Stanford

Pei Huang (# #)

Postdoctoral Scholar, Computer Science

Bio

STANFORD ADVISORS

- Clark Barrett, Postdoctoral Faculty Sponsor

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Automated Reasoning, Trustworthy AI, Neural Symbolic Methods, Constraint Solving

Publications

PUBLICATIONS

- **Don't Confuse! Redrawing GUI Navigation Flow in Mobile Apps for Visually Impaired Users** *IEEE TRANSACTIONS ON SOFTWARE ENGINEERING*
  Zhang, M., Liu, H., Zhou, Y., Chen, C., Huang, P., Zhao, J.
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- **Are your apps accessible? A GCN-based accessibility checker for low vision users** *INFORMATION AND SOFTWARE TECHNOLOGY*
  Zhang, M., Liu, H., Song, S., Chen, C., Huang, P., Zhao, J.
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- **A prompt-based approach to adversarial example generation and robustness enhancement** *FRONTIERS OF COMPUTER SCIENCE*
  Yang, Y., Huang, P., Cao, J., Li, J., Lin, Y., Ma, F.
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- **Towards Efficient Verification of Quantized Neural Networks**
  Huang, P., Wu, H., Yang, Y., Daukantas, I., Wu, M., Zhang, Y., Barrett, C.
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- **Parallel Verification for δ-Equivalence of Neural Network Quantization**
  Huang, P., Yang, Y., Wu, H., Daukantas, I., Wu, M., Jia, F., Barrett, C.
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- **Marabou 2.0: A Versatile Formal Analyzer of Neural Networks**
  Wu, H., Isac, O., Zeljic, A., Tagomori, T., Daggitt, M., Kokke, W., Refaeli, I., Amir, G., Julian, K., Bassan, S., Huang, P., Lahav, O., Wu, et al
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- **Quantifying Robustness to Adversarial Word Substitutions**
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- **Suggesting Variable Order for Cylindrical Algebraic Decomposition via Reinforcement Learning**
  Jia, F., Dong, Y., Liu, M., Huang, P., Ma, F., Zhang, J.
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- **Improving Bit-Blasting for Nonlinear Integer Constraints**
  Jia, F., Han, R., Huang, P., Liu, M., Ma, F., Zhang, J.
  edited by Just, R., Fraser, G.
  ASSOC COMPUTING MACHINERY.2023: 14-25

- **PSMT: Satisfiability Modulo Theories Meets Probability Distribution**
  Jia, F., Han, R., Ma, X., Cui, B., Liu, M., Huang, P., Ma, F., Zhang, J., IEEE
  IEEE COMPUTER SOC.2023: 1756-1760

- **NRAgo: Solving SMT(NRA) Formulas with Gradient-based Optimization**
  Liu, M., Lv, K., Huang, P., Han, R., Jia, F., Zhang, Y., Ma, F., Zhang, J., IEEE
  IEEE COMPUTER SOC.2023: 2046-2049

- **Word Level Robustness Enhancement: Fight Perturbation with Perturbation** *(AAAI2022)*
  Huang, P., Yang, Y., Jia, F., Liu, M., Ma, F., Zhang, J.
  2022: 10785-10793

- **ε-Weakened robustness of deep neural networks** *(ISSTA2022)*
  Huang, P., Yang, Y., Liu, M., Jia, F., Ma, F., Zhang, J.
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- **Efficient SAT-Based Minimal Model Generation Methods for Modal Logic S5** *(SAT2021)*
  Huang, P., Li, R., Liu, M., Ma, F., Zhang, J.
  2021: 225-241

- **Learning the Satisfiability of Pseudo-Boolean Problem with Graph Neural Networks** *(CP2020)*
  Liu, M., Zhang, F., Huang, P., Niu, S., Ma, F., Zhang, J.
  2020: 885-898

- **Solving the Satisfiability Problem of Modal Logic S5 Guided by Graph Coloring** *(IJCAI2019)*
  Huang, P., Liu, M., Wang, P., Zhang, W., Ma, F., Zhang, J.
  2019: 1093-1100

- **Approximating Integer Solution Counting via Space Quantification for Linear Constraints** *(IJCAI2019)*
  Ge, C., Ma, F., Ma, X., Zhang, F., Huang, P., Zhang, J.
  2019: 1697-1703

- **Investigating the Existence of Orthogonal Golf Designs via Satisfiability Testing** *(ISSAC2019)*
  Huang, P., Liu, M., Ge, C., Ma, F., Zhang, J.
  2019: 203-210

- **Investigating the Existence of Large Sets of Idempotent Quasigroups via Satisfiability Testing** *(IJCAR2018)*
  Huang, P., Ma, F., Ge, C., Zhang, J., Zhang, H.
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