digital Communications (TDC) and Tax Withholding Estimator (TWE) systems and the **accessibility** of IRS online services generally (users with vision loss, limited English proficiency)
- **COVID-19 vaccine distribution:** Modeling the entities, steps, and performance standards necessary to achieve the Biden White House vision of 100 million Americans vaccinated within 100 days
- **Targeting process (Fires Support Next, ASTARTE):** Facilitating decision-making and lowering human workload in the targeting process (esp. close air support and airspace deconfliction) via **human factors, task analysis, and process modeling**; objectives: a smarter, faster, safer, and more accurate targeting process for U.S. soldiers
- **UAS Traffic Management (UTM):** Using **process modeling** to help the FAA: A) describe the common entities and actions involved in its “Remote ID” initiative for unmanned aerial systems, and B) devise rules governing these entities and actions
- **Website usability:** Performed **surveys, interviews, and heuristic evaluations** to improve the usability of the Adaptive Acquisition Framework (AAF) website, which enables defense acquisition personnel to better navigate policies and documents (project for the Under Secretary of Defense)
- **Effects Chain Analysis Platform:** **Wireframing and user workflow** design of centralized repository for MITRE analysts
- **Autonomy Roadmap:** Advising the DoD on technological investments to advance the use of autonomous systems in the U.S. military; focus areas: C2 systems, common operating picture, automation transparency, streamlined communication

*Research scientist, Soar Technology*

April 2018 – June 2019

- **Complex cognitive skills (CCS) research** (Army Research Institute, or ARI): Created a framework that outlines current CCS research and provides a road map for future CCS research and training; enabled Northrop Grumman and ARI to better **select training methods, select skill evaluation techniques, evaluate environment factors, and navigate team concerns**
- **Lifelong learning portal** (Advanced Distributed Learning Initiative, or ADL): Designed **user experience and led functional requirements documentation** for the production of an online tool that facilitates how military personnel complete their work, track progress on goals, engage in non-work activities, and plan for the future
- **Fishing video game** (Naval Air Warfare Center Training Systems Division, or NAWCTSD): Designed **experimental plan and user experience** for a video game in which the tasks required of players (controlling a fleet of drones to catch fish in a lake) are substantively analogous to the tasks required of P-8 anti-submarine warfare instructors during teaching periods; the experiment tests the effectiveness of various game interface transparency levels and various speech recognition grammar sets. (“DroneFisher was a finalist at the 2019 I/TSEC Serious Games Showcase and Challenge)
- **Social information processing (SIP) in children:** Identified behavioral indications that can improve the accuracy of **virtually assessing the SIP skills of children** (dwell time, keyboard actions, mouse movements, scenario replaying, changes in selected response); these indications will be implemented as metrics in the web-based Virtual Environment for Social Information Processing (VESIP) assessment program to infer measures such as affect, engagement, and effort level

## Education

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- Ph.D., Engineering Psychology **Georgia Institute of Technology** GPA: 3.9
- Graduation date: May 2018
  - Dissertation (defended on February 21, 2018 – passed with minor revisions)  
*An investigation of pedagogical interventions within the productive failure methodology*  
Committee: Richard Catrambone (adviser), Phil Ackerman, Jamie Gorman, Mark Guzdial, Rick Thomas,
  - Minor: Human-Computer Interaction
  - Finalist, James D. Foley Scholarship (GVU, 2017): Named one of the top design/tech PhD students at GT
  - Recipient, Larry S. O'Hara Scholarship (College of Sciences, 2017): Top senior doctoral student in GT CoS
  - Georgia Tech Presidential Fellowship (2012)
- B.S.E., Industrial and Operations Engineering **University of Michigan – Ann Arbor** GPA: 3.5
- Graduation date: May 2012
  - Minor: Clarinet Performance

## Past work experience

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- Research intern, Army Research Laboratory* Summer 2016
- Worked on a simulated shooting range designed to teach cadets marksmanship fundamentals through the use of adaptive tutoring feedback (powered by GIFT, the Generalized Intelligent Framework for Tutoring)
  - Presented work on “productive failure” instructional technique for potential use in future ARL projects
  - Analyzed existing research on leadership principles for potential use in future ARL projects
- Columnist, The Michigan Daily* January 2011 – May 2012
- Opinion Columnist (Winter 2011, Fall 2011, Winter 2012): Wrote bi-weekly columns on current events
  - Editorial Board (Winter 2012): Reviewed newspaper's positions on current issues
- Research intern, Institute for Simulation and Training* Summer 2010, Summer 2011
- CDL Driver Distraction study (funded by Department of Transportation): Examined the effects of various distractions on commercialized truck drivers while recording EEG and ECG responses
  - Perceptually-informed Virtual Environment study (PerceiVE; funded by the Office of Naval Research): Examined the effects of visual fidelities on training transfer while recording EEG and ECG responses
  - Mixed Initiative eXperimental (MIX) testbed: Helped design experiments on human-robot interaction in multitasking and multi-modal environments (funded by Army Research Laboratory)
  - Robotics Collaborative Technology Alliance (funded by Army Research Laboratory): Presented a literature review on human-robot interaction

## Professional affiliations

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*Human Factors and Ergonomics Society – Georgia Tech chapter* (2012-2018; served as president in 2015-2016)

*Human Factors and Ergonomics Society* (2012 – present)

### Refereed journal articles

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- Chen, D.**, Chase, V., Burkhardt, M., & Agulto, A. (2016). Using industrial engineering and human factors design principles to improve accuracy and speed of drug selection. *Joint Commission Journal of Quality and Patient Safety*, 42 (10), 473-477.
- Gable, T.M., **Chen, D.**, Darling, C.M., McGlynn, S., Kazi, S., Preusse, K., Yoo, A., & Schaeffer, L.M. (2016). Recommendations for improving the American voting process through the application of human factors principles. *Ergonomics in Design: The Quarterly of Human Factors Applications*, 24 (3), 4-8.
- Goldberg, B., Amburn, C., Ragusa, C., & **Chen, D.** (2017). Modeling Expert Behavior in Support of an Adaptive Psychomotor Training Environment: A Marksmanship Use Case. *Intl. Journal of Artificial Intelligence in Education*, 28 (2), 194-224.
- Margulieux, L.E., **Chen, D.**, McDonald, J.D., Bujak, K.R., Gable, T.M., Darling, C.M., Schaeffer, L.M, & Barg-Walkow, L.H. (2016). Online Collaboration Applications Evaluated by Ease of Use. *Ergonomics in Design: The Quarterly of Human Factors Applications*, 24 (2), 21-30.

### Book chapters

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- Folsom-Kovarik, J.T., **Chen, D.**, Mostafavi, B., & Freed, M. (2019). *Personalization*. In J.J. Vogel-Walcutt (Ed.), *Advanced Distributed Learning – Academy*.
- Schaeffer, L.M., Margulieux, L.E., **Chen, D.**, & Catrambone, R. (2016). Feedback via Educational Technology. In L. Lin & R. Atkinson (Eds.), *Educational Technologies: Challenges, Applications, and Learning Outcomes*

## Refereed conference proceedings

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- Amburn, C.R., Goldberg, B.S., **Chen, D.**, Ragusa, C., Boyce, M.W., & Shorter, P. (2016). Effects of equipment on model development for adaptive marksmanship trainers. Paper presented at the *Interservice/Industry Training, Simulation, and Education Conference (I/ITSEC) 2016*, Orlando, FL.
- Chen, D.** & Catrambone, R. (2019). Productive failure and subgoal scaffolding in novel domains. *Proceedings of the 21<sup>st</sup> International Conference on Human-Computer Interaction*.
- Chen, D.** & Catrambone, R. (2016). Facilitating spatial task learning in interactive multimedia environments while accounting for individual differences and task difficulty. *Proceedings of the 38<sup>th</sup> Annual Meeting of the Cognitive Science Society* (pp. 1925-1930). Austin, TX: Cognitive Science Society.
- Chen, D.** & Catrambone, R. (2015). Paper vs. Screen: Effects on Reading Comprehension, Metacognition, and Reader Behavior. *Proceedings of the 59<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society* (pp. 332-336). Santa Monica, CA: Human Factors and Ergonomics Society. [Best Student Paper, Education Technical Group – HFES 2015]
- Chen, D.** & Catrambone, R. (2014). Effects of multimedia interactivity on spatial task learning outcomes. *Proceedings of the 58<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society* (pp. 1356-1360). Santa Monica, CA: Human Factors and Ergonomics Society.
- Chen, D.**, Neville, K.J., Massey, L., Burbelo, G.A., Blankenbeckler, P.N., Normand, S., & Uhl, E. (2019). Toward a definition of complex cognitive skill. *Proceedings of the 63rd Annual Meeting of the Human Factors and Ergonomics Society*.
- Chen, D.**, Schaeffer, L.M., Preusse, K., Gable, T.M., Hartzell, C., McGlynn, S., Yoo, A., Gipson, C., & Kim, D. (2018). Improving the U.S. Adult Immunization Schedule by Applying Usability Principles. *Proceedings of the 62nd Annual Meeting of the Human Factors and Ergonomics Society*. Santa Monica, CA: Human Factors and Ergonomics Society.
- Cochran, Z., Tomlinson, B., **Chen, D.**, & Patel, K. (2014). LightWeight: Wearable Resistance Rehab Visualization. *Proceedings of the 27<sup>th</sup> Annual ACM Symposium on User Interface Software and Technology* (pp. 101-102). New York, NY: Association for Computing Machinery.
- Folsom-Kovarik, J. & **Chen, D.** (2018). Data Analytics Can Make Existing Web-Delivered Assessments More Informative [Abstract]. *Proceedings of the 59th Annual Meeting of the Psychonomic Society* (p. 64). Madison, WI: Psychonomic Society.
- Folsom-Kovarik, J., **Chen, D.**, Mostafavi, B., & Brawner, K. (2019). Measuring the complexity of learning content to enable automated comparison, recommendation, and generation. *Proceedings of the 21<sup>st</sup> International Conference on Human-Computer Interaction*.
- Neville, K.J., **Chen, D.**, Massey, L., Cowell, T.S., Burbelo, G.A., Blankenbeckler, P.N., Normand, S., & Uhl, E. (2019). A complex cognitive skills framework. *Proceedings of the 14th International Conference of Naturalistic Decision Making*.
- Sollins, B., **Chen, D.**, Reinerman-Jones, L.E., & Tarr, R. (2014). Truck Driving Distractions: Impact on Performance and Physiological Response. *Proceedings of the 58<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society* (pp. 2171-2175). Santa Monica, CA: Human Factors and Ergonomics Society.

**Refereed conference presentations**

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- Amburn, C.R., Goldberg, B.S., **Chen, D.**, Ragusa, C., Boyce, M.W., & Shorter, P. (2016, December). *Effects of equipment on model development for adaptive marksmanship trainers*. Interservice/Industry Training, Simulation, and Education Conference, Orlando, FL.
- Chen, D.** & Catrambone, R. (2016, August). *Facilitating Spatial Task Learning in Interactive Multimedia Environments While Accounting For Individual Differences and Task Difficulty*. Cognitive Science Society 38<sup>th</sup> Annual Meeting, Philadelphia, PA.
- Chen, D.** & Catrambone, R. (2015, October). *Paper vs. Screen: Effects on Reading Comprehension, Metacognition, and Reader Behavior*. Human Factors and Ergonomics Society 59<sup>th</sup> Annual Meeting, Los Angeles, CA.
- Chen, D.** & Catrambone, R. (2014, October). *Effects of multimedia interactivity on spatial task learning outcomes*. Human Factors and Ergonomics Society 58<sup>th</sup> Annual Meeting, Chicago, IL.
- Chen, D.**, Neville, K.J., Massey, L., Burbelo, G.A., Blankenbeckler, P.N., Normand, S., & Uhl, E. (2019). *Toward a definition of complex cognitive skill*. 63rd Annual Meeting of the Human Factors and Ergonomics Society, Seattle, WA.
- Chen, D.**, Schaeffer, L.M., Preusse, K., Gable, T.M., Hartzell, C., McGlynn, S., Yoo, A., Gipson, C., & Kim, D. (2018). *Improving the U.S. Adult Immunization Schedule by Applying Usability Principles*. 62nd Annual Meeting of the Human Factors and Ergonomics Society, Philadelphia, PA.
- Cochran, Z., Tomlinson, B., **Chen, D.**, & Patel, K. (2014, October). *LightWeight: Wearable Resistance Rehab Visualization*. 27<sup>th</sup> Annual ACM Symposium on User Interface Software and Technology, Honolulu, Hawaii.
- Folsom-Kovarik, J. & **Chen, D.** (2018). *Data Analytics Can Make Existing Web-Delivered Assessments More Informative*. 59th Annual Meeting of the Psychonomic Society, New Orleans, LA.
- Folsom-Kovarik, J., **Chen, D.**, Mostafavi, B., & Brawner, K. (2019, July). *Measuring the complexity of learning content to enable automated comparison, recommendation, and generation*. 21<sup>st</sup> International Conference on Human-Computer Interaction, Orlando, FL.
- Neville, K.J., **Chen, D.**, Massey, L., Cowell, T.S., Burbelo, G.A., Blankenbeckler, P.N., Normand, S., & Uhl, E. (2019, June). *A complex cognitive skills framework*. 14th International Conference of Naturalistic Decision Making, San Francisco, CA.
- Sollins, B., **Chen, D.**, Reinerman-Jones, L.E., & Tarr, R. (2014, October). *Truck Driving Distractions: Impact on Performance and Physiological Response*. Human Factors and Ergonomics Society 58<sup>th</sup> Annual Meeting, Chicago, IL.

## Honors and awards

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<i>Catalyst Award (MITRE)</i>	Recipient: 3 times	last: 2022
<ul style="list-style-type: none"> <li>➤ Description: "...stand-out contributions that align with our values and behaviors"</li> <li>➤ Role (May 2022): Recognized for helping MITRE complete its largest IRS usability task to date</li> <li>➤ Role (March 2022): Built process models to depict roles of new DARPA technologies in targeting processes</li> <li>➤ Role (June 2021): Co-authored report that compared various C2 systems for JADC2 CFT and Joint Staff J6</li> </ul>		
<i>Spark and Applause awards (MITRE)</i>	Recipient: 7 times	last: 2021
<ul style="list-style-type: none"> <li>➤ Description: Appreciation awards from colleagues for contributions to project work</li> </ul>		
<i>I/ITSEC Serious Games Showcase and Challenge</i>	Finalist	2019
<ul style="list-style-type: none"> <li>➤ Description: Recognizing the year's best in delivering instructional material through games</li> <li>➤ Role: User experience, experimental design (Game: "DroneFisher")</li> </ul>		
<i>James D. Foley Scholarship (GVU Center)</i>	Finalist	2017
<ul style="list-style-type: none"> <li>➤ Description: Awarded to top PhD students in design- and technology-related research areas at Georgia Tech</li> </ul>		
<i>Award for Excellence in Medication Safety</i>	Finalist	2017
<ul style="list-style-type: none"> <li>➤ Description: National award from American Society of Health-System Pharmacists recognizes "significant institution-wide system improvements relating to medication use."</li> <li>➤ Role: Led student portion of team during Phase I of project</li> </ul>		
<i>Larry S. O'Hara Scholarship</i>	Recipient	2017
<ul style="list-style-type: none"> <li>➤ Description: Presented to a top senior-level doctoral student in the Georgia Tech College of Sciences</li> </ul>		
<i>Graduate Student Instructor of the Year – School of Psychology</i>	Recipient	2016-2017
<ul style="list-style-type: none"> <li>➤ Description: Recognized as best graduate student instructor in the Georgia Tech School of Psychology for 2016-2017</li> </ul>		
<i>Human Factors and Ergonomics Society Student Chapter Awards</i>	Gold Award	2015-2016
<ul style="list-style-type: none"> <li>➤ Description: Georgia Tech chapter of HFES fulfilled service, outreach, collaboration, and improvement criteria</li> <li>➤ Role: President during 2015-2016 school year</li> </ul>		
<i>Best Student Paper Award – HFES Education Technical Group</i>	Recipient	Oct. 2015
<ul style="list-style-type: none"> <li>➤ Description: Paper titled "Paper vs. Screen: Effects on Reading Comprehension, Metacognition, and Reader Behavior" was unanimously ranked as the best student paper in the Education Technical Group for the HFES 2015 conference</li> </ul>		
<i>National Ergonomics Month Action Plans</i>	Gold (Oct. '15), Silver (Oct. '14)	
<ul style="list-style-type: none"> <li>➤ Description (2015): Georgia Tech's plan (Space Race: Humans vs. Aliens) won first place in call for ideas about how to promote awareness of human factors and ergonomics.</li> <li>➤ Description (2014): Georgia Tech's plan (Bad Design Atlanta) won second place</li> <li>➤ Role: Co-authored both submission documents and event plans</li> </ul>		
<i>Human Factors and Ergonomics Society "Voting System of Tomorrow" competition</i>	First place	Oct. 2014
<ul style="list-style-type: none"> <li>➤ Description: Georgia Tech won first place in an HFES-sponsored competition offering teams the opportunity to re-design the American voting process with a human factors focus.</li> <li>➤ Role: One of three team leaders (led team during writing phase and ballot interface design phase)</li> </ul>		
<i>Best of the Michigan Daily</i>	Recipient (4x)	2011-2012
<ul style="list-style-type: none"> <li>➤ Description: Wrote the newspaper's best opinion column of the week (as decided by managing editors)</li> </ul>		
<i>Eugene Bossart Concerto Competition (University of Michigan)</i>	Winner	Apr. 2011
<ul style="list-style-type: none"> <li>➤ Description: Won grand prize and performed <i>Concertino</i> (Weber) with the Campus Symphony at Hill Auditorium</li> </ul>		
<i>George M. Landes Prize for Technical Communication (freshman division)</i>	Runner-up	Apr. 2009
<ul style="list-style-type: none"> <li>➤ Description: Team won second place in a technical writing competition (topic: bi-leaflet heart valves)</li> </ul>		

## Service and professional activities

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- Engineering psychology student representative to the faculty (Georgia Tech)* 2016-2017 school year
- Represented the engineering psychology department's doctoral students in monthly meetings of the engineering psychology faculty and general faculty
- Immunization schedule redesign (Centers for Disease Control)* 2015-2016 school year
- Led HFES student chapter in redesign of CDC immunization schedules to be used in doctors' offices for reference (supervisor: Dr. David Kim)
- Leucine Zipper Science Show (part of the Atlanta Science Festival)* March 2015
- Used card tricks to illustrate various scientific concepts
- Guest speaker, Winter Park High School* March 2015
- As past graduate (c/o 2008), spoke to freshmen about life/career opportunities after high school
- Global Social Venture Competition* December 2014
- Judged first round of idea submissions by aspiring entrepreneurs
- Bad Design Atlanta (part of National Ergonomics Month)* Fall 2014
- Judged submissions from contest entrants
- The Psychology of Card Magic (presentation to the Atlanta Science Tavern)* August 2014
- Presented card tricks to attendees and explained the psychology concepts underlying the tricks
- Lab representative, Engineering Psychology Advisory Committee* 2013-2014 school year
- Represented the Problem Solving and Educational Technology (PSET) laboratory in meetings with faculty and other lab representatives to discuss current issues in the engineering psychology program
- Atlanta Science Festival* March 2014
- Wrote proposal for Georgia Tech chapter of HFES to receive science demonstration funds
- Merit Badge Day* July 2013
- Talked to local Boy Scout troop (Griffin, GA) about scientific research and higher education
- Fernbank Museum's "Science at Hand" Day* November 2012
- Performed demonstrations regarding the importance of user-centered design
- Code cart medication drawer redesign – Ann Arbor Veterans Affairs Hospital* January 2012 – May 2012
- Used human factors principles to create user-friendly medication drawers
  - Finalist for 2017 ASHP Award for Excellence in Medication Safety
  - Improved nurses' retrieval speed and accuracy compared to existing drawer design
  - Work was presented at 2013 American Society of Health-System Pharmacists (ASHP) conference
  - "Easy-read" vial holders patented by Health Care Logistics (Patent US 20150014492 A1)
  - Partners: University of Michigan Health Services, Health Care Logistics

## Review work

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### Journals

- *IEEE Transactions on Human-Machine Systems*
- *Theoretical Issues in Ergonomics Science*
- *Journal on Multimodal User Interfaces*

### Conferences

- *IEEE Systems, Man, and Cybernetics Society (SMC)* 2021, 2022
- *Interservice/Industry Training, Simulation, and Education (IITSEC)* 2018
- *Cognitive Science Society (CogSci)* 2016, 2017
- *International Conference on Human-Computer Interaction (HCI)* 2016
- *International Conference on Applied Human Factors and Ergonomics (AHFE)* 2016
- *Human Factors and Ergonomics Society (HFES)* 2015

### Books

- *Educational Technologies: Challenges, Applications, and Learning Outcomes (Lin & Atkinson, 2016)*
- *Trust in Human-Robot Interaction (Nam & Lyons, 2020)*

## Teaching

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<p><i>Instructor of record – Georgia Institute of Technology, School of Psychology</i></p> <ul style="list-style-type: none"> <li>➤ Engineering Psychology (undergraduate)</li> </ul>	<p>3 times (last: Spring 2018)</p>
<p><i>Laboratory instructor – Georgia Institute of Technology, School of Psychology</i></p> <ul style="list-style-type: none"> <li>➤ Research Methods (undergraduate)</li> </ul>	<p>4 times (last: Spring 2017)</p>
<p><i>Co-instructor – Georgia Institute of Technology, School of Psychology</i></p> <ul style="list-style-type: none"> <li>➤ Introduction to Psychology</li> </ul>	<p>Aug. 2014 – Dec. 2014</p>
<p>“<i>Psychology of Magic</i>” guest lectures</p> <ul style="list-style-type: none"> <li>➤ Course: Sensation and Perception (5 times)</li> <li>➤ Course: Engineering Psychology (5 times)</li> <li>➤ Course: Cognitive Psychology (2 times)</li> </ul>	<p>2014-2018</p>
<p><i>Graduate teaching assistant – Georgia Institute of Technology, School of Psychology</i></p> <ul style="list-style-type: none"> <li>➤ Introduction to Psychology</li> <li>➤ Cognitive Psychology (undergraduate)</li> <li>➤ Research Methods (undergraduate)</li> </ul>	<p>Aug. 2012 – May 2016</p>
<p><i>Instructional aide – University of Michigan, Industrial and Operations Engineering</i></p> <ul style="list-style-type: none"> <li>➤ Instructional Aide – Entrepreneurship</li> </ul>	<p>Jan. 2012 – May 2012</p>



### Invited talks

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**Chen, D.** (2015, November). *Productive failure*. Invited presentation to Georgia Tech Engineering Psychology Colloquia Series, Georgia Institute of Technology, Atlanta, GA.

**Chen, D.** (2013, April). *Effects of multimedia interactivity on spatial task learning outcomes*. Invited presentation to Georgia Tech Engineering Psychology Colloquia Series, Georgia Institute of Technology, Atlanta, GA.

### Other conference presentations

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**Chen, D.**, Gable, T., Gipson, C., Kazi, S., Preusse, K., & White, C. (2015, October). *Engineering psychology laboratories – Georgia Tech School of Psychology*. Human Factors and Ergonomics Society 59<sup>th</sup> Annual Meeting, Los Angeles, CA.

Gable, T., **Chen, D.**, Illingworth, D., McGlynn, S., & Mumma, J. (2014, October). *Engineering psychology laboratories in the Georgia Tech School of Psychology*. Human Factors and Ergonomics Society 58<sup>th</sup> Annual Meeting, Chicago, IL.

**Chen, D.** (2014, March). *Comparing usage of metacognitive prompts in reading from screens and paper*. Poster presented at the Georgia Tech Research and Innovation Conference, Georgia Institute of Technology, Atlanta, GA.

### Miscellaneous presentations

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**Chen, D.** (2014, April). *Effects of multimedia interactivity on spatial task learning outcomes*. Presentation at the 2014 Spring GVU Digital Media Research Showcase, Georgia Institute of Technology, Atlanta, GA.

**Chen, D.** (2013, November). *Effects of multimedia interactivity on spatial task learning outcomes*. Presentation at the Institute for People and Technology Forum, Georgia Institute of Technology, Atlanta, GA.

**Chen, D.** (2013, October). *Effects of multimedia interactivity on spatial task learning outcomes*. Presentation at the 2013 Fall GVU Digital Media Research Showcase, Georgia Institute of Technology, Atlanta, GA.

Bujak, K.R., Margulieux, L.E., **Chen, D.**, Schaeffer, L.M., & Hughes, G.C. (2013, April). *Understanding cognition to design better learning experiences*. Presentation at the 2013 Spring GVU Digital Media Research Showcase, Georgia Institute of Technology, Atlanta, GA.

**Chen, D.**, Lloyd, D., Maziar, N., & Ramanathan, V. (2012, April). *Emergency Code Cart Medicine Tray Redesign*. Poster presented at the Winter Michigan Engineering Design Expo, University of Michigan, Ann Arbor, MI.

## Media coverage and dissemination

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- Applied Cognition and Training in Immersive Virtual Environments Laboratory. (2012, December). STEM Student Showcase. *Science & Technology Innovations, Fall 2012*. Retrieved from: [http://www.active.ist.ucf.edu/Portals/1/Docs/ST\\_Innovations\\_Fall2012\\_LowRes.pdf](http://www.active.ist.ucf.edu/Portals/1/Docs/ST_Innovations_Fall2012_LowRes.pdf)
- Cockrum, T. & Brown, J. (2015, February 24). Research on Multimedia Interactivity with Dar-Wei Chen. *Flipped Learning Podcast*. Retrieved from: <http://flippedlearning.edreach.us/2015/02/25/flipped-learning-118-research-on-interactive-multimedia-with-dar-wei-chen/>
- Cohn, J. (2011, October 26). Daily Deadline. *The New Republic*. Retrieved from: <http://www.newrepublic.com/blog/jonathan-cohn/96737/daily-deadline-mississippi-v-birth-control>
- The Garage (2018, September 4). Print vs. screen: How to remember what you read. *The Garage*. Retrieved from: <https://garage.ext.hp.com/us/en/modern-life/reading-on-screen-on-paper-printing.html>
- Human Factors and Ergonomics Society. (2014, November 10). Design Competition Teams Recognized for Advancing Voting Technology. *HFES News*. Retrieved from: <https://www.hfes.org/web/DetailNews.aspx?Id=360>
- IANS (2016, May). Download these free web apps to multi-task better. Featured in Yahoo!News, The Times of India, The Economic Times, The Statesman, Business Standard, Zee News, The Free Press Journal, Three Novices, Udaipur Kiran, Download Jozz, Vishva Times, LA Indian, Seattle Indian, Can India.
- Preston, J. (2016, May). Georgia Tech research finds that web apps for the workplace succeed to varying degrees. *GVU Center News Brief*. <http://gvu.gatech.edu/georgia-tech-researchers-find-web-apps-workplace-are-succeeding-varying-degrees>
- Preston, J. (2015, January 28). What the Rubik's Cube teaches us about online learning. *GVU Center News*. Retrieved from: <http://gvu.gatech.edu/what-rubiks-cube-teaches-us-about-online-learning>
- Smith, L. (2016, May). Which free web apps for collaboration are the most user-friendly?. Featured in EurekAlert.org, Newswise.com, Phys.org, Livenetworknews.com, Scienmag.com, Allmagnews.com, Healthmedicinet.com, Science Codex.
- Woods, S. (2017, February). FanRag Sports: The Starting 5. <https://www.fanragssports.com/nba/starting-5-nba-trade-deadline-defined-unintended-consequences/>

## Graduate coursework (Georgia Institute of Technology)

### Psychology

Sensation and Perception  
 Biopsychology  
 Data Visualization  
 Engineering Psychology – Stressors  
 Engineering Psychology II  
 Cognitive Psychology  
 Psychomotor and Cognitive Skill Learning and Performance  
 Human-Computer Interaction  
 Web Usability and Access

### Quantitative

Statistical Analysis I (with SPSS)  
 Statistical Analysis II (with R)  
 Research Methods  
 Engineering Psychology – Analysis Techniques  
 Responsible Conduct of Research

Other: Teaching practicum, Educational technology seminar

## Relevant undergraduate coursework (University of Michigan – Ann Arbor)

### Mathematics

Linear Algebra  
 Differential Equations  
 Calculus I, II, and III (with Matlab)

### Human factors

Ergonomics (plus laboratory)  
 Human Error and Complex System Failures  
 Automotive Human Factors

### Statistics

Markov Processes  
 Optimization Methods  
 Linear Statistical Models  
 Operations Modeling  
 Statistics and Probability  
 Statistical Quality Control

Other: Entrepreneurship, Senior Design – Veterans Affairs Ann Arbor, Data Processing (Visual Basic), Technical Communication, System Simulations (ProModel), Manufacturing Strategies, Introduction to Programming (C++)

## Personal development

*Freelance basketball writing (~80,000 article views)*

March 2016 – January 2018

- 16 Wins A Ring (staff writer, NBA)
- Orlando Magic Daily (staff writer, Sports Illustrated – FanSided)

*Principal clarinetist and publicity chair, Michigan Campus Symphony*

Fall 2010, Winter 2011, Fall 2011

*Member, Michigan Solar Car Team*

Fall 2009

- Helped organize team's workspace and received basic training on machining and power tools

*First clarinetist, University of Michigan Marching Band*

Fall 2008

## Community service

- Assistant basketball coach at Ramay Junior High School (Fayetteville, AR): 2021-2022 season
- Youth basketball coach at Junior Magic (Sep. 2018 through Nov. 2019, under-8 and under-10 age groups)
- Volunteered at the United Cerebral Palsy of Central Florida over two summers (2006 and 2007) to help affected children lead normal and social lives
- Taught free private lessons to novice students at the Maitland Middle School Summer Band Camp (summers of 2006 and 2007)
- Built houses for under-privileged people at Habitat for Humanity (2005, 2012)