Yu Ju (Edwin) Chen

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Website: `https://edwinchenyj.github.io`

Skills

- Scientific Computing, C++, Python, Matlab, Javascript, Typescript, CMake, Git, C#, Docker, CI/CD, NodeJs, React, Linux, Object-oriented design, Concurrency, Parallel Computing, Cuda, DirectX12, Unreal Engine.

Education

- **University of British Columbia** **Vancouver, British Columbia**
  PhD. , Computer Science *Sep 2014 - May 2020*
  Dissertation: Integrators for elastodynamic simulation with stiffness and stiffening
  Advisors: Uri Ascher, Dinesh Pai
- **University of British Columbia** **Vancouver, British Columbia**
  BASc, Engineering Physics *Sep 2009 - April 2014*

Experiences

- **Researcher - Tencent America, Graphics and Vision**, Los Angeles, CA *Feb 2022 - Present*
  As a researcher in the Graphics and Vision team, I work on GPU-based numerical techniques for physically-based simulation.
- **Research Software Engineer - Rapidia Tech Inc**, Vancouver, BC *July 2019 - Jan 2022*
  I was the first software engineer of the company and built the software team from the ground up. We developed both software and firmware for our product. I worked on our software infrastructure and led the development for our internal software tools, including a NodeJS electron app, an image processing based close-loop print quality control, and a thread-safe communication protocol for our furnace controller.
- **Research Intern - Adobe Creative Technologies Lab**, Seattle, WA *May 2017 - Aug 2017*
  Supervisors : Danny Kaufman
  I investigated integrators for physical simulation with mass-PCA model reduction and published our work EigenFit at SCA 2019.

Publication

- **SIERE: A Hybrid Semi-Implicit Exponential Integrator for Efficiently Simulating Stiff Deformable Objects**
  Yu Ju Chen, Seung Heon Sheen, Uri M. Ascher, Dinesh K. Pai
  ACM TOG 2020
- **EigenFit for Consistent Elastodynamics Simulation Across Mesh Resolution**
  Yu Ju Chen, David Levin, Danny Kaufman, Uri M. Ascher, Dinesh K. Pai
  Symposium on Computer Animation 2019
- **Exponential Rosenbrock-Euler Integrators for Elastodynamic Simulation**
  Yu Ju Chen, Uri M. Ascher, Dinesh K. Pai
  IEEE TVCG 2017