



**DCGI**

**DEPARTMENT OF COMPUTER GRAPHICS AND INTERACTION**

# APG Introduction

**Jakub Hendrich, Daniel Meister**

# Contacts

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## ■ Tutor

- Jakub Hendrich, [jakub.hendrich@fel.cvut.cz](mailto:jakub.hendrich@fel.cvut.cz)
- room KN:E-421

## ■ Course

- <https://cw.fel.cvut.cz/wiki/courses/b4m39apg/start>
- seminar: **Monday 12:45-14:15**, room **KN:E-327**



# Prerequisites

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## ■ C/C++ Programming language

- B6B36PJC Programming in C/C++ language
  - <https://cw.fel.cvut.cz/wiki/courses/b6b36pjc/start>

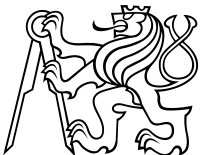
## ■ Rust [for the curious&dexterous]

## ■ OpenGL API

- B0B39PGR Computer graphics
  - <https://cent.felk.cvut.cz/courses/PGR/>

## ■ Math

- Linear Algebra (Vector & Matrix Calculus)
- Analytic Geometry (Intersection Calculus)



# Rules of the Game

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## ■ Academic principles

- <https://dcgi.fel.cvut.cz/en/study/rules>
- Antiplagiarism check

## ■ 5 Homework assignments

- 50 points (10 points each) + bonus points
- All assignments must be accepted
  - Later submissions are penalized by 3 points for each week of delay!

## ■ Test

- 9<sup>th</sup> December (12<sup>th</sup> week)
- Up to 10 points

## ■ At least 30 points needed for the assessment



# Homework Assignments (1/2)

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## ■ Topics

- Rasterization
- Ray Tracing

## ■ Team of two

- Find your teammate by next Monday!

## ■ Bonus points

- Optional objectives
- Speed competition (for the first three assignments)
  - 3 bonus points for the 1<sup>st</sup> fastest solution
  - 2 bonus points for the 2<sup>nd</sup> fastest solution
  - 1 bonus point for the 3<sup>rd</sup> fastest solution



# Homework Assignments (2/2)

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## ■ Evaluation

- All evaluation: <https://cw.felk.cvut.cz/brute/>
  - Image diff
  - Speed competition
  - Clean build & run
  - Clean & clear code, comments, etc.
  - Functionality

## ■ Technical details

- C++17; multithreading, SIMD (speed competition)
- GitLab: <https://gitlab.fel.cvut.cz/>



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# Thank you for your attention!

*Jakub Hendrich*

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