NIGEL BOSCH

Curriculum Vitae

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School of Information Sciences
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Education

2017   PhD, Computer Science
            University of Notre Dame, Notre Dame, IN 46556

2016   MS, Computer Science
            University of Notre Dame, Notre Dame, IN 46556

2012   BS, Computer Science
            Abilene Christian University, Abilene, TX 79699

Appointments

2019–Present   Assistant Professor, School of Information Sciences
                Assistant Professor, Department of Educational Psychology
                Faculty Affiliate, National Center for Supercomputing Applications
                Faculty Affiliate, Illinois Informatics
                University of Illinois at Urbana–Champaign

2017–2019   Postdoctoral Researcher
                National Center for Supercomputing Applications
                University of Illinois at Urbana–Champaign

2012–2017   Graduate Research Assistant
                Emotive Computing Lab, University of Notre Dame

2010–2012   Software Development Intern
                Milsoft Utility Solutions, Abilene, TX

Grants

2019–2022   Advancing Computational Grounded Theory for Audiovisual Data from STEM
                Classrooms ($1,313,855). National Science Foundation EHR Core Research. Co-PI.

2018–2021   Underrepresented Student Learning in Online Introductory STEM College Courses ($1,399,194). Institute of Education Sciences. Co-PI.

2018–2019   National Study of Learning Mindsets Early Career Fellowship ($8000 + travel). Mindset Scholars Network and University of Texas at Austin Population Research Center.

2016   National Science Foundation Travel Award ($1449). 24th ACM Conference on User Modeling, Adaptation and Personalization (UMAP).

2015   National Science Foundation Travel Award ($2398). 17th ACM International Conference on Multimodal Interaction (ICMI).

2015   National Science Foundation Travel Award ($1250). 20th ACM Conference on Intelligent User Interfaces (IUI 2015).

2015   National Science Foundation Travel Award ($1000). 8th International Conference on Educational Data Mining (EDM 2015) and 17th International Conference on Artificial Intelligence in Education (AIED 2015).

2015   University of Notre Dame Professional Development and Graduate Student Union Conference Presentation Grant ($2600). 8th International Conference on Educational Data Mining (EDM 2015) and 17th International Conference on Artificial Intelligence in Education (AIED 2015).

2013   National Science Foundation Travel Award ($1300). Doctoral Consortium at 16th International Conference on Artificial Intelligence in Education (AIED 2013).

Awards

Publication Awards

AIED 2018 Best Student Paper Award: Jiang, Y., **Bosch, N.**, Baker, R. S., Paquette, L., Ocumpaugh, J., Andres, J. M. A. L., … Biswas, G. (2018). Expert feature-engineering vs. deep neural networks: Which is better for sensor-free affect detection? In C. Rosé, R. Martínez-Maldonado, H. U. Hoppe, R. Luckin, M. Mavrikis, K. Porayska-Pomsta, … B. du Boulay (Eds.), *Proceedings of the 19th International Conference on Artificial Intelligence in Education (AIED 2018)* (pp. 198–211). London, UK: Springer, Cham.

UMAP 2017 Best Student Paper Award: Hutt, S., Mills, C., **Bosch, N.**, Krasich, K., Brockmole, J., & D'Mello, S. K. (2017). Out of the fr-"eye"-ing pan: Towards gaze-based models of attention during learning with technology in the classroom. In *Proceedings of the 2017 Conference on User Modeling, Adaptation, and Personalization (UMAP 2017)* (pp. 94–103). New York, NY: ACM.

EDM 2017 Best Student Paper Award: Stewart, A., **Bosch, N.**, & D'Mello, S. K. (2017). Generalizability of face-based mind wandering detection across task contexts. In X. Hu, T. Barnes, A.

Hershkovitz, & L. Paquette (Eds.), *Proceedings of the 10th International Conference on Educational Data Mining (EDM 2017)* (pp. 88–95). International Educational Data Mining Society.

AIED 2015 Best Paper Award: Bosch, N., D'Mello, S., Baker, R., Ocumpaugh, J., & Shute, V. J. (2015). Temporal generalizability of face-based affect detection in noisy classroom environments. In C. Conati, N. T. Heffernan, A. Mitrovic, & M. Felisa Verdejo (Eds.), *Proceedings of the 17th International Conference on Artificial Intelligence in Education (AIED 2015)* (pp. 44–53). Berlin Heidelberg: Springer-Verlag.

EDM 2015 Best Student Paper Award: Kai, S., Paquette, L., Baker, R., **Bosch, N.**, D'Mello, S., Ocumpaugh, J., … Ventura, M. (2015). Comparison of face-based and interaction-based affect detectors in physics playground. In C. Romero, M. Pechenizkiy, J. Boticario, & O. Santos (Eds.), *Proceedings of the 8th International Conference on Educational Data Mining (EDM 2015)* (pp. 77–84). International Educational Data Mining Society.

IUI 2015 Honorable Mention for Best Paper Award: Bosch, N., D'Mello, S., Baker, R., Ocumpaugh, J., Shute, V. J., Ventura, M., … Zhao, W. (2015). Automatic detection of learning-centered affective states in the wild. In *Proceedings of the 2015 International Conference on Intelligent User Interfaces (IUI 2015)* (pp. 379–388). New York, NY: ACM.

ICSE 2014 ACM Distinguished Paper Award: Rodeghero, P., McMillan, C., McBurney, P. W., **Bosch, N.**, & D'Mello, S. (2014). Improving automated source code summarization via an eye-tracking study of programmers. In *Proceedings of the 36th International Conference on Software Engineering (ICSE 2014)* (pp. 390–401). New York, NY: ACM.

Other Awards

- Outstanding reviewer, IEEE Face & Gesture (FG) conference, 2019
- Outstanding SPIN (Students Pushing INnovation) mentor, Summer 2018

Publications

Peer-reviewed Published Conference Proceedings

Zhang, Y., Paquette, L., Baker, R. S., Ocumpaugh, J., **Bosch, N.**, Munshi, A., & Biswas, G. (2020). The relationship between confusion and metacognitive strategies in Betty's Brain. *Proceedings of the 10th International Conference on Learning Analytics and Knowledge (LAK20)* (pp. 276–284). New York, NY: ACM.

Huang, E., Valdiviejas, H., & **Bosch, N.** (2019). I'm sure! Automatic detection of metacognition in online course discussion forums. *Proceedings of the 8th International Conference on Affective Computing and Intelligent Interaction (ACII 2019)* (pp. 241–247). Piscataway, NJ: IEEE.

Mills, C., **Bosch, N.**, Krasich, K., & D'Mello, S. K. (2019). Reducing mind wandering during vicarious learning from an intelligent tutoring system. In S. Isotani, E. Millán, A. Ogan, P. Hastings, B. McLaren, & R. Luckin (Eds.), *Proceedings of the 20th International Conference on Artificial Intelligence in Education (AIED 2019)* (pp. 296–307). Cham, CH: Springer.

Bosch, N., Huang, E., Angrave, L., & Perry, M. (2019). Modeling improvement for underrepresented minorities in online STEM education. In *Proceedings of the 27th Conference on User Modeling, Adaptation and Personalization (UMAP 2019)* (pp. 327–335). New York, NY: ACM.

Andres, A., Ocumpaugh, J., Baker, R. S., Slater, S., Paquette, L., Jiang, Y., **Bosch, N.**, Munshi, A., Moore, A. L., Biswas, G. (2019). Affect sequences and learning in Betty's Brain. In C. Brooks, R. Ferguson, & H. U. Hoppe (Eds.), *Proceedings of the 9th International Learning Analytics & Knowledge Conference (LAK19)* (pp. 383–390). New York, NY: ACM.

Bosch, N., Crues, R. W., & Shaik, N. (2018). Diverse learners, diverse motivations: Exploring the sentiment of learning objectives. In K. E. Boyer & M. V. Yudelson (Eds.), *Proceedings of the 11th International Conference on Educational Data Mining (EDM 2018)* (pp. 553–556). International Educational Data Mining Society.

Crues, R. W., **Bosch, N.**, Anderson, C. J., Perry, M., Bhat, S., & Shaik, N. (2018). Who they are and what they want: Understanding the reasons for MOOC enrollment. In K. E. Boyer & M. V. Yudelson (Eds.), *Proceedings of the 11th International Conference on Educational Data Mining (EDM 2018)* (pp. 176–186). International Educational Data Mining Society.

Crues, R. W., **Bosch, N.**, Perry, M., Angrave, L., Shaik, N., & Bhat, S. (2018). Refocusing the lens on engagement in MOOCs. In R. Luckin, K. R. Koedinger, & S. Klemmer (Eds.), *Proceedings of the 5th (2018) ACM Conference on Learning@Scale* (10 pages). New York, NY: ACM.

Bosch, N., Mills, C., Wammes, J. D., & Smilek, D. (2018). Quantifying classroom instructor dynamics with computer vision. In C. Rosé, R. Martínez-Maldonado, H. U. Hoppe, R. Luckin, M. Mavrikis, K. Porayska-Pomsta, … B. du Boulay (Eds.), *Proceedings of the 19th International Conference on Artificial Intelligence in Education (AIED 2018)* (pp. 30–42). Cham, CH: Springer.

Jiang, Y., **Bosch, N.**, Baker, R. S., Paquette, L., Ocumpaugh, J., Andres, J. M. A. L., … Biswas, G. (2018). Expert feature-engineering vs. deep neural networks: Which is better for sensor-free affect detection? In C. Rosé, R. Martínez-Maldonado, H. U. Hoppe, R. Luckin, M. Mavrikis, K. Porayska-Pomsta, … B. du Boulay (Eds.), *Proceedings of the 19th International Conference on Artificial Intelligence in Education (AIED 2018)* (pp. 198–211). Cham, CH: Springer.

Paquette, L., **Bosch, N.**, Mercier, E., Jung, J., Shehab, S., & Tong, Y. (2018). Matching data-driven models of group interactions to video analysis of collaborative problem solving on tablet computers. In J. Kay & R. Luckin (Eds.), *Proceedings of the 13th International Conference of the Learning Sciences (ICLS) 2018, Volume 1* (pp. 312–319). International Society of the Learning Sciences.

Bosch, N., Crues, R. W., Henricks, G. M., Perry, M., Angrave, L., Shaik, N., … Anderson, C. J. (2018). Modeling key differences in underrepresented students' interactions with an online STEM course. In *Proceedings of TechMindSociety '18*. New York, NY: ACM.

Stewart, A., **Bosch, N.**, Chen, H., Donnelly, P. J., & D'Mello, S. K. (2017). Face forward: Detecting mind wandering from video during narrative film comprehension. In E. André, R. S. Baker, X. Hu, M. M. T. Rodrigo, & B. du Boulay (Eds.), *Proceedings of the 18th International Conference on Artificial Intelligence in Education (AIED 2017)* (pp. 359–370). Cham, CH: Springer.

Stewart, A., **Bosch, N.**, & D'Mello, S. K. (2017). Generalizability of face-based mind wandering detection across task contexts. In X. Hu, T. Barnes, A. Hershkovitz, & L. Paquette (Eds.), *Proceedings of the 10th International Conference on Educational Data Mining (EDM 2017)* (pp. 88–95). International Educational Data Mining Society.

Khan, S., Suendermann-Oeft, D., Evanini, K., Williamson, D. M., Paris, S., Qian, Y., Huang, Y., **Bosch, N.**, D'Mello, S. K., Loukina, A., & Davis, L. (2017). MAP: Multimodal assessment platform for interactive communication competency. In S. Shehata & J. P.-L. Tan (Eds.), *Practitioner Track Proceedings of the 7th International Learning Analytics & Knowledge Conference (LAK17)* (pp. 6–12). SoLAR.

Hutt, S., Mills, C., **Bosch, N.**, Krasich, K., Brockmole, J., & D'Mello, S. K. (2017). Out of the fr-"eye"-ing pan: Towards gaze-based models of attention during learning with technology in the classroom. In *Proceedings of the 2017 Conference on User Modeling, Adaptation, and Personalization (UMAP 2017)* (pp. 94–103). New York, NY: ACM.

D'Mello, S. K., Mills, C., Bixler, R., & **Bosch, N.** (2017). Zone out no more: Mitigating mind wandering during computerized reading. In X. Hu, T. Barnes, A. Hershkovitz, & L. Paquette (Eds.), *Proceedings of the 10th International Conference on Educational Data Mining (EDM 2017)* (pp. 8–15). International Educational Data Mining Society.

D'Mello, S. K., Kopp, K., Bixler, R., & **Bosch, N.** (2016). Attending to attention: Detecting and combating mind wandering during computerized reading. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 1661–1669). New York, NY: ACM.

Bosch, N., D'Mello, S. K., Baker, R. S., Ocumpaugh, J., Shute, V., Ventura, M., … Zhao, W. (2016). Detecting student emotions in computer-enabled classrooms. In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI 2016)* (pp. 4125–4129). Menlo Park, CA: AAAI Press.

Bosch, N. (2016). Detecting student engagement: Human versus machine. In *Proceedings of the 2016 Conference on User Modeling, Adaptation, and Personalization (UMAP 2016)* (pp. 317–320). New York, NY: ACM.

Dillon, J., **Bosch, N.**, Chetlur, M., Wanigasekara, N., Ambrose, G. A., Sengupta, B., & D'Mello, S. K. (2016). Student emotion, co-occurrence, and dropout in a MOOC context. In T. Barnes, M. Chi, & M. Feng (Eds.), *Proceedings of the 9th International Conference on Educational Data Mining (EDM 2016)* (pp. 353–357). International Educational Data Mining Society.

Stewart, A., **Bosch, N.**, Chen, H., Donnelly, P. J., & D'Mello, S. K. (2016). Where's your mind at? Video-based mind wandering detection during film viewing. In *Proceedings of the 2016 Conference on User Modeling, Adaptation, and Personalization (UMAP 2016)* (pp. 295–296). New York, NY: ACM.

Bosch, N., Chen, H., Baker, R., Shute, V., & D'Mello, S. (2015). Accuracy vs. availability heuristic in multimodal affect detection in the wild. In *Proceedings of the 17th International Conference on Multimodal Interaction (ICMI 2015)* (pp. 267–274). New York, NY: ACM.

Bosch, N., D'Mello, S., Baker, R., Ocumpaugh, J., Shute, V. J., Ventura, M., … Zhao, W. (2015). Automatic detection of learning-centered affective states in the wild. In *Proceedings of the 2015 International Conference on Intelligent User Interfaces (IUI 2015)* (pp. 379–388). New York, NY: ACM.

Kai, S., Paquette, L., Baker, R., **Bosch, N.**, D'Mello, S., Ocumpaugh, J., … Ventura, M. (2015). Comparison of face-based and interaction-based affect detectors in physics playground. In C. Romero, M. Pechenizkiy, J. Boticario, & O. Santos (Eds.), *Proceedings of the 8th International Conference on Educational Data Mining (EDM 2015)* (pp. 77–84). International Educational Data Mining Society.

Mills, C., D'Mello, S., **Bosch, N.**, & Olney, A. (2015). Mind wandering during learning with an intelligent tutoring system. In C. Conati, N. T. Heffernan, A. Mitrovic, & M. Felisa Verdejo (Eds.), *Proceedings of the 17th International Conference on Artificial Intelligence in Education (AIED 2015)* (pp. 267–276). Cham, CH: Springer.

Bosch, N. (2015). Multimodal affect detection in the wild: Accuracy, availability, and generalizability. In *Proceedings of the 17th International Conference on Multimodal Interaction (ICMI 2015 doctoral consortium)* (pp. 645–649). New York, NY: ACM.

Bosch, N., D'Mello, S., Baker, R., Ocumpaugh, J., & Shute, V. J. (2015). Temporal generalizability of face-based affect detection in noisy classroom environments. In C. Conati, N. T. Heffernan, A. Mitrovic, & M. Felisa Verdejo (Eds.), *Proceedings of the 17th International Conference on Artificial Intelligence in Education (AIED 2015)* (pp. 44–53). Cham, CH: Springer.

Chen, Y., **Bosch, N.**, & D'Mello, S. (2015). Video-based affect detection in noninteractive learning environments. In C. Romero, M. Pechenizkiy, J. Boticario, & O. Santos (Eds.), *Proceedings of the 8th International Conference on Educational Data Mining (EDM 2015)* (pp. 440–443). International Educational Data Mining Society.

Rodeghero, P., McMillan, C., McBurney, P. W., **Bosch, N.**, & D'Mello, S. (2014). Improving automated source code summarization via an eye-tracking study of programmers. In *Proceedings of the 36th International Conference on Software Engineering (ICSE 2014)* (pp. 390–401). New York, NY: ACM.

Bosch, N., & D'Mello, S. (2014). It takes two: Momentary co-occurrence of affective states during computerized learning. In S. Trausan-Matu, K. E. Boyer, M. Crosby, & K. Panourgia (Eds.), *Proceedings of the 12th International Conference on Intelligent Tutoring Systems (ITS 2014)* (pp. 638–639). Switzerland: Springer International Publishing.

Bosch, N., Chen, Y., & D'Mello, S. (2014). It's written on your face: Detecting affective states from facial expressions while learning computer programming. In S. Trausan-Matu, K. E. Boyer, M. Crosby, & K. Panourgia (Eds.), *Proceedings of the 12th International Conference on Intelligent Tutoring Systems (ITS 2014)* (pp. 39–44). Switzerland: Springer International Publishing.

Mills, C., **Bosch, N.**, Graesser, A., & D'Mello, S. (2014). To quit or not to quit: Predicting future behavioral disengagement from reading patterns. In S. Trausan-Matu, K. E. Boyer, M. Crosby, & K. Panourgia (Eds.), *Proceedings of the 12th International Conference on Intelligent Tutoring Systems (ITS 2014)* (pp. 19–28). Switzerland: Springer International Publishing.

Bosch, N., & D'Mello, S. (2013). Programming with your heart on your sleeve: Analyzing the affective states of computer programming students. In H. C. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Proceedings of the 16th International Conference on Artificial Intelligence in Education (AIED 2013)* (pp. 908–911). Berlin, Heidelberg: Springer.

Bosch, N., D'Mello, S., & Mills, C. (2013). What emotions do novices experience during their first computer programming learning session? In H. C. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Proceedings of the 16th International Conference on Artificial Intelligence in Education (AIED 2013)* (pp. 11–20). Berlin, Heidelberg: Springer.

Mills, C., D'Mello, S., Lehman, B., **Bosch, N.**, Strain, A., & Graesser, A. (2013). What makes learning fun? Exploring the influence of choice and difficulty on mind wandering and engagement during learning. In H. C. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Proceedings of the 16th International Conference on Artificial Intelligence in Education (AIED 2013)* (pp. 71–80). Berlin, Heidelberg: Springer.

Peer-reviewed Journal Publications

Bosch, N., & D'Mello, S. K. (in press). Automatic detection of mind wandering from video in the lab and in the classroom. *IEEE Transactions on Affective Computing*.

Hutt, S., Krasich, K., Mills, C., **Bosch, N.**, White, S., Brockmole, J. R., & D'Mello, S. K. (2019). Automated gaze-based mind wandering detection during computerized learning in classrooms. *User Modeling and User-Adapted Interaction, 29*(4), 821–867.

Wammes, J. D., Ralph, B. C. W., Mills, C., **Bosch, N.**, Duncan, T. L., & Smilek, D. (2019). Disengagement during lectures: Media multitasking and mind wandering in university classrooms. *Computers & Education, 132*, 76–89.

Bosch, N., & Paquette, L. (2018). Metrics for discrete student models: Chance levels, comparisons, and use cases. *Journal of Learning Analytics, 5*(2), 86–104.

Monkaresi, H., **Bosch, N.**, Calvo, R. A., & D'Mello, S. K. (2017). Automated detection of engagement using video-based estimation of facial expressions and heart rate. *IEEE Transactions on Affective Computing*, *8*(1), 15–28.

Bosch, N., & D'Mello, S. (2017). The affective experience of novice computer programmers. *International Journal of Artificial Intelligence in Education*, *27*(1), 181–206.

Bosch, N., D'Mello, S. K., Ocumpaugh, J., Baker, R. S., & Shute, V. (2016). Using video to automatically detect learner affect in computer-enabled classrooms. *ACM Transactions on Interactive Intelligent Systems (TiiS)*, *6*(2).

Shute, V. J., D'Mello, S., Baker, R., Cho, K., **Bosch, N.**, Ocumpaugh, J., … Almeda, V. (2015). Modeling how incoming knowledge, persistence, affective states, and in-game progress influence student learning from an educational game. *Computers & Education*, *86*, 224–235.

Book Chapters

Paquette, L., & Bosch, N. (2020). The invisible breadcrumbs of digital learning: How learner actions inform us of their experience. In M. Montebello (Ed.), *Handbook of Research on Digital Learning* (pp. 302–316). Hershey, PA: IGI Global

D'Mello, S. K., **Bosch, N.**, & Chen, H. (2018). Multimodal, multisensory affect detection. In S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, & A. Krüger (Eds.), *The Handbook of Multimodal-Multisensor Interfaces, Volume 2: Signal Processing, Architectures, and Detection of Emotion and Cognition* (pp. 167–202). New York, NY: ACM Books/Morgan Claypool.

Peer-reviewed Workshop Papers

Bosch, N., & Paquette, L. (2017). Unsupervised deep autoencoders for feature extraction with educational data. In *Deep Learning with Educational Data Workshop at the 10th International Conference on Educational Data Mining*.

Bosch, N., & D'Mello, S. (2014). Co-occurring affective states in automated computer programming education. In E. Walker & C. K. Looi (Eds.), *Proceedings of the Workshop on AI-supported Education for Computer Science (AIEDCS) at the 12th International Conference on Intelligent Tutoring Systems* (pp. 21–30).

Bosch, N., & D'Mello, S. (2013). Sequential patterns of affective states of novice programmers. In E. Walker & C. K. Looi (Eds.), *Proceedings of the First Workshop on AI-supported Education for Computer Science (AIEDCS 2013)* (pp. 1–10).

Teaching and Mentorship

Teaching and Tutoring Activities

- University of Illinois at Urbana–Champaign
  - Instructor, *Data, Statistical Models, and Information* (IS 542) – Fall 2019, Spring 2020
  - Instructor, *Machine Learning Team Projects* (IS 590ML) – Spring 2019, Fall 2019
  - Instructor, *Foundations of Information Processing* (IS 452) – Spring 2019
  - Instructor, *Data Mining* (IS 590DT2) – Fall 2018
  - Co-instructor, *Machine Learning Team Projects* (IS 590ML) – Fall 2018
  - Guest Lecturer, *Advanced Topics: Machine Learning & Social Computing* (IS 590MSC)
  - Guest Lecturer, *Introduction to Educational Data Mining* (CI 507EDM)
  - Guest Lecturer, *Qualitative Analysis of Video Data* (CI 507AVD)
- Teachers Ranked as Excellent (UIUC teaching award), Fall 2018, Fall 2019

Doctoral Advising

- Destiny Williams-Dobosz (Co-advisor with Michelle Perry)

Masters Students Mentored

- University of Illinois at Urbana–Champaign
  - Lan Jiang, MS in Information Management (2019–2020)
  - Jinlin Zeng, MS in Information Management (2018–2019)

Undergraduate Students Mentored

- University of Illinois at Urbana–Champaign
  - Debopam Sanyal (2019–2020, SPIN—*Students Pushing INnovation* intern)
  - Lauren Gregory (2019)
  - Dean Lin (2018–2019, SPIN—*Students Pushing INnovation* intern)
  - Eddie Huang (2018–2019, First employment: Graduate student at UIUC)
  - Zhuoyue Wang (2018–2019, First employment: Graduate student at UC Berkeley)

- University of Notre Dame
  - Yuxuan Chen (2013–2016, First employment: Graduate student at Columbia University)
  - Huili Chen (2015–2016, First employment: Graduate student at Massachusetts Institute of Technology)
  - Jianan Wang (2016)
  - Jacob Beiter (2016)
  - Timothy Pusateri (2015)

High School Students Mentored

- Connor Sullivan (2016)
- Gustavo Van Overberghe (2013–2014)

Professional Activities

Professional Memberships (Past and Current)

- American Educational Research Association (AERA)
- Association for the Advancement of Affective Computing (AAAC)
- Association for Computing Machinery (ACM)
- International Artificial Intelligence in Education Society
- International Educational Data Mining Society

Journal Reviews

- Behavior Research Methods (BRM)
- British Journal of Educational Technology (BJET)
- IEEE Access
- IEEE Transactions on Affective Computing (TAFFC)
- IEEE Transactions on Learning Technologies (TLT)
- IEEE Transactions on Instrumentation and Measurement (TIM)
- Image and Vision Computing (IMAVIS)
- Information Sciences
- International Journal of Artificial Intelligence in Education (IJAIED)
- International Journal of Distributed Sensor Networks
- International Journal of Human–Computer Interaction (IJHCI)
- PLOS ONE
- Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)
- Psychometrika

Conference Chairing

- Industry Track Co-chair, Educational Data Mining (EDM) Conference, 2020

Conference Reviews

- AAAI Conference on Artificial Intelligence, 2016
- ACM CHI Conference on Human Factors in Computing Systems, 2017–2020
- ACM International Conference on Multimodal Interaction (ICMI), 2014–2019

- IEEE Conference on Automatic Face and Gesture Recognition (FG), 2018–2020
- IEEE Winter Conference on Applications of Computer Vision (WACV), 2020
- International Conference of the Learning Sciences (ICLS), 2018
- International Conference on Affective Computing and Intelligent Interaction (ACII), 2015, 2017, 2019
- International Conference on Artificial Intelligence in Education (AIED), 2017–2020
- International Conference on Computers in Education (ICCE), 2018
- International Conference on Educational Data Mining (EDM), 2014, 2015, 2017–2020
- International Conference on Intelligent Tutoring Systems (ITS), 2016

Workshop and Symposium Reviews

- APA Technology, Mind, and Society (TMS), 2019
- EDMGAMES Workshop at the Educational Data Mining Conference, 2019
- EuroCSS Workshop on Biases in Social Computing Data and Technology, 2018
- IJCAI Workshop on Artificial Intelligence in Affective Computing, 2017
- International Workshop on Empathetic Computing, 2014, 2015
- Society of Research on Educational Effectiveness Spring Conference (SREE), 2019, 2020

Service

- MS/IM Program Committee, School of Information Sciences, UIUC, 2019–2020
- Research Advisory Committee, School of Information Sciences, UIUC, 2019–2020
- Admissions Committee, School of Information Sciences, UIUC, 2019
- Illinois Science Olympiad State Tournament Judge, 2017–2019
- Northern Indiana Regional Science and Engineering Fair Judge, 2015, 2016
- University of Notre Dame Computer Science Graduate Student Board, 2014–2015, 2015–2016
- Notre Dame National Robotics Week Presenter, 2013