

Avi Parush

Faculty of Industrial Engineering and Management
Israel Institute of Technology
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ACADEMIC DEGREES

- 1976-1979 B.A., Psychology, Bar Ilan University, Ramat Gan, Israel
(With highest distinction)
- 1979-1981 M.A., Experimental Psychology, McGill University, Montreal, Canada
Advisor: Prof. Don Donderi
Thesis: "The relationships among perceived contrast, noise, and content in printed images".
- 1981-1984 Ph.D., Experimental Psychology, McGill University, Montreal, Canada
(Dean's Honor List)
Advisor: Prof. David Ostry
Thesis: "Movement organization in speech production: implications from studies of coarticulation".

ACADEMIC APPOINTMENTS

- 2013 – present *Technion - Israel Institute of Technology, Faculty of Industrial Engineering and Management*
Position: Associate professor
- 2016-present *Department of Psychology, Carleton University, Canada*
Professor Emeritus (from July 2016)
- 2012-present *Adjunct professor, School of Nursing, Queen's University, Canada*
- 2013- 2016 *Department of Psychology, Carleton University, Canada*
Position: Full Professor
Cross appointments: School of Industrial Design, Institute of Cognitive Science, The Human-Computer Interaction program
- 2012-2013 *Adjunct professor, Industrial Management and Engineering, Ben Gurion University, Israel*
- 2004 -2012 *Department of Psychology, Carleton University, Canada*
Position: Associate Professor (Tenured January 2007)
Cross appointments: School of Industrial Design, Institute of Cognitive Science
- 1998-2003 *Technion - Israel Institute of Technology, Faculty of Industrial Engineering and Management*
Position: Adjunct and Visiting Scientist
- 1996-2003 *Tel Aviv University, Industrial Engineering, Engineering Faculty, Israel*
Position: Adjunct Senior Lecturer and Research Associate
- 1987 - 1992 *Tel Aviv University, The School of Communication Disorders, Israel*
Position: Adjunct Lecturer
- 1991, 1989 *McGill University, Psychology Dept., Montreal, Canada*
Position: Summer Session Instructor
Course: Statistics for the Behavioral Sciences (undergraduate)

- 1990 *Jerusalem College of Technology, Research Center for Driving Safety, Israel*
Position: Research Consultant
- 1987-1989 *Everyman's University, Ramat-Aviv, Israel*
Position: Research Consultant for the Course Evaluation Team
- 1981-1984 *Pulp and Paper Research Institute of Canada, Montreal, Canada*
Position: Research Associate
- 1981-1984 *McGill University, Psychology Dept., Montreal, Canada*
Position: Teaching Assistant
- 1981-1984 *McGill University, Psychology Dept., Montreal, Canada*
Position: Research Assistant

PROFESSIONAL EXPERIENCE

- 1990-2003 *HIT Human Interface Technologies Ltd.*
Position: Owner and principal consultant
Scitex Corporation Ltd., Corporate R & D, Human Factors Engineering Group
Position: Group Manager.
- 1987-1990 *Israel Defense Forces (IDF)*
Position: Human Factors Engineering Consultant
- 1987-1988 *PAMAM Ltd., Israel*
Position: Human Factors Engineering Consultant
- 1984-1987 *Israel Aircraft Industries (IAI) Ltd., Human Factors Engineering Department*
Position: Human Factors Engineer
- 1983-1984 *Human Factors North, Inc., Canada*
Position: Technical Associate

RESEARCH INTERESTS

Human factors and cognitive engineering, human-computer interaction and user experience, usability engineering, teamwork, critical and complex situations, simulation-based training

Recent and selected scientific publications

- Parush, A.** and **Berman, D.** (2004). Orientation and navigation in 3D user interfaces: The impact of navigation aids and landmarks. *International Journal of Human Computer Studies*, 61 (3), 375-395.
- Parush, A.** (2004). Usability engineering case study of a speech-operated car phone. *International Journal of Industrial Engineering*, 11 (3), 221-230.
- Parush, A.** (2004). An empirical evaluation of textual display configurations for supervisory tasks. *Behavior and Information Technology*, 23 (4), 225-235.
- Parush, A.** and **Yuviler-Gavish, N.** (2004). Web navigation structures in cellular phones: The depth/breadth tradeoff issue. *International Journal of Human Computer Studies*, Special Issue on HCI Issues in Mobile Computing (Editor P. Penharkar), 60 (5-6), pp. 753-770.
- Parush, A.** (2005). Three perspectives on the nature of human-computer interaction. *History and Philosophy of Psychology Bulletin*, Vol. 17 (2), pp. 17-28.
- Parush, A., Shwartz, Y., Shtub, A., and Chandra, J.** (2005). The impact of visual layout factors on performance in web pages: A cross-language study. *Human Factors*, 47 (1), Spring 2005, 141-157.
- Parush, A.** (2005). Speech-based interaction in multi-task conditions: Impact of prompt modality. *Human Factors*, 47 (3), Fall 2005, 591-597.
- Parush, A., Pulsifer, P., Philp, K. and Dunn, G.** (2006). Understanding through structure: The challenges of information and navigation architecture in cybercartography. *Cartographica*, Volume 41, Number 1, 21-34.
- Davidovitch, L., Parush, A., and Shtub, A.** (2006). Simulation-based learning in engineering education: Performance and transfer in learning project management. *Journal of Engineering Education*, October 2006, 289-299.
- Parush, A., Hod, A., and Shtub, A.** (2007). Impact of Visualization Type and Contextual Factors on Performance with Enterprise Resource Planning Systems. *Computers & Industrial Engineering*, 52, 133-142.
- Davidovitch, L., Parush, A., and Shtub, A.** (2008). Simulation-based Learning: The Learning-Forgetting-Relearning Process and Impact of Learning History. *Computers & Education*, 50, 866-880.
- Gauthier, S. M., Parush, A., Macuda, T., Tang, D., Craig, G., and Jennings, S.** (2008). The Impact of Night Vision Goggles on Way-finding Performance and the Acquisition of Spatial Knowledge. *Human Factors*, Volume 50, Number 2, pp. 311-321.
- Arya, A., DiPaola, S., and Parush, A.** (2009). Perceptually valid facial expressions for character-based applications. *International Journal of Computer Games Technology*, Volume 2009 (2009), Article ID 462315, 13 pages.
- Davidovitch, L., Parush, A., and Shtub, A.** (2009). The impact of functional fidelity in simulator-based learning of project management. *International Journal of Engineering Education*, 25 (2), 333-340.
- Davidovitch, L., Parush, A., and Shtub, A.** (2010). Simulator-based training to share resources in a matrix structure organization. *IEEE Transactions on Engineering Management*, 57 (2), 288-300.
- Parush, A., Kramer, C., Foster-Hunt, T., Momtahan, K., Hunter, A., and Sohmer, B.** (2011). Communication and Team Situation Awareness in the OR: Implications for augmentative information display. *Journal of Biomedical Informatics*, 44 (2011), 477-485.
- Parush, A., Gauthier, M. S., Arseneau, L. and Tang, D.** (2011). The human factors of night vision goggles: Perceptual, cognitive, and physical factors. *Reviews of Human Factors and Ergonomics*, Volume 7, pp. 238-279.

- Spilinger, A. and **Parush, A.** (2012). Testimonials and purchase intentions of young buyers in a mock E-Commerce web site. *Journal of Theoretical and Applied Electronic Commerce Research*, Vol 7, Issue 1, 51-63.
- Ellis, J., **Parush, A.**, Taing, M. et al. (2012). Preventing Medication Errors with High Alert Drugs: Testing the iDoseCheck. *Canadian Journal of Nurse Informatics*, Volume 7, Issue 1.
- Estemad, A. Arya, A. & **Parush, A.** (2014). Additivity in Perception of Affect from Limb Motion. *Neuroscience Letters*, Vol. 558, 132-136.
- Parush, A.**, Kramer, C., Foster-Hunt, T., McMullan, A. & Momtahan, K. (2014). Exploring similarities and differences in teamwork across diverse healthcare contexts using communication analysis. *Cognition, Technology & Work*, 16, 47-57.
- Wohl, J.A.M, **Parush, A.**, Kim, H.S., & Warren, K. (2014). Building it Better: Applying Human-Computer Interaction and Persuasive System Design Principles to a Monetary Limit Tool Improves Responsible Gambling. *Computers in Human Behaviour*. Computers in Human Behavior 37C, pp. 124-132
- Varpio, L., Day, K., Elliott-Miller, P., Kuziemy, C., King, J., **Parush, A.**, Roffey, T., Rashotte, J. (2015). The Impact of Adopting EHRs: How Losing Connectivity Effects Clinical Reasoning. *Medical Education*, 49(5):476-486.
- McMullan, A., **Parush, A.**, & Momtahan, K. (2015). Transferring Patient Care: Patterns of Synchronous Bi-Disciplinary Communication Between Nurses and Physicians During Handoffs in a Critical Care Unit. *Journal of PeriAnesthesia Nursing*, 30 (2), 92-104.
- Foster-Hunt, T., **Parush, A.**, Ellis, J., Thomas, M., & Rashotte, J. (2015). Information Structure and Organization in Change of Shift Reports: An Observational Study of Nursing Hand-offs in a Pediatric Intensive Care Unit. *Intensive & Critical Care Nursing*, Vol. 16, issue 1, pp. 47-57.
- Varpio, L., Rashotte, J., Day, K., King, J., Kuziemy, C., **Parush, A.** (2015). The EHR and Building the Patient's Story: A Qualitative Investigation of How EHR Use Obstructs a Vital Clinical Activity. *International Journal of Medical Informatics*, 84 (12), 1019-1028.
- Ackerman, R., **Parush, A.**, Nassar, F., & Shtub, A. (2016). Metacognition and system usability: Incorporating metacognitive research paradigm into usability testing. *Computers in Human Behavior*, Volume 54, Pages 101–113
- Estemad, A. Arya, A., **Parush, A.**, DiPaola, S. (2016). Perceptual Validity in Animation of Human Motion. *Computer Animation and Virtual Worlds*, Vol. 27 (1), 58-71.
- Rashotte, J., Varpio, L., Day, K., Kuziemy, C., **Parush, A.**, Elliott-Miller, P., King, J., & Roffey, T. (2016). Mapping Communication Spaces: The Development and Use of a Tool Analyzing the Impact of EHRs on Interprofessional Collaborative Practice. *International Journal of Medical Informatics*, 93, 2-13.
- Reychav, I., **Parush, A.**, McHaney, R., Hazan, M., & Moshonov, R. (2016). The use of mobile technology in waiting rooms to leverage women's empowerment: A conceptual context. *Health Informatics Journal*, Vol 24, Issue 3, pp. 277 – 292.
- LA Calder, G Mastoras, M Rahimpour, B Sohmer, B Weitzman, AA Cwinn, T Hobin, **A Parush**. (2017). "Team communication patterns in emergency resuscitation: a mixed methods qualitative analysis". *International Journal of Emergency Medicine*, 10:24.
- A Parush**, G Mastoras, A Bhandari, K Momtahan, K Day, B Weitzman, B Sohmer, A Cwinn, SJ Hamstra, L Calder. (2017). "Can teamwork and situational awareness (SA) in ED resuscitations be improved with a technological cognitive aid? Design and a pilot study of a team situational display". *Journal of Biomedical Informatics*, 76, 154-161.
- Calder, L.A., Bhandari, A., Mastoras, G., Day, K., Momtahan, K., Falconer, M., Weitzman, B., Sohmer, B., Cwinn, A., Hamstra, S.J., **Avi Parush**. (2018). Healthcare providers' perceptions of a situational awareness display for emergency department resuscitation: a

simulation qualitative study, *International Journal for Quality in Health Care*, Volume 30, Issue 1, Pages 16–22.

Authored Books

Parush, A., Campbell, C., Hunter, A., Ma, C., Calder, L., Worthington, J., Abbott, C., & Frank, J.R. (2011). *Situational Awareness and Patient Safety*. Ottawa, ON, Canada: The Royal College of Physicians and Surgeons of Canada. ISBN: 978-1-926588-10-0.

Parush, A. (2015). *Conceptual Design in Interactive Systems*. Morgan Kaufmann. ISBN: 9780124199699.

Parush, A., Parush, D. & Ilan, R. (2017). *Human Factors in Healthcare: A Field Guide to Continuous Improvement*. Morgan & Claypool Publishers. ISBN: 9781627059442

Invited Editorials

Shtub, A., **Parush, A.**, and Hewitt, T. (2009). The use of simulation in learning and teaching. *International Journal of Engineering Education*, 25 (2), 206-208.

Parush, A. (2017). Situational awareness: A tacit yet viable concept. *Canadian Journal of Anesthesia*, DOI 10.1007/s12630-017-0905-1.

Chapters in Books

Pulsifer, P.L., **Parush, A.**, Lindgaard, G., Taylor, D.R.F. (2005). The Development of the Cybercartographic Atlas of Antarctica. In Taylor, D. R. F. Ed. *Cybercartography: Theory and Practice*. Amsterdam:Elsevier B. V., pp. 461- 490.

Roberts S., Parush A., & Lindgaard G. (2005). Cognitive Theories and Aids to Support Navigation of Multimedia Information Space. In Taylor, D. R. F. Ed. *Cybercartography: Theory and Practice*. Amsterdam:Elsevier B. V., pp. 231-256.

Parush, A. and Auerbach, Y. (2005). Adaptive User Interfaces: Examination of Adaptation Costs in User Performance. In Schmorow, D. (Editor), *Foundations of Augmented Cognition*, Vol. 11, Lawrence Erlbaum Associates, Inc., pp. 797-805.

Parush, A. (2006). Human Errors in UAV Takeoff and Landing: Theoretical Account and Practical Implications. In: Cooke, Pringle, Pederson, and Connor (Eds.), *Human Factors of Remotely Operated Vehicles. Advances in Human Performance and Cognitive Engineering Research*, Volume 7. Elsevier, pp. 91-103.

Lindgaard, G. and **Parush, A.** (2007). Utility and experience in the evolution of usability. In Law, E., Hvannberg, E., Cockton, G. (Eds.), *Maturing Usability: Quality in Software, Interaction and Value*. Springer, pp. 222-240.

Parush, A., Ahuvia, S., and Erev, I. (2007). Degradation in Spatial Knowledge Acquisition When Using Automatic Navigation Systems. In Winter, S., Duckham, M., Kulik, L., Kuipers, B. (eds.) *Spatial Information Theory*. Vol 4736 of Lecture Notes in Computer Science, pp. 238-254, Springer-Verlag.

Gauthier, S.M. and Parush, A. (2010). A spatial cognition paradigm to assess the impact of night vision goggles (NVGs) on way-finding performance. In Niall, K. K. (Ed.) *Vision and Displays for Military and Security Applications: The Advanced Deployable Day/Night Simulation Project*. Pp. 111-122, Springer New York.

Parush, A., Campbell, C., Ellis, J., Vaillancourt, R., Lockett, J., Lebreux, D., Wong, E. and Pascuet, E. (2010). A human factors approach to evaluating morphine administration in a

- pediatric surgical unit. In Vincent G. Duffy (Ed.) *Advances in Human Factors and Ergonomics in Healthcare*, pp. 468-477, CRC Press.
- Kramer, C., Parush, A., Brandigampola, S., and Momtahan, K. (2010). Analysis of Cross-Professional Communication in Thoracic Operating Rooms. In Vincent G. Duffy (Ed.) *Advances in Human Factors and Ergonomics in Healthcare*, pp. 307-316, CRC Press.
- Kramer, C., Dube, G., **Parush, A.**, Breton, E., Chiniara, G., Weiss, M., & Trembley, S. (2012). Capturing team mental models in complex healthcare environments. In Vincent G. Duffy (Ed.), *Advances in Human Factors and Ergonomics in Healthcare*, pp. 625-634, CRC Press.
- Campbell, C., Parush, A., Garvey, T. (2012). Interdisciplinary interactions in cross-functional collaborative prototyping at a pediatric hospital. In Vincent G. Duffy (Ed.), *Advances in Human Factors and Ergonomics in Healthcare*, pp. 669-678, CRC Press.
- Parush, A.** (2015). Displays for healthcare teams: A conceptual framework and design methodology. In A. Bisantz, C. Burns, and T. Fairbanks (Editors), *Cognitive Engineering Applications in Health Care*, pp. 75-92, CRC Press.
- Chan, G., Whitehead, A., & **Parush, A.** (2017). Dynamic player pairing: Quantifying the effects of competitive versus cooperative attitudes. In Korn, O. and Lee, N. (Eds.), *Game Dynamics: Best Practices in Procedural and Dynamic Game Content Generation*, pp. 71-94. Springer International Publishing.

Refereed Papers in Conference Proceedings

- Roberts, S., Parush, A. & Lindgaard, G. (2004). Navigating Hypermedia Information Spaces: Lessons learnt from real and virtual worlds. In Khalid, H.M., Helander, M.G., and Yeo, A.W. (Editors) *Proceedings WWCS2004 (Work with Computer Systems)*, pp. 616- 621, Kuala Lumpur, June 2004.
- Ferres, L., **Parush, A.**, Rasouli, M. & Beirne, M. (2005). Modeling spatial dialogues: The speaker role. In the proceedings of the *Workshop on Spatial Language and Dialogue*, October 23-25, Delmenhorst, Germany.
- Parush, A.** & Tsuji, B. (2005). Cybercartography and Human Computer Interaction: New wine in old bottles?. In the Proceedings of the *International Cartography Conference*, a Coruña Spain, July 9-16 2005.
- Tsuji, B., Lindgaard, G., & **Parush, A.** (2005). Landmarks for navigators who are visually impaired. In the Proceedings of the *International Cartography Conference, a Coruña Spain*, July 9-16 2005.
- Parush, A. (2005). Expanding our toolkit: From descriptive descriptions to in-depth analysis. In the proceedings of *UPA 2005, Usability Professionals' Association 14th Annual Conference*, Montreal, Quebec, Canada, June 27-July 1, 2005. An Invited session.
- Parush, A.**, Ferres, L., Rasouli, M. and Lindgaard, G. (2006). Impact of external representation and task on graph comprehension. In Sun, R. (Editor), the Proceedings of the *28th Annual Conference of the Cognitive Society Meeting*, pp. 1932-1938. Lawrence Erlbaum Associates, Inc., Mahwah, New Jersey.
- Gauthier, M. S., **Parush, A.**, Macuda, T. J., Tang, D., Craig, G., Jennings, S. A. (2006). Spatial navigation performance using night vision goggles. In the Proceedings of *SPIE- The International Society for Optical Engineering, Defense and Security Symposium*, Orlando, Florida, USA
- Ferres, L., **Parush, A.**, Li, Z., Oppacher, Y., Lindgaard, G. (2006). Representing and Querying Line Graphs in Natural Language: The iGraph System, *SmartGraphics 2006, Lecture Notes in Computer Science*, Springer-Verlag.

- Ferres, L., **Parush, A.**, **Roberts, S.**, and Lindgaard, G. (2006a). Helping People with Visual Impairments Gain Access to Graphical Information Through Natural Language: The iGraph System. In K. Miesenberger et al. (Eds.): *ICCHP 2006*, Lecture Notes in Computer Science 4061, pp. 1122–1130, 2006. Springer-Verlag Berlin Heidelberg.
- Roberts, S.** and **Parush, A.** (2007). A dynamic model balancing user control and workload in automatic and adaptive systems. In the Proceedings of the *Human Factors and Ergonomics Society 51st Annual Meeting*, pp. 186-190.
- Parush, A.**, Momtahan, K., **Foster-Hunt, T.**, **Kramer, C.**, Holm, C., and Nathan, H. (2008). Critical information flow analysis in the cardiac operating room. In the Proceedings of the *International System Safety Conference 2008* (August 2008, Vancouver, BC, Canada).
- Yuviler-Gavish, N.** and **Parush, A.** (2008). The Depth/Breadth Tradeoff in Web Navigation Structures: A Method for Mapping and Measuring Users' Mental Models. Proceedings of the Third *IASTED International Conference on Human Computer Interaction*, pp. 126-131. (March 17-19, 2008, Innsbruck, Austria).
- Davidovitch, L.**, **Parush, A.**, Hewett, T., and Shtub, A. (2008). Training teams in managing projects in a matrix structure. In the proceedings of the ASME 2008 9th *Biennial Conference on Engineering Systems Design and Analysis (ESDA2008)*, pp. 487-490 (July 7-9, 2008, Haifa, Israel).
- Parush, A.**, Momtahan, K., **Foster-Hunt, T.**, **Kramer, C.**, **Hunter, A.**, Nathan, H. (2009). A Communication Analysis methodology for developing cardiac operating room team-oriented displays. In the proceedings of the *Annual Human Factors and Ergonomics Society Conference*, Volume 53, Number 11, 2009 , pp. 728-732(5).
- Roberts, S.** and **Parush, A.** (2009). Role of landmark size and location in way-finding and spatial cognition in virtual environments. In the proceedings of the *Annual Human Factors and Ergonomics Society Conference*, October 2009.
- Hunter, A.** and **Parush, A.** (2009). Using eye movements to uncover conflict detection strategies. In the proceedings of the *Annual Human Factors and Ergonomics Society Conference*, Volume 53, Number 22, 2009 , pp. 1729-1733(5).
- Parush, A.**, **Simoneau, Y.**, **Foster-Hunt, T.**, Thomas, M., & Rashotte, J. (2010). The use of resources during shift hand-offs in a pediatric intensive care unit. In the proceedings of the *54th Annual Human Factors and Ergonomics Society Conference*, pp. 962-966 (5).
- Hunter, A.** and **Parush, A.** (2010). “Where did they go?” – Recovering dynamic objects after interruption. In the proceedings of the *54th Annual Human Factors and Ergonomics Society Conference*, pp. 1990- 1994 (5).
- Etemad, S.A.**, Arya, A. & **Parush, A.** (2011). Spatial Perceptual Weights of Energy-related Features in Animation of Human Motion. In the *Proceedings of the Computer Graphics International 2011*.
- Parush, A.** & **Ma, C.** (2012). Team displays work, particularly with communication breakdown: Performance and situation awareness in a simulated forest fire. In the Proceedings of the Human Factors and Ergonomics Society, 56th Annual Meeting, pp. 383-387.
- Vinson, N., Lapointe, J-F., **Parush, A.**, & **Roberts, S.** (2012). Cybersickness Induced by Desktop Virtual Reality. In the proceedings of *Graphic Interface 2012*, May 2012, Toronto, Canada.
- Campbell, C.**, **Parush, A.**, Garvey, T., Ellis, J., Vaillancourt, R., & Lebreux, D. (2012). Addressing risk factors in morphine administration: A collaborative prototyping approach. In the proceedings of the First Symposium on Human Factors and Ergonomics in Healthcare, March 2012, Baltimore, USA.
- Parush, A.** & **Rustanjaja, N.** (2013). The Impact of Sudden Events and Spatial Configuration on the Benefits of Prior Information to Situation Awareness and Performance. In the

- Proceedings of the Human Factors and Ergonomics Society, 57th Annual Meeting, pp. 1395-1399.
- Parush, A., Lourenco Levin, M. & Campbell, C.** (2014). Dual patient-healthcare provider experience mapping and implications for information technology deployment and clinic layout. In V. Duffy & N. Lightner (eds.), *Advances in Human Aspects of Healthcare*, pp. 389-396, AHFE Conference 2014.
- Warren, K., Parush, A., Wohl, A., & Kim, A.** (2014). Embedded Disruption in Online Slot Machines Facilitates Responsible Gambling. In Spagnolli A., Chittaro L., Gamberini L. (Eds), *Proceedings of Persuasive Technology 9th International Conference, PERSUASIVE 2014*, Padua, Italy, May 21-23, 2014. *Lecture Notes in Computer Science*, Vol. 8462, 253-265. London: Springer.
- Parush, A.** (2015). Cross-channel conceptual design. *The Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computer Systems*, pages 2453-2454, ACM Press.
- Parush, A., Momtahan, K., Kramer, C., Sohmer, B., Mastorias, G. & Calder, L.** (2015). Twelve tips to designing a situation display for the healthcare team. In the *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care*, vol. 4, no. 1 188-193.
- Goubran, L., Parush, A., Whitehead, A.** (2016). Modelling Information Flow and Situational Awareness in Wild Fire Response Operations. *HCI International 2016, Lecture Notes in Computer Science 9735*, pp. 11-19.
- Luko, L., Parush, A., Lowenstein, L.** (2017). Cognitive Task Analysis of Spatial Skills in Hysterectomy with the Da-Vinci Surgical System. In the proceedings of the 13th IASTED International Conference on Biomedical Engineering, February 2017, Austria, p. 100-107.
- Luko, L. & Parush, A.** (2017). Targeted Cognitive Training of Spatial Skills: Perspective Taking for Robot Teleoperation. In the proceedings of the 13th International Conference on Spatial Information Theory, pp. 12:1 - 12:13, Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany.
- Parush, A., Hazan, M., & Shtekelmacher, D.** (2017). Individuals perform better in teams but are not more aware – Performance and situational awareness in teams and individuals. To appear in the *Proceedings of the Human Factors and Ergonomics Society, 61st Annual Meeting*.
- Parush, A.** (2019). Designing health information for mutual empowerment in the joint journey of patients and healthcare professionals. In *Improving Usability, Safety and Patient Outcomes with Health Information Technology, Series: Studies in Health Technology and Informatics*, Vol. 257, pp. 341-345. Eds. Francis Lau, John A. Bartle-Clar, Gerry Bliss, Elizabeth M. Borycki, Karen L. Courtney, Alex Mu-Hsing Kuo, Andre Kushniruk, Helen Monkman, Abdul Vahabpour Roudsari. IOS Press.

Encyclopedia Entries

- 1998 Industrial Engineering Encyclopedia.
Articles on: “Human Computer Interaction”, “Task Analysis”, and “Display Design”.
- 2007 The Encyclopedia of Industrial and Organizational Psychology, 1st Edition
Article on: “Human Computer/Machine Interaction”.
- 2016 The Encyclopedia of Industrial and Organizational Psychology, 2nd Edition
Article on: “Human Computer Interaction”.

Book Reviews

Parush, A. (2013). Speech in Interactive Systems. [Review of the book *Practical Speech User Interface Design*, J. R. Lewis]. *Ergonomics in Design*, July 2013, 28-29.

Invited talks

- Parush, A.** (2002). Web page usability and visual design. Presentation given at the Symposium on :”Libraries on the net – Content, Interface, and Technologies”, Haifa University, Haifa, Israel, November, 2002. Invited.
- Parush, A.** (2003). The visual design of “My Site”. Presentation given at the Info2003 Conference, Tel Aviv, Israel, May, 2003. Invited.
- Narasimhan, S., Parush A., Gervais, E., Sack, J.R., and Nussbaum, D.** (2006). The evaluation of an adaptive rotation algorithm in a moving map display. Presented at the Dagstuhl seminar on: Spatial data: Mining, processing, and communicating. March, 2006, Dahgstuhl, Germany. Invited
- Gauthier, M. and Parush, A.** (2007). A spatial cognition paradigm to assess the impact of Night Vision Goggles (NVG) on way-finding performance. Advance Deployable Day/Night Simulation Symposium, DRDC, Toronto, Canada, November 13-14, 2007. Invited.
- Parush, A.** (2007). Considering human error and safety in the usability of healthcare systems. Invited presentation at the World Usability Day, Ottawa, ON, Canada, November 2007.
- Parush, A.** (2008). Teamwork and safety in healthcare systems: Challenges and implications for design. ASSET Meeting 2, National Research Council of Canada, November 18 2008. Invited.
- Parush, A. and Momtahan, K.** (2009). Prototyping and testing of a cardiac operating room integrated team display. Clinical Epidemiology Seminar Rounds, The Ottawa Hospital, June 19, 2009, Ottawa, ON, Canada. Invited.
- Parush, A.** (2010). Team communication and situation awareness in the cardiac OR: Implications for team information display. Invited presentation at the CPSI Working Group on teamwork and communication, Toronto, ON, June 10, 2010.
- Parush, A.** (2011) Communication in the OR. Online presentation at The Conference, as of January, 11, 2011 (<http://www.theconference.ca/communication-a-team-situation-awareness-in-the-or>). Invited.
- Parush, A.** (2012). What if the surgeon does not know what is going on – Situational awareness, human factors, and patient safety. Invited presentation to a meeting of the Israeli chapter of the User Experience Professional Association, June 2012, Ra’anana, Israel.
- Parush, A.** (2013) “Take control over the situation – Situational awareness, communication, and patient safety”. Invited plenary to the Annual Fall Conference of the Independent Physicians Association of Maccabi Medical Services, October 16, 2013, Eilat, Israel.
- Parush, A.** (2018). Sensing and Making Sense: Situational awareness goes beyond the data. Invited talk for the 3rd Rambam Health Symposium on Individual data-based Decision Making, December 19, 2018.