Arne Jonni SUPPE

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Education

PhD, Carnegie Mellon University, United States of America, 2022

Master of Science, Carnegie Mellon University, United States of America, 2012

Master of Science, Carnegie Mellon University, United States of America, 2001

Bachelor of Science, Carnegie Mellon University, United States of America, 2000

Academic Appointments

Senior Lecturer of Computer Science, School of Computing and Information Systems, SMU, Jul 2023 - Present

RESEARCH

Publications

Journal Articles [Non-Refereed]

Moving object detection with laser scanners, by MERTZ, Christoph; NAVARRO-SERMENT, Luis E.; MACLACHLAN, Robert; RYBSKI, Paul; STEINFELD, Aaron; SUPPE, Arne; URMSON, Christopher; VANDAPEL, Nicolas; HEBERT, Martial; THORPE, Chuck; DUGGINS, David; GOWDY, Jay. (2013). *Journal of Field Robotics, 30* (1), 17-43. https://doi.org/10.1002/rob.21430 (Published)

Conference Proceedings

Using deep learning to bridge the gap between perception and intelligence, by SUPPE, Arne; HERBERT, Martial. (2017.0). *Proceedings Volume 10195 SPIE Defense + Security Unmanned Systems XIX, Anaheim, California, 2017 April 9-13,* (pp. 1-10) Anaheim: SPIE. https://doi.org/10.1117/12.2262252 (Published)

Reducing adaptation latency for multi-concept visual perception in outdoor environments, by WIGNESS, Maggie; ROGERS, John G.; NAVARRO-SERMENT, Luis Ernesto; SUPPE, Arne; DRAPER, Bruce A.. (2016.0). *Proceedings of the 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Daejeon, Korea , October 9-14,* (pp. 2784-2791) Piscataway, NJ: IEEE. https://doi.org/10.1109/IROS.2016.7759432 (Published)

Inferring door locations from a teammate's trajectory in stealth human-robot team operations, by OH, Jean; NAVARRO-SERMENT, Luis; SUPPE, Arne; STENTZ, Anthony; HEBERT, Martial. (2015.0). *Proceedings of (IROS) IEEE/RSJ International Conference on Intelligent Robots and Systems, Hamburg, Germany, 2015 September 28 - October 2,* (pp. 5315-5320) Piscataway, NJ: IEEE.

https://doi.org/10.1109/IROS.2015.7354127 (Published)

Semantic labeling of objects in a simulated environment, by BREWER, Ralph W.; FIELDS, Mary Anne; SUPPE, Arne; WAGNER, Dave. (2015.0). *Proceedings of the 24th Conference on Behavior Representation in Modeling and Simulation, Washington, DC, 2015 March 31-April 3,* (pp. 43-50) Washington: BRiMS Committee. (Published)

Integrated intelligence for human-robot teams, by OH, Jean; et. al.. (2017.0). *Proceedings of 29th AAAI Conference on Artificial Intelligence (AAAI '15), Austin, Texas, 2015 January 25-30,* (pp. 309-322) Austin, Texas, USA: Springer Science and Business Media B.V. https://doi.org/10.1007/978-3-319-50115-4_28 (Published)

Toward mobile robots reasoning like humans, by OH, Jean; SUPPE, Arne.; DUVALLET, Felix; BOULARIAS, Abdeslam; NAVARRO-SERMENT, Luis; HEBERT, Martial; STENTZ, Anthony; VINOKUROV, Jerry; ROMERO, Oscar; LEBIERE, Christian; DEAN, Robert. (2015.0). *Proceedings of the 29th AAAI Conference on Artificial Intelligence, Austin, Texas, 2015 January 25-30,* (pp. 1371-1379) Washington, DC: AAAI. https://doi.org/10.5555/2887007.2887197 (Published)

Vehicle localization along a previously driven route using an image database, by KUME, Hideyuki; SUPPE, Arne; KANADE, Takeo. (2013.0). *Proceedings of the 13th IAPR International Conference on Machine Vision Applications, Kyoto, Japan, 2013 May 20-23,* (pp. 177-180) Kyoto: MVA Organization. (Published)

Enhancing robot perception using human teammates, by OH, Jean; SUPPE, Arne; STENTZ, Anthony; HEBERT, Martial. (2013.0). *Proceedings of the 12th International Conference on Autonomous Agents and Multiagent Systems, Saint Paul, Minnesota, 2013 May 6-10,* (pp. 1147-1148) Saint Paul, Minnesota: International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS). (Published)

An architecture for online semantic labeling on UGVS, by SUPPÉ, Arne; NAVARRO-SERMENT, Luis; MUNOZ, Daniel; BAGNELL, Drew; HEBERT, Martial. (2013.0). *Proceedings of the SPIE Unmanned Systems Technology XV, Baltimore, Maryland, United States, 2013 April 29 - May 3,* Baltimore, Maryland, USA: SPIE. https://doi.org/10.1117/12.2015806 (Published)

Semi-autonomous virtual valet parking, by SUPPE, Arne; NAVARRO-SERMENT, Luis; STEINFELD, Aaron. (2010.0). *AutomotiveUI '10: Proceedings of the 2nd International Conference on Automotive User Interfaces and Interactive Vehicular Applications, Pittsburgh, Pennsylvania, 2010 November 11-12,* (pp. 139-142) New York: ACM. https://doi.org/10.1145/1969773.1969798 (Published)

Development of the side component of the transit integrated collision warning system, by STEINFELD, Aaron; DUGGINS, David; GOWDY, Jay; KOZAR, John; MACLACHLAN, Robert; MERTZ, Christoph; SUPPE, Arne; THORPE, Charles; WANG, Chieh-Chih. (2004.0). *Proceedings of the 7th International IEEE Conference on Intelligent Transportation Systems, Washington, USA, 2004, October 3-6,* (pp. 343-348) New Jersey, USA: IEEE. https://doi.org/10.1109/ITSC.2004.1398922 (Published)

Safe robot driving in cluttered environments, by THORPE, Chuck; CARLSON, Justin; DUGGINS, Dave; GOWDY, Jay; MACLACHLAN, Rob; MERTZ, Christoph; SUPPE, Arne ; WANG, Bob. (2005.0). *Proceedings of the Eleventh International Symposium Robotics Research, Siena, Italy, 2003 October 19-22,* (pp. 271-280) Cham: Springer. https://doi.org/10.1007/11008941_29 (Published)

LADAR-based detection and tracking of moving objects from a ground vehicle at high speeds, by WANG, Chieh-Chih; THORPE, Charles; SUPPE, Arne . (2003.0). *Proceedings of the IEEE IV2003 Intelligent Vehicles Symposium, Columbus, USA, June 9-11,* (pp. 416-421) Piscataway, NJ: IEEE. https://doi.org/10.1109/IVS.2003.1212947 (Published)

Safe robot driving, by THORPE, Chuck; AUFRERE, Romuald; CARLSON, Justin David; DUGGINS, David; FONG, Terrence W.; GOWDY, Jay; KOZAR, John; MACLACHLAN, Robert; MCCABE, Colin; MERTZ, Christoph; SUPPE , Arne; WANG, Chieh Chih; YATA, Teruko. (2002.0). *Proceedings of 4th International Conference on Machine Automation (ICMA ' 02), Tampere, Finland, 2002 September 11-13,* (pp. 1-8) Tampere, Finland: (Published)

Multi-level modeling of software on hardware in concurrent computation, by PAUL, JoAnn M.; SUPPE, Arne; ADAMS, Henele I.; THOMAS, Donald E.; . (2002.0). *Proceedings 16th International Parallel and Distributed Processing Symposium, Ft. Lauderdale, Florida, USA, 2002 April 15-19,* (pp. 177-184) Piscataway, NJ: IEEE. https://doi.org/10.1109/IPDPS.2002.1016581 (Published)

Driving in traffic: Short-range sensing for urban collision avoidance, by THORPE, Chuck; DUGGINS, Dave; GOWDY, Jay; MACLAUGHLIN, Rob; MERTZ, Christoph; SIEGEL, Mel; SUPPÉ, Arne; WANG, Bob; YATA,

Teruko. (2002.0). *Proceedings of SPIE Unmanned Ground Vehicle Technology IV, Orlando, Florida, 2002 April 1-5,* (pp. 201-205) USA: SPIE. https://doi.org/10.1117/12.474450 (Published)

Modeling and simulation of steady state and transient behaviors for emergent SoCs, by PAUL, JoAnn M.; SUPPE' Arne Jonni; THOMAS, Donald E.. (2001.0). *Proceedings of the 14th International Symposium on Systems Synthesis, Montreal, Canada, 2001 Oct 1-3,* (pp. 262-267) New York: ACM. https://doi.org/10.1145/500001.500062 (Published)

Side collision warning system for transit buses, by MCNEIL, Sue; DUGGINS, David; MERTZ, Christoph; SUPPE, Arne; THORPE, Chuck. (2000.0). *Proceedings of the IEEE Intelligent Vehicles Symposium 2000, Dearborn, Michigan, USA, October 14-17,* (pp. 344-349) USA: IEEE. https://doi.org/10.1109/IVS.2000.898367 (Published)

TEACHING

Courses Taught

Singapore Management University

Undergraduate Programmes :

    Computational Thinking and Programming

    Digital Business - Technologies and Transformation

    Introduction to Artificial Intelligence

    Introduction to Programming

THESES AND DISSERTATIONS

Theses and Dissertations Assessed

Other Institutions

Student, "Learning Multi-Modal Navigation in Unstructured Environments", Thesis by Arne Jonni Suppé, Doctor of Philosophy in Robotics, Carnegie Mellon University, 2012

Student, "The Virtual Valet", Thesis by Arne Jonni Suppé, Master of Science in Robotics, Carnegie Mellon University, 2010

Student, "Frequency Interleaved Co-simulation", Thesis by Arne Jonni Suppé, Master of Science in Electrical & Computer Engineering, Carnegie Mellon University, 2000