

# Emil Levo

Game Programmer  
Computational Physicist

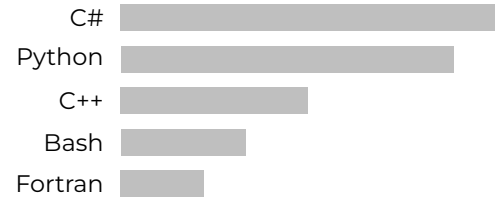
📍 Helsinki, Finland  
☎ +358504327638  
@ email.levo@outlook.com

🌐 [linkedin.com/in/emil-levo](https://www.linkedin.com/in/emil-levo)  
🐙 [github.com/CurlyNikolai](https://github.com/CurlyNikolai)  
👤 [curlynikolai.github.io](https://curlynikolai.github.io)

## Who Am I?

A 28 year old doctor in computational physics, now turned to game programming. Currently working as a Game Programmer at Heroic Games, and studying Game Design and Development at Aalto University. My main areas of interest include gameplay programming, graphics programming and high performance computing.

## Programming



## Game Engines



## Other Tools



## Experience

- 2022 – **Game Programmer** **Heroic Games**  
Various responsibilities related to game programming, including but not limited to, implementing AI, UI, various game mechanics, and shaders.  
Unity / C# / Shader Graph / Quantum - Photon Engine
- 2021 – 2022 **Research Assistant** **Aalto University**  
Research experience projects (REPs) alongside my studies in Game Design and Production. The first REP was a study of real world geographical data usage in video games. The second REP was a study of the effect anisotropic filtering parameters had on individual pixel colours in an image.  
Graphics / Unity / Real World Data / Python
- 2019 – 2021 **Doctoral Researcher** **University of Helsinki**  
Computational research of irradiation damage in high entropy alloys for fusion reactor applications. The work included running computationally intensive molecular dynamics irradiation simulations, analyzing irradiation damage in simulated samples, publishing results via peer-reviewed articles in journals related to the field, and teaching.  
Molecular Dynamics / OVITO / Linux / Python
- 2015 – 2019 **Research Assistant** **University of Helsinki**  
Computational research of irradiation damage in high entropy alloys for fusion reactor applications.  
Molecular Dynamics / OVITO / Linux / Python

## Education

- 2021 – **Master's Degree** **Aalto University**  
Master's Programme in Computer, Communication and Information Sciences  
Major: Game Design and Production
- 2019 – 2022 **Doctoral Degree** **University of Helsinki**  
Doctoral Programme in Materials Research and Nanoscience
- 2017 – 2019 **Master's Degree** **University of Helsinki**  
Master's Programme in Materials Research  
Line: Computational Material Physics

2014 – 2017      **Bachelor's Degree**      **University of Helsinki**  
Degree Programme in Physical Sciences  
Major: Theoretical Physics

### Teaching

2017 – 2019      **Teaching Assistant**      **University of Helsinki**  
Mathematics for Physicists I  
Basics of vector calculus, power series, differential calculus, integral calculus

2017 – 2019      **Teaching Assistant**      **University of Helsinki**  
Mathematics for Physicists II  
Complex numbers, ordinary differential equations, vector calculus

2018 – 2021      **Teaching Assistant**      **University of Helsinki**  
Mathematics for Physicists III  
Linear algebra, vector calculus

### International Experience

2019      **ICFRM 2019**      **San Diego**  
International conference on fusion reactor materials  
Poster presentation

2014 – 2015      **Lancaster University**      **Lancaster**  
First year BSc physics studies.

### Publications

- [1] Levo, E. (2022). Radiation Damage in High Entropy Alloys. University of Helsinki.
- [2] Levo, E., Granberg, F., Utt, D., Albe, K., Nordlund, K., & Djurabekova, F. (2019). Radiation stability of nanocrystalline single-phase multicomponent alloys. Journal of Materials Research.
- [3] Levo, E., Granberg, F., Fridlund, C., Nordlund, K., & Djurabekova, F. (2017). Radiation damage buildup and dislocation evolution in Ni and equiatomic multicomponent Ni-based alloys. Journal of Nuclear Materials, 490, 323-332.
- [4] Granberg, F., Djurabekova, F., Levo, E., & Nordlund, K. (2017). Damage buildup and edge dislocation mobility in equiatomic multicomponent alloys. Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, 393, 114-117.

### References

**Prof. Kai Nordlund**      **University of Helsinki**  
Supervising professor of doctoral studies  
Email: kai.nordlund@helsinki.fi  
Mobile: +358-40-5562806

### Languages

**Swedish** - native  
**Finnish** - native  
**English** - excellent

### Hobbies

If not working, or studying, one can most certainly find me at the gym, playing games, cooking, writing my book, or planning my future winery.

### Military Service

Served as a conscript in the Finnish Defence Forces for a year. Underwent non-commissioned officer training and gained valuable leadership skills.