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U1222847D

Lab Group SS1

rectangle.wrl

- Shows a surface obtained from parametric equation x=u, y=v, z=0 with parameters from [-1, 1, -1, 1] and resolution of 4.

- A square of width = 2 at z-axis, center at origin

rectangle1.wrl

- Shows a surface obtained from parametric equation x=u, y=v, z=u with parameters from [-1, 1, -1, 1] and resolution of 4.

- A square of width = 2, center at origin

bilinear1.wrl

- Shows a surface obtained from parametric equation x=u, y=v, z=u with parameters from [0, 1, 0, 1] and resolution of 100.

- A bilinear surface with 4 points (-0.5, 0.6, -0.8), (-0.4, -0.8, 0.6), (0.4, 0.6, 0.5), (0.7, -0.6, 0.8)

bilinear2.wrl

- Shows a surface obtained from parametric equation x=u, y=v, z=u with parameters from [0, 1, 0, 1] and resolution of 100.

- A bilinear surface with 4 points (-1, 0, -1), (1, 0, -1), (-1, 0, 1), (1, 0, 1)

bilinear3.wrl

- Shows a surface obtained from parametric equation x=u, y=v, z=u with parameters from [0, 1, 0, 1] and resolution of 100.

- A bilinear surface with 4 points (-1, 1, -1), (1, 0, -1), (-1, 0, 1), (1, 0, 1)

bilinear4.wrl

- Shows a surface obtained from parametric equation x=u, y=v, z=u with parameters from [0, 1, 0, 1] and resolution of 100.

- A bilinear surface with 4 points (-1, 1, -1), (1, 0, -1), (-1, 0, 1), (1, 1.5, 1)

sphere1.wrl

- Shows a surface obtained from parametric equation x=cos(u\*2\*pi)\*cos(v\*pi), y=cos(u\*2\*pi)\*sin(v\*pi), z=sin(u\*2\*pi) with parameters from [0, 1, 0, 1] and resolution of 100.

- A sphere of radius 1, center at origin

sphere2.wrl

- Shows a surface obtained from parametric equation x=0.8\*cos(u\*2\*pi)\*cos(v\*pi), y=0.8\*cos(u\*2\*pi)\*sin(v\*pi), z=0.8\*sin(u\*2\*pi) with parameters from [0, 1, 0, 1] and resolution of 100.

- A sphere of radius 0.8, center at origin

ellipsoid1.wrl

- Shows a surface obtained from parametric equation x=0.3\*cos(u\*2\*pi)\*cos(v\*pi), y=0.5\*cos(u\*2\*pi)\*sin(v\*pi), z=0.4\*sin(u\*2\*pi) with parameters from [0, 1, 0, 1] and resolution of 100.

- A ellipsoid of x-semi-radius of 0.3, y-semi-radius of 0.5, z-semi-radius of 0.4, center at origin

sphere3.wrl

- Shows a surface obtained from parametric equation x=cos(u\*2\*pi)\*cos(v\*pi), y=cos(u\*2\*pi)\*sin(v\*pi), z=sin(u\*2\*pi) with parameters from [0, 0.5, 0, 1] and resolution of 100.

- A hemisphere of radius 1, center at origin

sphere4.wrl

- Shows a surface obtained from parametric equation x=cos(u\*2\*pi)\*cos(v\*pi), y=cos(u\*2\*pi)\*sin(v\*pi) + 1, z=sin(u\*2\*pi) with parameters from [0, 1, 0, 1] and resolution of 100.

- A sphere of radius 1, center at (0,1,0)

sweeping1.wrl

- Shows a surface obtained from parametric equation x=cos(u\*2\*pi), y=sin(v\*pi), z=v with parameters from [0, 1, 0, 1] and resolution of 100.

- A cylinder of radius 1, height of 1, center at (0,0,0.5)

sweeping2.wrl

- Shows a surface obtained from parametric equation x=cos(u\*2\*pi), y=sin(u\*2\*pi)\*cos(v\*2\*pi), z=sin(u\*2\*pi)\*sin(v\*2\*pi) with parameters from [0, 1, 0, 0.5] and resolution of 100.

- A sphere radius 1, center at origin

sweeping3.wrl

- Shows a surface obtained from parametric equation x=u, y=u\*cos(v\*2\*pi), z=u\*sin(v\*2\*pi) with parameters from [0, 1, 0, 1] and resolution of 100.

- A cone radius 1, center at origin

sweeping4.wrl

- Shows a surface obtained from parametric equation x=u, y=u\*cos(v\*2\*pi), z=u\*sin(v\*2\*pi) with parameters from [0, 1, 0, 0.5] and resolution of 100.

- A half cone radius 1, center at origin

triangle1.wrl

- Shows a surface obtained from parametric equation x=x1+u\*(x2-x1)+v\*(x3-x1+u\*(x4-x3-x2+x1)), y=y1+u\*(y2-y1)+v\*(y3-y1+u\*(y4-y3-y2+y1)), z=z1+u\*(z2-z1)+v\*(z3-z1+u\*(z4-z3-z2+z1)) with parameters from [0, 1, 0, 1] and resolution of 100.

- a triangle forming from point (-1,0,-1), (1, 0, -1), (-1, 0, 1)

solidcube1.wrl

- Shows a solid cube obtained from parametric equation x=u, y=v, z=w, with parameters from [0,1,0,1,0,1]

- The solid cube is generated by translational sweeping of a point to become a line, a line to become a plane, and a surface to become a cube

- The solid cube is of side = 1

solidcylinder1.wrl

- Shows a solid cylinder obtained from parametric equation x=u\*cos(v\*2\*pi), y=u\*sin(v\*2\*pi), z=w, with parameters from [0,1,0,1,0,1]

- the solid cylinder is generated by translational sweeping of a circle

- the cylinder is of radius = 1, height = 1

solidsphere1.wrl

- Shows a solid sphere obtained from parametric equation x = v\*cos(u\*pi\*2), y = v\*sin(u\*pi\*2)\*cos(w\*pi), z = v\*sin(u\*pi\*2)\*sin(w\*pi), with parameters from [0,1,0,1,0,1]

- The solid sphere is generated by rotational sweeping

- The sphere is of radius = 1, and center at origin

solidcone1.wrl

- Shows a solid cone obtained from parametric equation x = u, y = v\*u\*cos(w\*2\*pi), z = v\*u\*sin(w\*2\*pi), with parameters from [0,1,0,1,0,1]

- The solid cone is generated by rotational sweeping

- The cone is of radius = 1, height = 1, and the tip at origin

solidcylinder2.wrl

- Shows a solid cylinder obtained by converting cylindrical surface to solid cylinder by adding a new parameter w

- the original cylindrical surface is from the file sweeping3.wrl