Stanford

Alberto Tono

- Ph.D. Student in Civil and Environmental Engineering, admitted Autumn 2021
- Ph.D. Minor, Computer Science
- Grad RA student-Hourly, Institute for Human-Centered Artificial Intelligence (HAI)

Bio

BIO

Tono Alberto is a current PhD Student at Stanford under the supervision of Kumagai Professor: Martin Fischer. He is currently exploring ways in which the Convergence between Digital and Humanities can facilitate cross-pollination between different industries within an Ethical Framework focused on augmenting human intelligence.

He served as the Research and Computational Design Leader in Architectural and Engineering organizations, receiving the O1-visa for outstanding abilities with both HOK and HDR. Tono obtained his Masters in Building Engineering - Architecture from the University of Padua and the Harbin Institute of Technology under the supervision of Andrea Giordano, Carlo Zanchetta and Paolo Borin. He has been working in the computational design and deep learning space since 2014. Furthermore, he is improving Building Information Modeling and Virtual Design and Construction (BIM/VDC) workflows within a statistical framework to optimize the sustainability impact of these processes. Hence, Tono is LEED AP certified. He is an international multi-award-winning “hacker” and speaker, and his work within Architecture and Artificial Intelligence brought him to companies in China, the Netherlands, Italy, and California. Thanks to his multidisciplinary approach he worked as Data Scientist and Geometric Deep Learning Researcher at a Physna/Thangs helping to raise over 80 Milion while working on 3D Search and Monocular 3D Shape Retrieval problems.

Currently is focusing on better methodologies for Generative Building Design, centered on capturing design knowledge from the primordial and universal act of Sketching.

Publications

PUBLICATIONS

- **Vitruvio: Conditional variational autoencoder to generate building meshes via single perspective sketches** *AUTOMATION IN CONSTRUCTION*
  Tono, A., Huang, H., Agrawal, A., Fischer, M.
  2024; 166