# Alex Dahl

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Baltimore, Maryland

## Education

[†] *Indicates expected*

| | |
|---|---|
| 2016–2021 [†] | Ph.D., Computer Science, University of Maryland Baltimore County, Advisor: Adam Bargteil |
| 2012–2016 | B.Sc., Computer Science, University of Minnesota |

## Papers

[1] Alex Dahl and Adam Bargteil. "Early Termination of Conjugate Gradients for Corotated Finite Elements". In: *Motion, Interaction and Games*. MIG '19. Newcastle upon Tyne, United Kingdom: Association for Computing Machinery, 2019. ISBN: 9781450369947. DOI: [10.1145/3359566.3360080](10.1145/3359566.3360080). URL: [https://doi.org/10.1145/3359566.3360080](https://doi.org/10.1145/3359566.3360080).

[2] Alex Dahl and Adam Bargteil. "Global Momentum Preservation for Position-Based Dynamics". In: *Motion, Interaction and Games*. MIG '19. Newcastle upon Tyne, United Kingdom: Association for Computing Machinery, 2019. ISBN: 9781450369947. DOI: [10.1145/3359566.3360078](10.1145/3359566.3360078). URL: [https://doi.org/10.1145/3359566.3360078](https://doi.org/10.1145/3359566.3360078).

## Posters

[3] Alex Dahl and Adam Bargteil. "Global Momentum Preservation for Position-based Dynamics". July 2019. Symposium on Computer Animation 2019.

## Coursework

Physically-based Animation, Fundamentals of Computer Graphics II, Numerical Analysis, Computer Vision, Program Design and Development, Design and Analysis of Algorithms

## Appointments

| | |
|---|---|
| 2017–19 | Research Assistant, Computer Science, University of Maryland Baltimore County |
| | • Research in physics-based animation under Dr. Adam Bargteil |

2016,2018–20 Teaching Assistant, Computer Science, University of Maryland Baltimore County

- Held office hours and graded assignments for combined grad/undergrad class.
- Graded assignments for a class of 30-40 students.
- Taught concurrent lectures when professor was unavailable.

2015–16 Undergraduate Teaching Assistant, Computer Science, University of Minnesota

- Held office hours and graded assignments.
- Ran programming labs.
- Ran discussion section when instructor unavailable.

2014–16 Usability Assistant, Office of Information Technology, University of Minnesota

- Assisted in running user experience testing for a variety of types of software
- Ran recording and tracking equipment in lab
- Recruited and scheduled for concurrent projects
- Developed Excel plugins to automate scheduling work

## Teaching Assistant

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|---|---|---|
| 2016 Fall | CMSC435/634, Computer Graphics | UMBC |
| 2016 Spring | CSCI2033, Linear Algebra | University of Minnesota |
| 2015 Fall | CSCI1913, Intro to Algs. and Program Dev. | University of Minnesota |
| 2015 Spring, Summer | CSCI1113, Intro to C/C++ | University of Minnesota |

## Grader

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| 2018 Fall - 2020 Fall | CMSC435/634, Computer Graphics | UMBC |

## Professional Activities

- Team Member, GOFIRST Student Group IGVC Software Team, 2012–2014
- Team Member, GOFIRST Student Group Autonomous Snowplow Software Team, 2014–2017
- Volunteer, FIRST FRC and FTC Competitions, 2012–2017