Stanford

Tian Tan

Research Engineer

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Bio

ACADEMIC APPOINTMENTS

- Research Engineer, Wu Tsai Human Performance Alliance
- Member, Wu Tsai Human Performance Alliance

LINKS

- Personal Site: https://tian-a-tan.github.io/

Publications

PUBLICATIONS

- **AddBiomechanics Dataset: Capturing the Physics of Human Motion at Scale.** *Computer vision - ECCV ... : ... European Conference on Computer Vision : proceedings. European Conference on Computer Vision*

  Werling, K., Kaneda, J., Tan, T., Agarwal, R., Skov, S., Van Wouwe, T., Uhlrich, S., Bianco, N., Ong, C., Falisse, A., Sapkota, S., Chandra, A., Carter, et al

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- **GaitDynamics: A Generative Foundation Model for Analyzing Human Walking and Running.** *Research square*

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- **Influence of Number of Subjects and Number of Trials on Biomechanical Variable Estimation via Deep-Learning Models and Wearable IMUs During Drop Landings** *IEEE SENSORS JOURNAL*

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- **AddBiomechanics Dataset: Capturing the Physics of Human Motion at Scale**

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- **Step Width Estimation in Individuals With and Without Neurodegenerative Disease Via a Novel Data-Augmentation Deep Learning Model and Minimal Wearable Inertial Sensors.** *IEEE journal of biomedical and health informatics*

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- **Self-Supervised Learning Improves Accuracy and Data Efficiency for IMU-Based Ground Reaction Force Estimation.** *IEEE transactions on bio-medical engineering*

  Tan, T., Shull, P. B., Hicks, J. L., Uhlrich, S. D., Chaudhari, A. S.

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- **A scoping review of portable sensing for out-of-lab anterior cruciate ligament injury prevention and rehabilitation.** *NPJ digital medicine*
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- **IMU and Smartphone Camera Fusion for Knee Adduction and Knee Flexion Moment Estimation During Walking** *IEEE TRANSACTIONS ON INDUSTRIAL INFORMATICS*
  Tan, T., Wang, D., Shull, P. B. B., Halilaj, E.
  2023; 19 (2): 1445-1455
- **Effects of IMU Sensor-to-Segment Misalignment and Orientation Error on 3-D Knee Joint Angle Estimation** *IEEE SENSORS JOURNAL*
  Fan, B., Li, Q., Tan, T., Kang, P., Shull, P. B.
  2022; 22 (3): 2543-2552
- **Transfer Learning Improves Accelerometer-Based Child Activity Recognition via Subject-Independent Adult-Domain Adaption.** *IEEE journal of biomedical and health informatics*
  Li, J., Kang, P., Tan, T., Shull, P. B.
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- **Accurate Impact Loading Rate Estimation During Running via a Subject-Independent Convolutional Neural Network Model and Optimal IMU Placement** *IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS*
  Tan, T., Strout, Z. A., Shull, P. B.
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  Tan, T., Chiasson, D. P., Hu, H., Shull, P. B.
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- **Resonant Frequency Skin Stretch for Wearable Haptics.** *IEEE transactions on haptics*
  Shull, P. B., Tan, T., Culbertson, H. M., Zhu, X., Okamura, A.
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