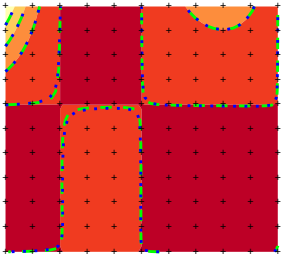
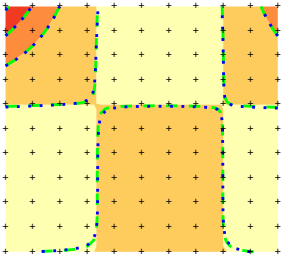
f



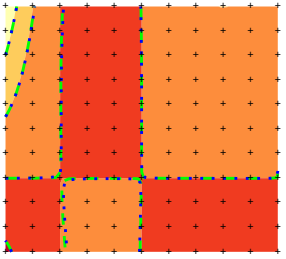
regular data grid 11 x 11
colors = exaxt values
dashed green = global bw
dotted blue = local bw
crosses: data points

f(x,y) =x^3*y^2−0.6*x^3*y+(−1.7)*x^2*y^2+1.02*x^2*
y+0.8*x*y^2−0.48*x*y+(−0.1)*y^2+0.06*y
f_x(x,y) =3*x^2*y^2−1.8*x^2*y+(−3.4)*x*y^2+2.04*x*y+
0.8*y^2−0.48*y
f_y(x,y) =2*x^3*y−0.6*x^3+(−3.4)*x^2*y+1.02*x^2+1.6*
x*y−0.48*x+(−0.2)*y+0.06
f_xx(x,y) =6*x*y^2−3.6*x*y+(−3.4)*y^2+2.04*y
f_yy(x,y) =2*x^3−3.4*x^2+1.6*x−0.2
f_xy(x,y) =6*x^2*y−1.8*x^2+(−6.8)*x*y+2.04*x+1.6*y−0.
48
f_xxx(x,y) =6*y^2−3.6*y
f_yyy(x,y) =0
f_xxy(x,y) =12*x*y−3.6*x+(−6.8)*y+2.04
f_xyy(x,y) =6*x^2−6.8*x+1.6

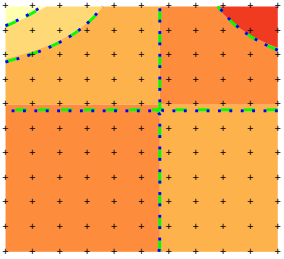
f_x



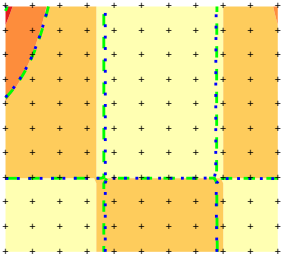
f_x



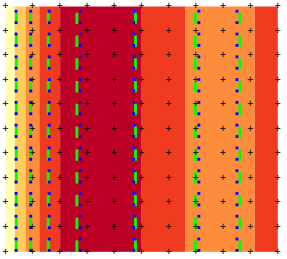
f_xx



f_xy

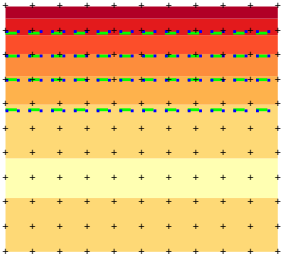


f_yy

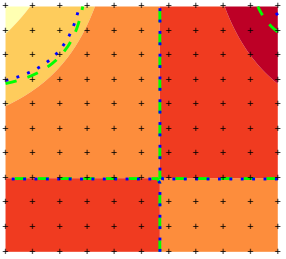


kernel: gaussian
global bandwidth 33 %
local bandwidth 11 %

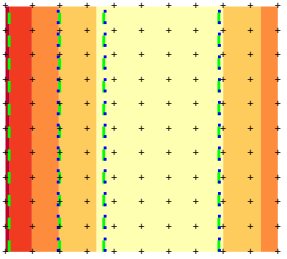
f_xxx



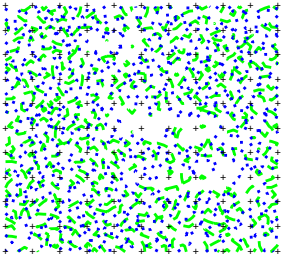
f_xxy



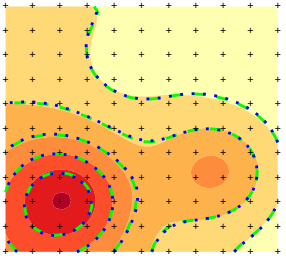
f_xyy



f_yyy



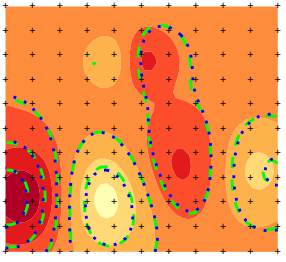
f



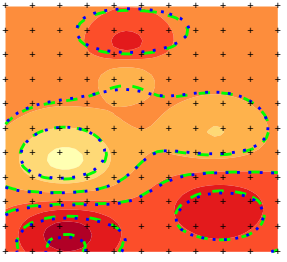
regular data grid 11 x 11
colors = exaxt values
dashed green = global bw
dotted blue = local bw
crosses: data points

f(x,y) =0.75*exp(−((9*x−2)^2+(9*y−2)^2)/4)+0.75*ex
p(−((9*x+1)^2/49+(9*y+1)/10))+0.5*exp(−((9
*x−7)^2+(9*y−3)^2)/4)−0.2*exp(−((9*x−4)^2+
(9*y−7)^2))
f_x(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*x+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−1
21.5)*x*exp(−((9*x+1)^2/49+(9*y+1)/10)))/4
9+((−40.5)*x*exp(−((9*x−7)^2+(9*y−3)^2)/4)
)/2+0.324e2*x*exp(−((9*x−4)^2+(9*y−7)^2))+
((−13.5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/
49+(31.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−
0.144e2*exp(−((9*x−4)^2+(9*y−7)^2))
f_y(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*y+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−4
0.5)*y*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2+0.
324e2*y*exp(−((9*x−4)^2+(9*y−7)^2))+((−6.7
5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/10+(13
.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−0.252e
2*exp(−((9*x−4)^2+(9*y−7)^2))

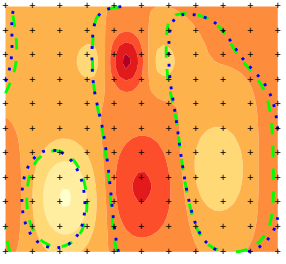
f_x



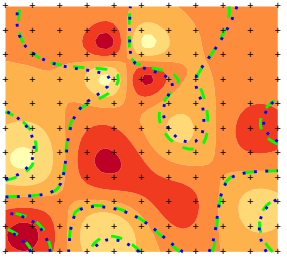
f_x



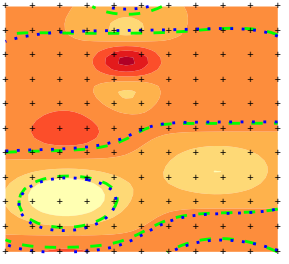
f_xx



f_xy

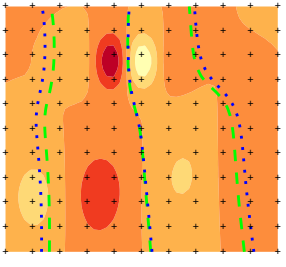


f_yy

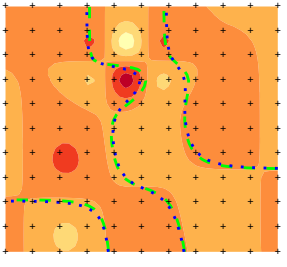


kernel: gaussian
global bandwidth 33 %
local bandwidth 11 %

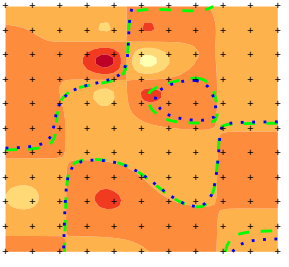
f_xxx



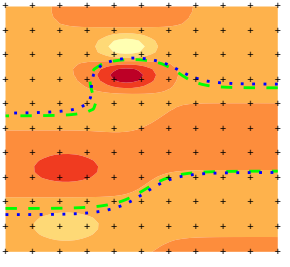
f_xxy



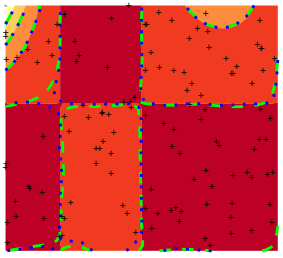
f_xyy



f_yyy



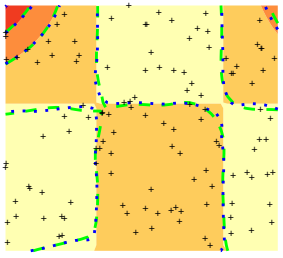
f



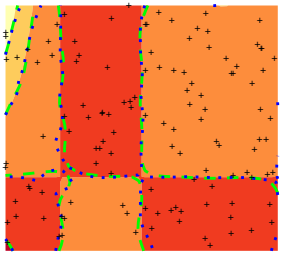
irregular data grid 121 pts
colors = exaxt values
dashed green = global bw
dotted blue = local bw
crosses: data points

f(x,y) =x^3*y^2−0.6*x^3*y+(−1.7)*x^2*y^2+1.02*x^2*
y+0.8*x*y^2−0.48*x*y+(−0.1)*y^2+0.06*y
f_x(x,y) =3*x^2*y^2−1.8*x^2*y+(−3.4)*x*y^2+2.04*x*y+
0.8*y^2−0.48*y
f_y(x,y) =2*x^3*y−0.6*x^3+(−3.4)*x^2*y+1.02*x^2+1.6*
x*y−0.48*x+(−0.2)*y+0.06
f_xx(x,y) =6*x*y^2−3.6*x*y+(−3.4)*y^2+2.04*y
f_yy(x,y) =2*x^3−3.4*x^2+1.6*x−0.2
f_xy(x,y) =6*x^2*y−1.8*x^2+(−6.8)*x*y+2.04*x+1.6*y−0.
48
f_xxx(x,y) =6*y^2−3.6*y
f_yyy(x,y) =0
f_xxy(x,y) =12*x*y−3.6*x+(−6.8)*y+2.04
f_xyy(x,y) =6*x^2−6.8*x+1.6

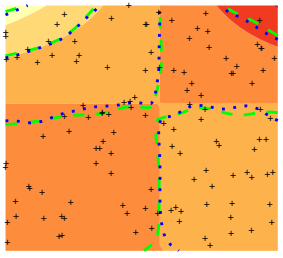
f_x



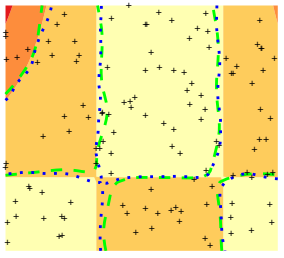
f_x



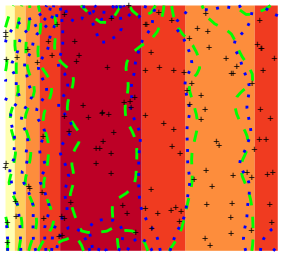
f_xx



f_xy

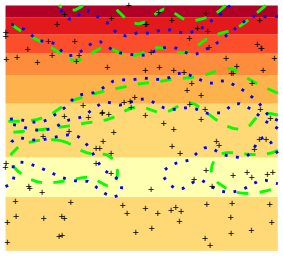


f_yy

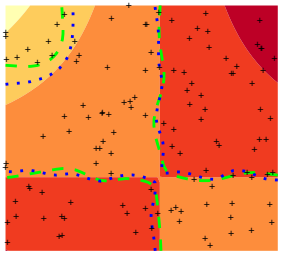


kernel: gaussian
global bandwidth 33 %
local bandwidth 11 %

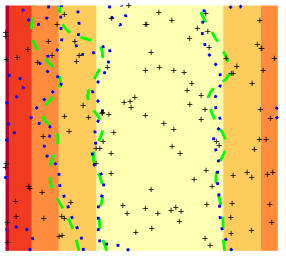
f_xxx



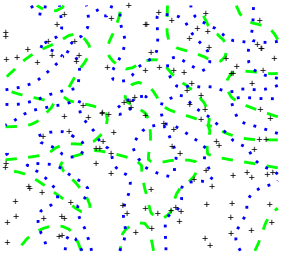
f_xxy



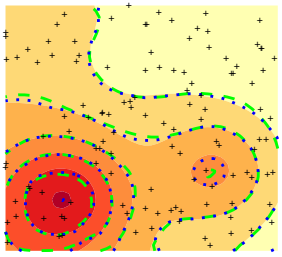
f_xyy



f_yyy



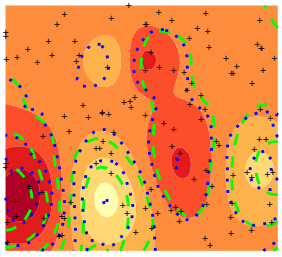
f



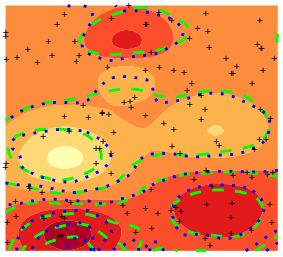
irregular data grid 121 pts
colors = exaxt values
dashed green = global bw
dotted blue = local bw
crosses: data points

f(x,y) =0.75*exp(−((9*x−2)^2+(9*y−2)^2)/4)+0.75*ex
p(−((9*x+1)^2/49+(9*y+1)/10))+0.5*exp(−((9
*x−7)^2+(9*y−3)^2)/4)−0.2*exp(−((9*x−4)^2+
(9*y−7)^2))
f_x(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*x+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−1
21.5)*x*exp(−((9*x+1)^2/49+(9*y+1)/10)))/4
9+((−40.5)*x*exp(−((9*x−7)^2+(9*y−3)^2)/4)
)/2+0.324e2*x*exp(−((9*x−4)^2+(9*y−7)^2))+
((−13.5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/
49+(31.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−
0.144e2*exp(−((9*x−4)^2+(9*y−7)^2))
f_y(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*y+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−4
0.5)*y*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2+0.
324e2*y*exp(−((9*x−4)^2+(9*y−7)^2))+((−6.7
5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/10+(13
.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−0.252e
2*exp(−((9*x−4)^2+(9*y−7)^2))

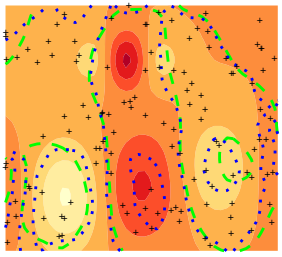
f_x



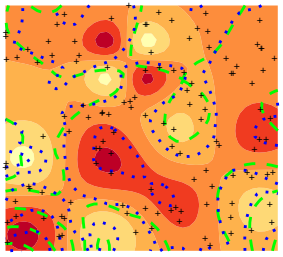
f_x



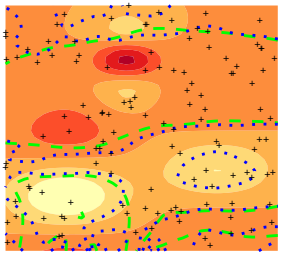
f_xx



f_xy

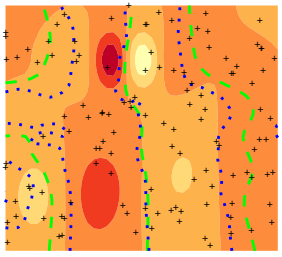


f_yy

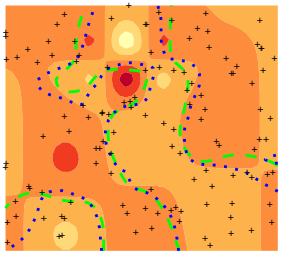


kernel: gaussian
global bandwidth 33 %
local bandwidth 11 %

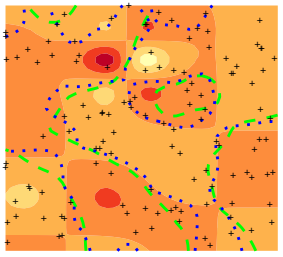
f_xxx



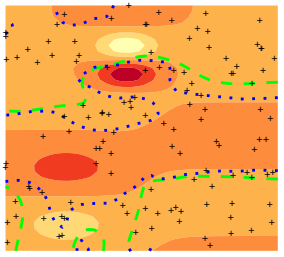
f_xxy



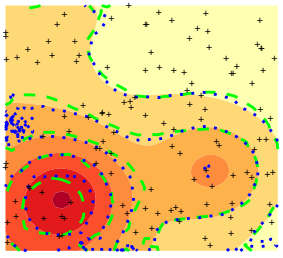
f_xyy



f_yyy



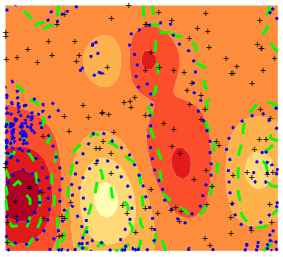
f



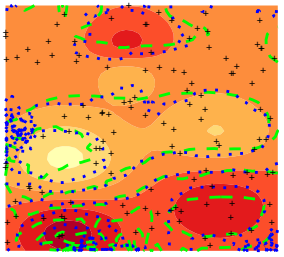
irregular data grid 121 pts
colors = exaxt values
dashed green = global bw
dotted blue = local bw
crosses: data points

f(x,y) =0.75*exp(−((9*x−2)^2+(9*y−2)^2)/4)+0.75*ex
p(−((9*x+1)^2/49+(9*y+1)/10))+0.5*exp(−((9
*x−7)^2+(9*y−3)^2)/4)−0.2*exp(−((9*x−4)^2+
(9*y−7)^2))
f_x(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*x+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−1
21.5)*x*exp(−((9*x+1)^2/49+(9*y+1)/10)))/4
9+((−40.5)*x*exp(−((9*x−7)^2+(9*y−3)^2)/4)
)/2+0.324e2*x*exp(−((9*x−4)^2+(9*y−7)^2))+
((−13.5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/
49+(31.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−
0.144e2*exp(−((9*x−4)^2+(9*y−7)^2))
f_y(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*y+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−4
0.5)*y*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2+0.
324e2*y*exp(−((9*x−4)^2+(9*y−7)^2))+((−6.7
5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/10+(13
.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−0.252e
2*exp(−((9*x−4)^2+(9*y−7)^2))

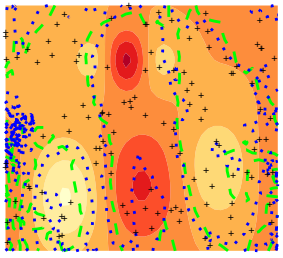
f_x



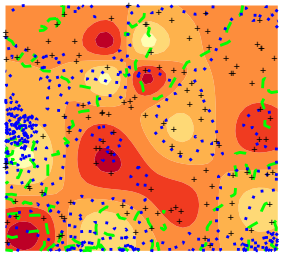
f_x



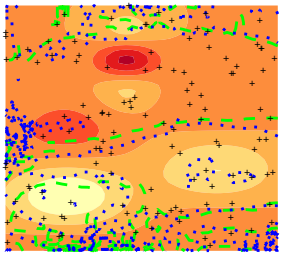
f_xx



f_xy

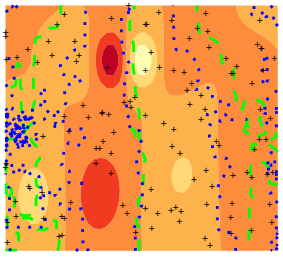


f_yy

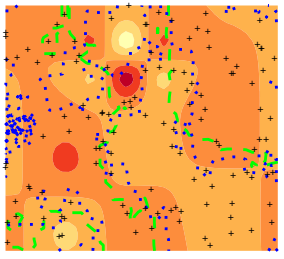


kernel: uniform
global bandwidth 33 %
local bandwidth 11 %

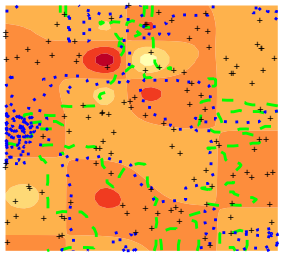
f_xxx



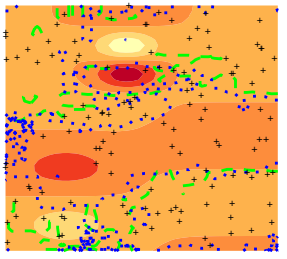
f_xxy



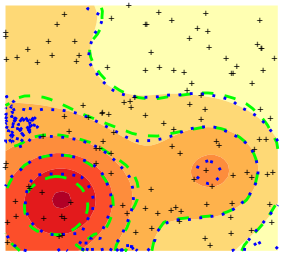
f_xyy



f_yyy



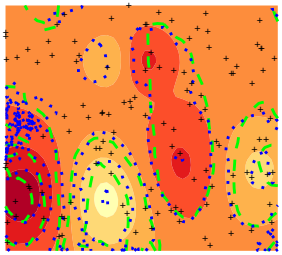
f



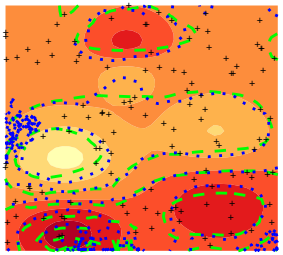
irregular data grid 121 pts
colors = exaxt values
dashed green = global bw
dotted blue = local bw
crosses: data points

f(x,y) =0.75*exp(−((9*x−2)^2+(9*y−2)^2)/4)+0.75*ex
p(−((9*x+1)^2/49+(9*y+1)/10))+0.5*exp(−((9
*x−7)^2+(9*y−3)^2)/4)−0.2*exp(−((9*x−4)^2+
(9*y−7)^2))
f_x(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*x+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−1
21.5)*x*exp(−((9*x+1)^2/49+(9*y+1)/10)))/4
9+((−40.5)*x*exp(−((9*x−7)^2+(9*y−3)^2)/4)
)/2+0.324e2*x*exp(−((9*x−4)^2+(9*y−7)^2))+
((−13.5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/
49+(31.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−
0.144e2*exp(−((9*x−4)^2+(9*y−7)^2))
f_y(x,y) =((−60.75)*exp(−((9*x−2)^2+(9*y−2)^2)/4)*y+
13.5*exp(−((9*x−2)^2+(9*y−2)^2)/4))/2+((−4
0.5)*y*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2+0.
324e2*y*exp(−((9*x−4)^2+(9*y−7)^2))+((−6.7
5)*exp(−((9*x+1)^2/49+(9*y+1)/10)))/10+(13
.5*exp(−((9*x−7)^2+(9*y−3)^2)/4))/2−0.252e
2*exp(−((9*x−4)^2+(9*y−7)^2))

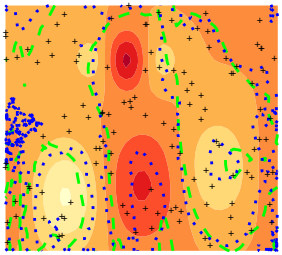
f_x



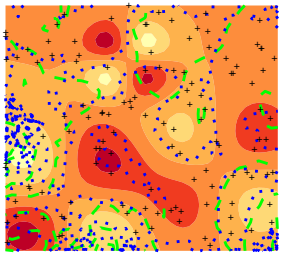
f_x



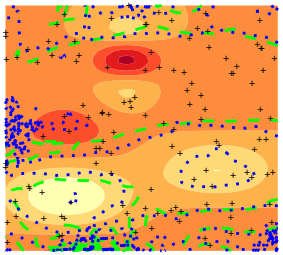
f_xx



f_xy

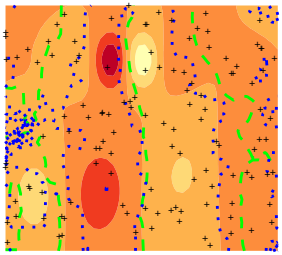


f_yy

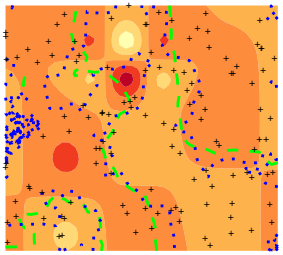


kernel: epanechnikov
global bandwidth 33 %
local bandwidth 11 %

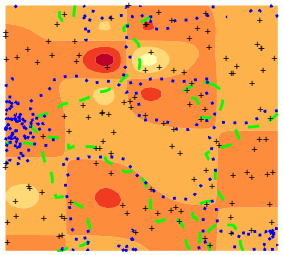
f_xxx



f_xxy



f_xyy



f_yyy