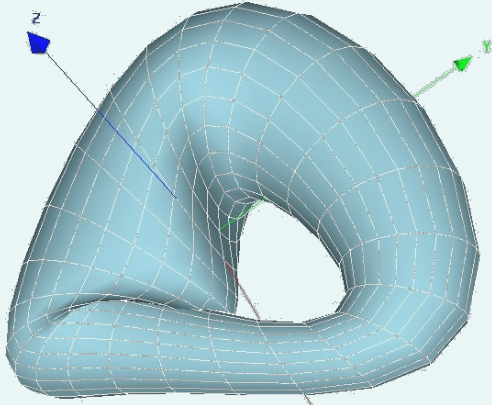


MATEMATIKA U ARHITEKTURI 2

Arhitektonski fakultet Univerziteta u Beogradu; Prof. dr Ljiljana Petruševski; Student Stefan Milosavljević, 2013/163

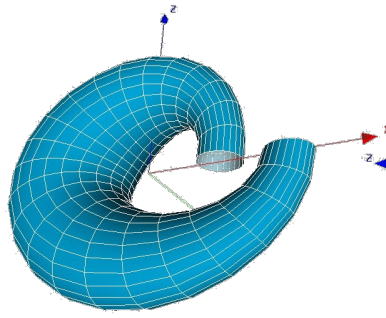
POVRŠI U PROSTORU



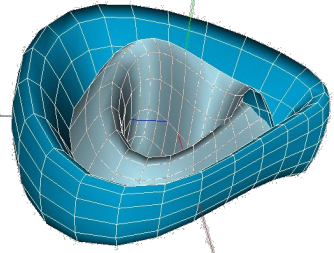
Inicijalna forma-jednačina Klein-a.

$$\begin{aligned} X f(u,v) &= 2*(1-\cos(v)/2)*\cos(u)*\cos(v) \\ Y f(u,v) &= -2*(1-\cos(v)/2)*\sin(u) \\ Z f(u,v) &= (4+2*(1-\cos(v)/2)*\cos(u))*\sin(v) \\ 0 &\leq u \leq 2*\pi \\ 0 &\leq v \leq 2*\pi \end{aligned}$$

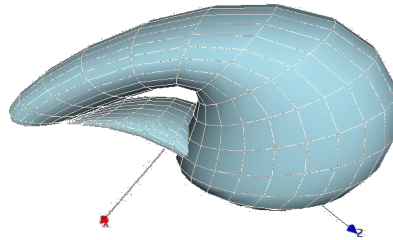
Podešavanjem parametara u i v dobija se matematička površ izražene arhitektoničnosti. Promenom pojedinih parametara uočavaju se znatne promene na formi.



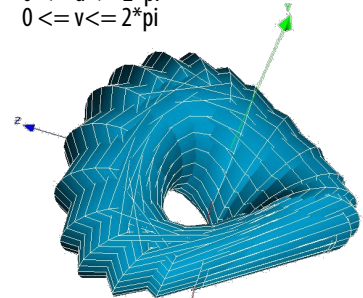
$$\begin{aligned} X f(u,v) &= 2*(1-\cos(v)/5/2)*\cos(u)*\cos(v) \\ Y f(u,v) &= -2*(1-\cos(v)/2)*\sin(u) \\ Z f(u,v) &= (4+2*(1-\cos(v)/2)*\cos(u))*\sin(v) \\ 0 &\leq u \leq 2*\pi \\ 0 &\leq v \leq 2*\pi \end{aligned}$$



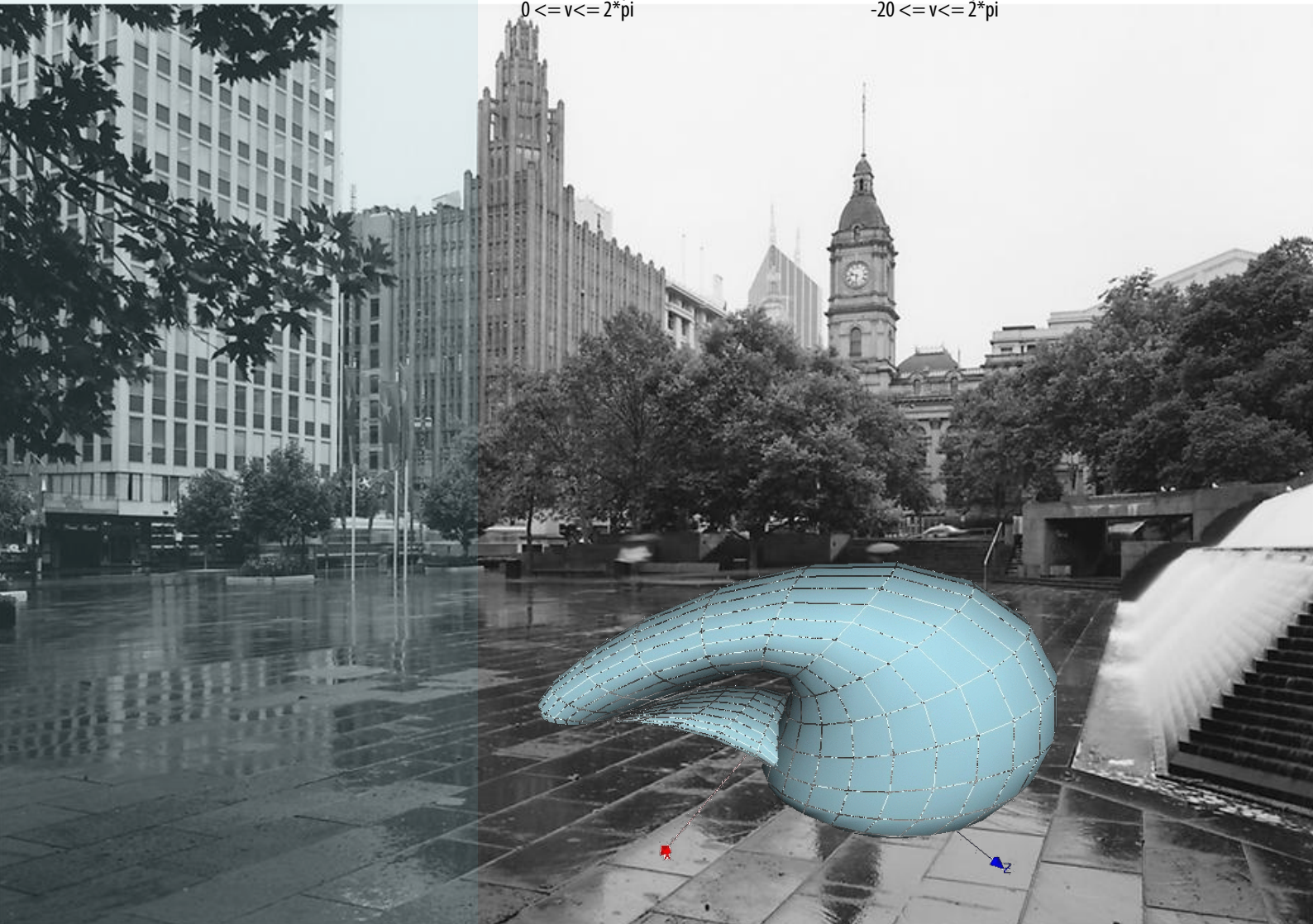
$$\begin{aligned} X f(u,v) &= 2*(1-\cos(v)/2)*\cos(u)*\cos(v) \\ Y f(u,v) &= -2*(1-\cos(v)/2)*\sin(2*u) \\ Z f(u,v) &= (4+2*(1-\cos(v)/2)*\cos(u))*\sin(v) \\ 0 &\leq u \leq 2*\pi \\ 0 &\leq v \leq 2*\pi \end{aligned}$$



$$\begin{aligned} X f(u,v) &= 2*(1-\cos(v)/2)*\cos(u)*\cos(v) \\ Y f(u,v) &= -2*(1-\cos(v)/2)*\sin(u) \\ Z f(u,v) &= (4+2*(1-\cos(v)/2)*\cos(u))*\sin(v+4) \\ 0 &\leq u \leq 2*\pi \\ 0 &\leq v \leq 2*\pi \end{aligned}$$



$$\begin{aligned} X f(u,v) &= 2*(1-\cos(v)/2)*\cos(u)*\cos(v) \\ Y f(u,v) &= -2*(1-\cos(v)/2)*\sin(u) \\ Z f(u,v) &= (4+2*(1-\cos(v)/2)*\cos(u))*\sin(v) \\ 0 &\leq u \leq 2*\pi \\ -20 &\leq v \leq 2*\pi \end{aligned}$$



Faculty of Architecture, University of Belgrade; Prof. Ljiljana Petruševski, PhD; Student Stefan Milosavljević, 2013/163