Geometrija prirode

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Sigurno ste puno puta u prirodi uočili geometriju: oblik zgrade, auta, plamena svijeće, cvijeta... Neki od nas vjeruju da se kompletna priroda može matematički opisati. Bilo kako bilo, zanimljivo je pokušati. Slijedom nesretnih okolnosti, ova je rubrika spala na jednu stranicu, tako da vam ne mogu prikazati sav izrađeni materijal, ali nadam se da ćete utjehu utopiti u logu Batmana. Dolje je dan logo Batmana napravljen u Mapleu i naredbe koje su korištene.

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[> with(plots):
ESU:=plot([1.8*sin(t),1.2375*cos(t),t=-Pi..Pi],v=-1.8..1.8,u=-1.2375..1.2375): a:=proc(x)
if (x>evalf(-Pi+.65)) and (x<-.3) then 1.6*sin(x) elif (x>.3) and (x<evalf(Pi-.65)) then
1.6*sin(x) else h end if end proc; b:=proc(x) if (x>evalf(-Pi+.65)) and (x<-.3) then
cos(x) elif (x>.3) and (x<evalf(Pi-.65)) then cos(x) else h end if end proc;
EL:=plot([a,b,-Pi..Pi],x=-1.6..1.6,y=-1..1,scaling=constrained):
CIL:=plot([.25*sin(x)-.5,.25*cos(x)+.6,x=-3/2*Pi..-Pi/4]):
PRL:=plot([x+1.45],x=evalf(-sin(Pi/3)*.25-.47)..-0.5):
CIR:=plot([.25*sin(x)+.5,.25*cos(x)+.6,x=-7/4*Pi..-Pi/2]):
PRR:=plot([-x+1.45],x=evalf(0.5..sin(Pi/3)*.25+.47)):
HEADL:=plot([-.25,x,x=.6..1]):
HEADR:=plot([.25,x,x=.6..1]):
EARL:=plot(-2*x+.5,x=-.25..-0.15):
EARR:=plot(2*x+.5,x=.25..0.15):
TOP:=plot(.8,x=-.15..0.15):
WINGOL:=plot([sqrt(x^2+(.4*sqrt(sin(7*x)))^2)* cos(arctan((.4*sqrt(sin(7*x)))/x)+
Pi/3.9)-1.59,sqrt(x^2+(.4*sqrt(sin(7*x)))^2)*sin(arctan((.4*sqrt(sin(7*x)))/x)+Pi/3.9)-
1.45,x=Pi/6..Pi/2],numpoints=1025):
WINGOR:=plot([-(sqrt(x^2+(.4*sqrt(sin(7*x)))^2)*cos(arctan((.4*sqrt(sin(7*x)))/x)+Pi/3.9)
-1.59) , sqrt(x^2+(.4*sqrt(sin(7*x)))^2)* sin(arctan((.4*sqrt(sin(7 * x)))/x)+Pi/3.9)-
1.45,x=Pi/6..Pi/2] , numpoints=1025):
TAILR:=plot(.8*sqrt(sin(4*x))-1,x=0.001..0.67):
TAILL:=plot(.8*sqrt(sin(-4*x))-1,x=-0.67..-0.001):
display(EL, ESU,CIL, PRL,CIR,PRR, HEADL,HEADR,EARL, EARR,TOP,WINGOL,
WINGOR,TAILR,TAILL, scaling=constrained, axes=none,thickness=3);
```