Course title: Computational Geometry
Institute/Division: F-3, Institute for Computer Science

Course code: F3-CG

Erasmus subject code: Informatics, Computer Science

Number of contact hours: 45 hours

Course duration: 1 semester

ECTS credits: 6

Course description: N-dimensional analytical geometry, simplexes, barycentric coordinates, Dirichlet tessellation, Voronoi diagrams, intersections of fundamental geometric entities, triangulation of set of points, Delaunay triangulation of set of points, monotone polygons, algorithm of triangulation of monotone polygons, monitoring of art gallery, Algorithm of Delaunay triangulation of set of points, Delaunay triangularization of multiconnected polygons with mesh size parameter.

Literature:
1. Computational Geometry : algorithms and applications / Mark de Berg [et al.] .

2. Computational Geometry : an introduction / Franco P. Preparata, Michael Ian Shamos

Course type: Lectures and laboratories

Assessment method: Attendance, evaluation of small projects, exam

Prerequisites: programming languages, operating systems

Primary target group: 3-th – 4-th year computer science students

Lecturer: Jan Kucwaj, PhD, DSc

Contact person: Jan Kucwaj, PhD, DSc

jkucwaj@pk.edu.pl

Deadline for application: 15th January