

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.
2024; 50 (12): 3351-3368
- **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.
2024; 174
- **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.
2024; 18 (4)
- **Towards Efficient Verification of Quantized Neural Networks**
Huang, P., Wu, H., Yang, Y., Daukantas, I., Wu, M., Zhang, Y., Barrett, C.
edited by Wooldridge, M., Dy, J., Natarajan, S.
ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2024: 21152-21160
- **Parallel Verification for δ -Equivalence of Neural Network Quantization**
Huang, P., Yang, Y., Wu, H., Daukantas, I., Wu, M., Jia, F., Barrett, C.
edited by Avni, G., Giacobbe, M., Johnson, T. T., Katz, G., Lukina, A., Narodytska, N., Schilling, C.
SPRINGER INTERNATIONAL PUBLISHING AG.2024: 78-99
- **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
edited by Ganesh, Gurfinkel, A.
SPRINGER INTERNATIONAL PUBLISHING AG.2024: 249-264
- **Quantifying Robustness to Adversarial Word Substitutions**
Yang, Y., Huang, P., Cao, J., Ma, F., Zhang, J., Li, J.
edited by Koutra, D., Plant, C., Rodriguez, M. G., Baralis, E., Bonchi, F.
SPRINGER INTERNATIONAL PUBLISHING AG.2023: 95-112

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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.
edited by Oh, A., Neumann, T., Globerson, A., Saenko, K., Hardt, M., Levine, S.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2023
 - **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.
2022: 126-138
 - **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.
2018: 354-369