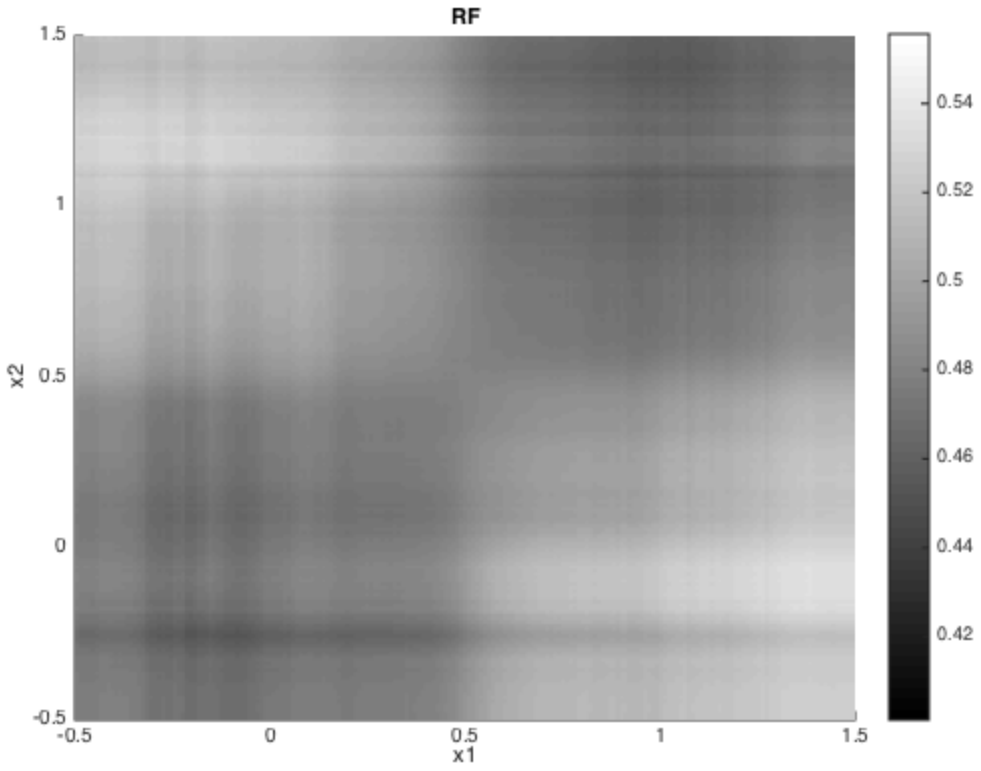
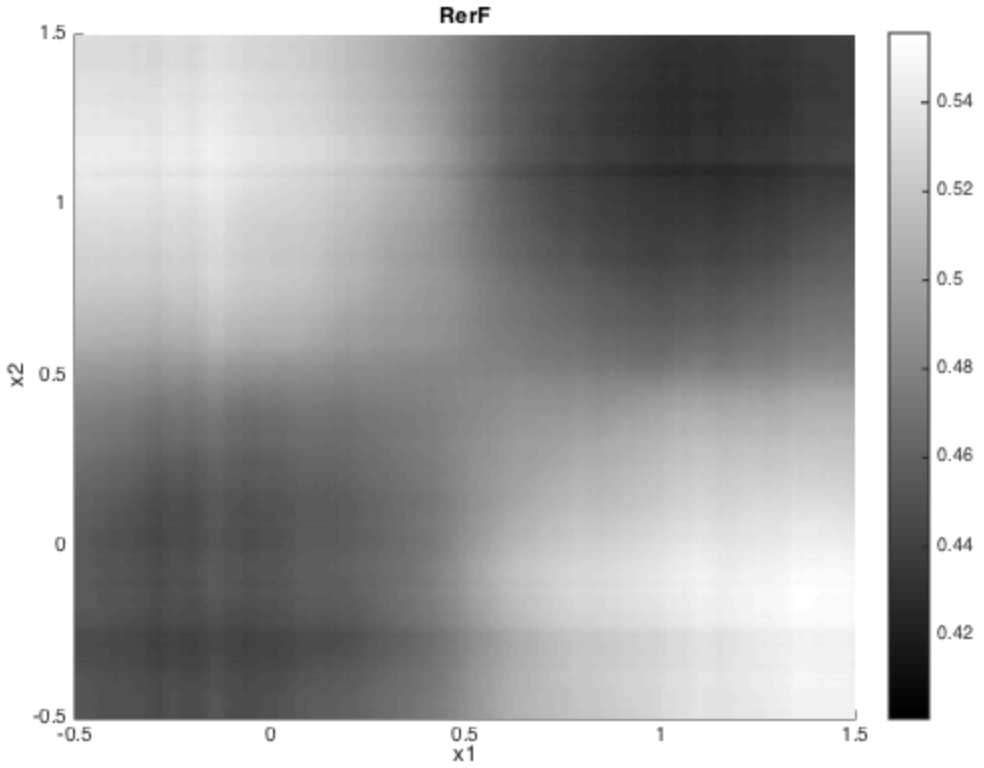
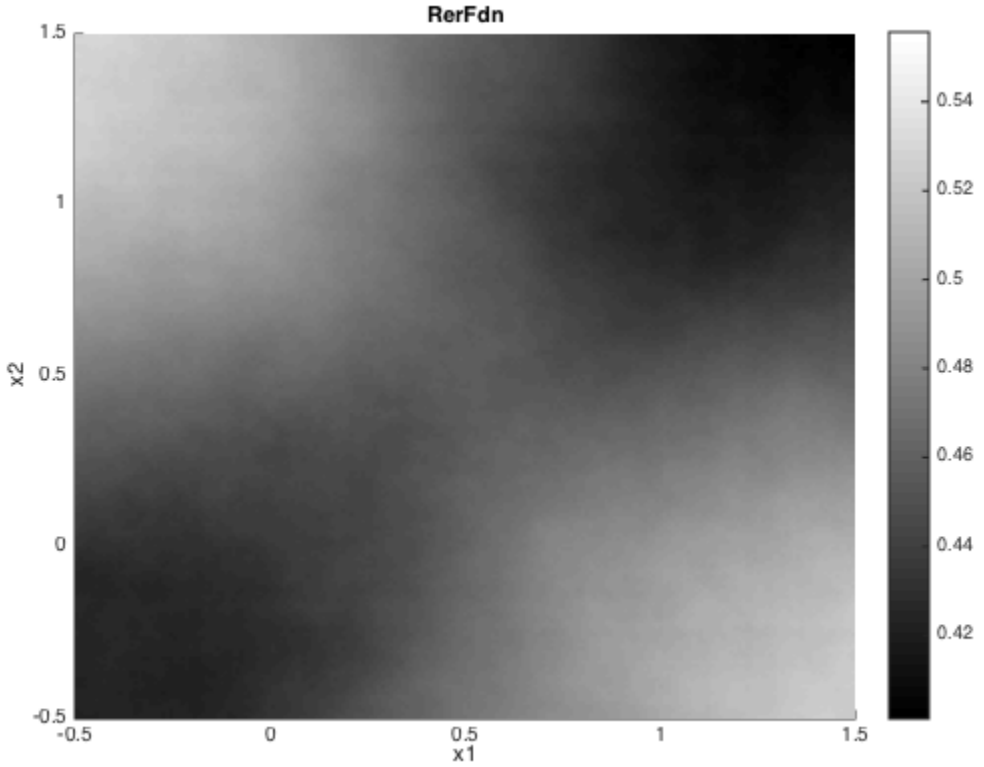
Plot posterior heat maps

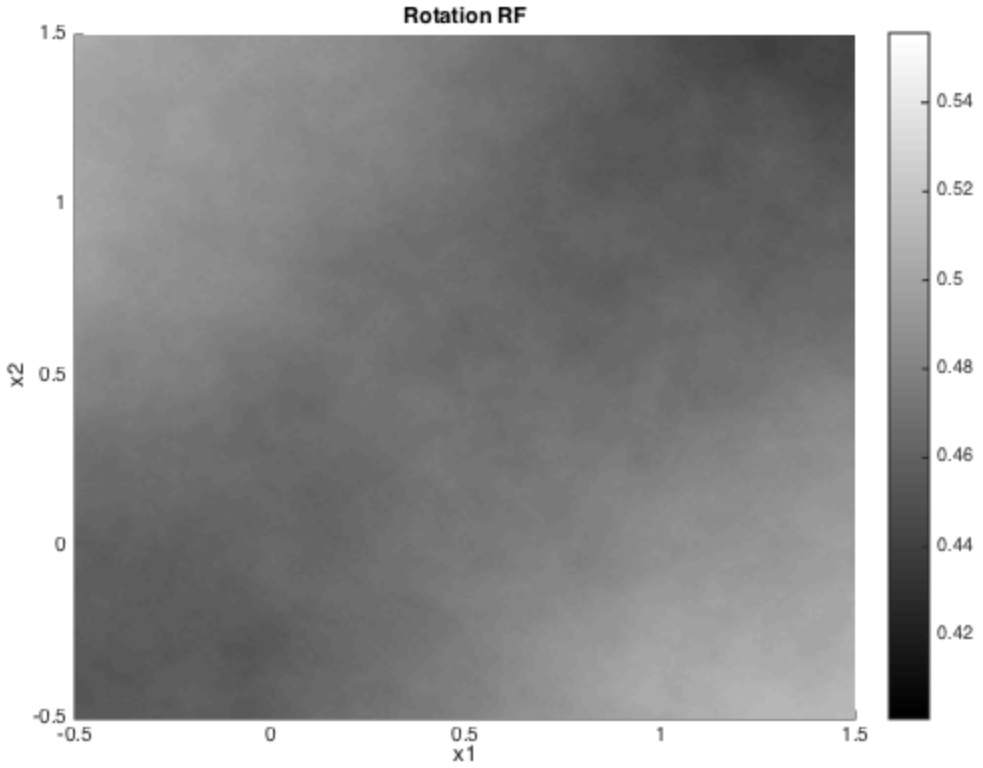
```
clear
close all
clc

fpath = mfilename('fullpath');
rerfPath = fpath(1:strfind(fpath,'RandomerForest')-1);

runSims = false;

if runSims
    run_sparse_parity_posteriors
else
    load Sparse_parity_posteriors.mat
end

figure('visible','off')
p1 = posterior_map(Xpost,Ypost,mean(rf.posteriors,3));
xlabel('x1')
ylabel('x2')
t(1) = title('RF');
ax_old(1) = gca;
c(1) = findobj(gcf,'Type','ColorBar');

figure('visible','off')
p2 = posterior_map(Xpost,Ypost,mean(rerf.posteriors,3));
xlabel('x1')
ylabel('x2')
t(2) = title('RerF');
ax_old(2) = gca;
c(2) = findobj(gcf,'Type','ColorBar');

figure('visible','off')
p3 = posterior_map(Xpost,Ypost,mean(rerfdn.posteriors,3));
xlabel('x1')
ylabel('x2')
t(3) = title('RerFdn');
ax_old(3) = gca;
c(3) = findobj(gcf,'Type','ColorBar');

figure('visible','off')
p4 = posterior_map(Xpost,Ypost,mean(rf_rot.posteriors,3));
xlabel('x1')
ylabel('x2')
t(4) = title('Rotation RF');
ax_old(4) = gca;
c(4) = findobj(gcf,'Type','ColorBar');

cmin = min([p1.CData(:);p2.CData(:);p3.CData(:);p4.CData(:)]);
cmax = max([p1.CData(:);p2.CData(:);p3.CData(:);p4.CData(:)]);
```

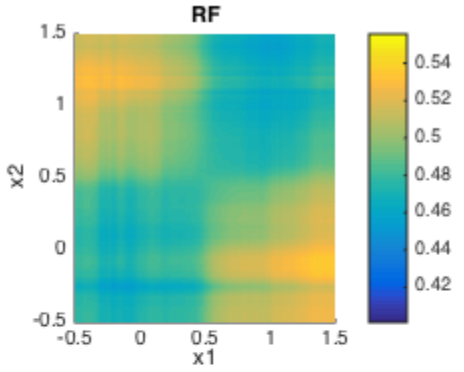
```
for i = 1:4
    figure(i)
    caxis([cmin cmax])
    save_fig(gcf,[rerfPath 'RandomerForest/Figures/Sparse_parity_posteriors_' strr
end

cmaps = {'parula' 'jet' 'hot' 'cool' 'spring' 'summer' 'autumn' 'winter'};

for i = 1:length(cmaps)
    fig = figure;
    for j = 1:4
        figure(fig)
        ax = subplot(2,2,j);
        newHandle = copyobj(allchild(ax_old(j)),ax);
        ax.Title.String = ax_old(j).Title.String;
        ax.XLabel.String = ax_old(j).XLabel.String;
        ax.YLabel.String = ax_old(j).YLabel.String;
        ax.XLim = ax_old(j).XLim;
        ax.YLim = ax_old(j).YLim;
        colorbar
        caxis(c(j).Limits)
    end
    colormap(fig,cmaps{i})
end
```

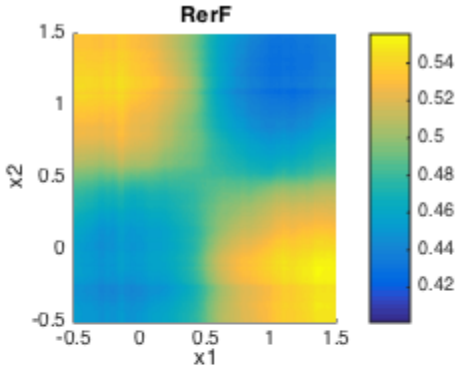


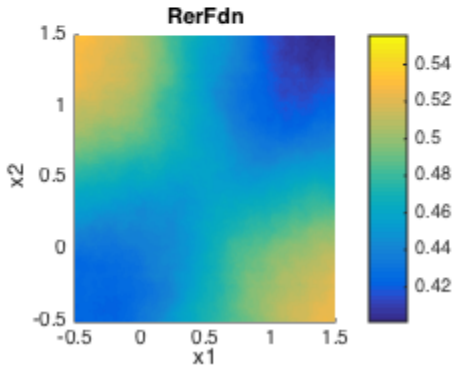

RerF
1.5
1
0.5
0
-0.5
x2
-0.5
0
0.5
1
1.5
x1
0.54
0.52
0.5
0.48
0.46
0.44
0.42

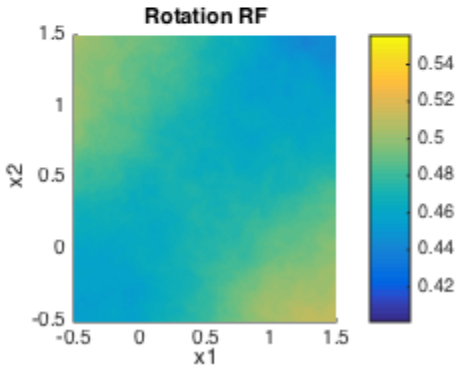

RerFdn
1.5
1
0.5
0
-0.5
x2
-0.5
0
0.5
1
1.5
x1
0.54
0.52
0.5
0.48
0.46
0.44
0.42

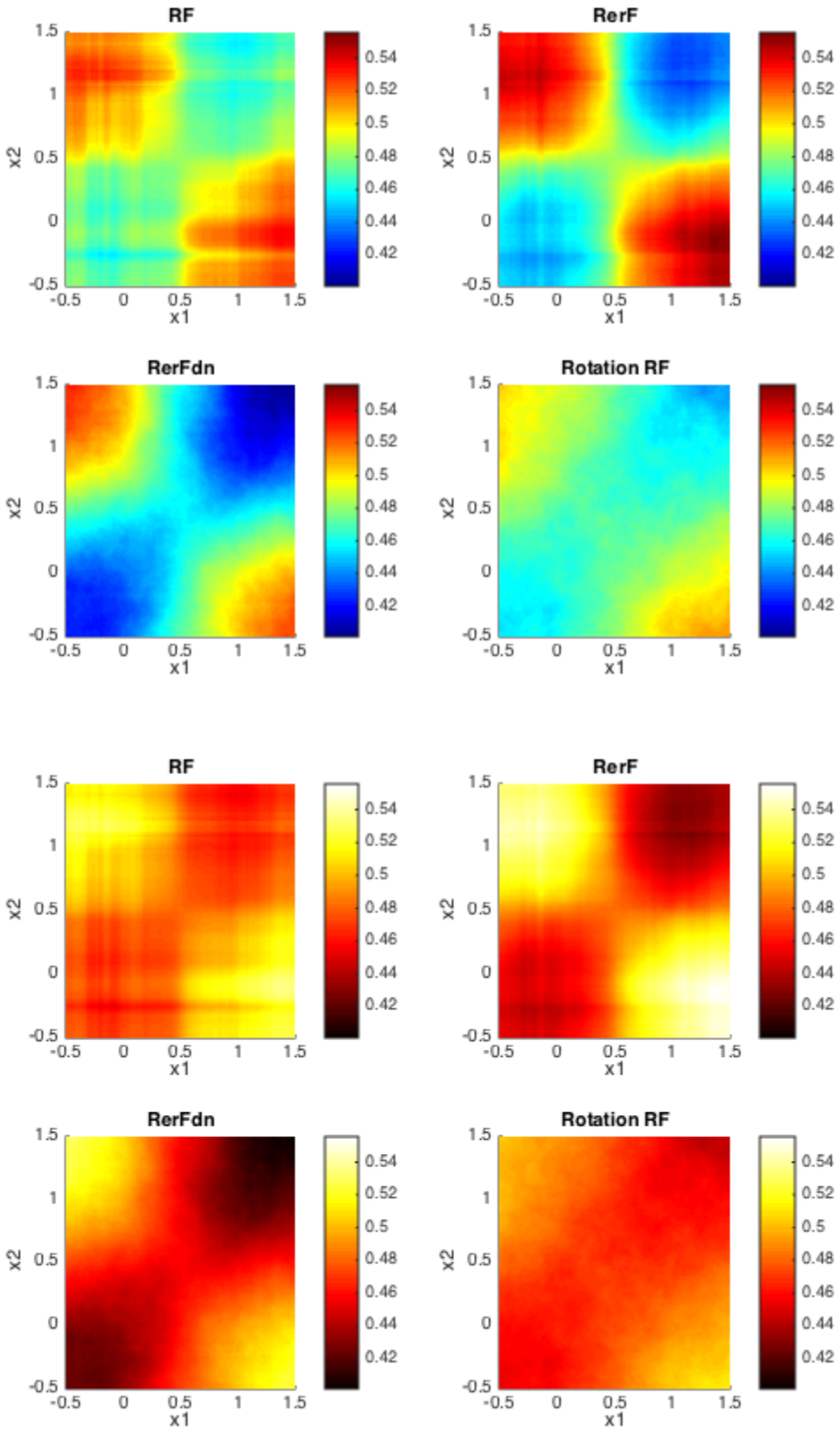

Rotation RF
x1
x2


RF
x1
x2


RerF
x1
x2


RerFdn
x1
x2


Rotation RF
x1
x2


RF
RerF
RerFdn
Rotation RF
RF
RerF
RerFdn
Rotation RF
x1
x2
1.5
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0.5
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-0.5
0.54
0.52
0.5
0.48
0.46
0.44
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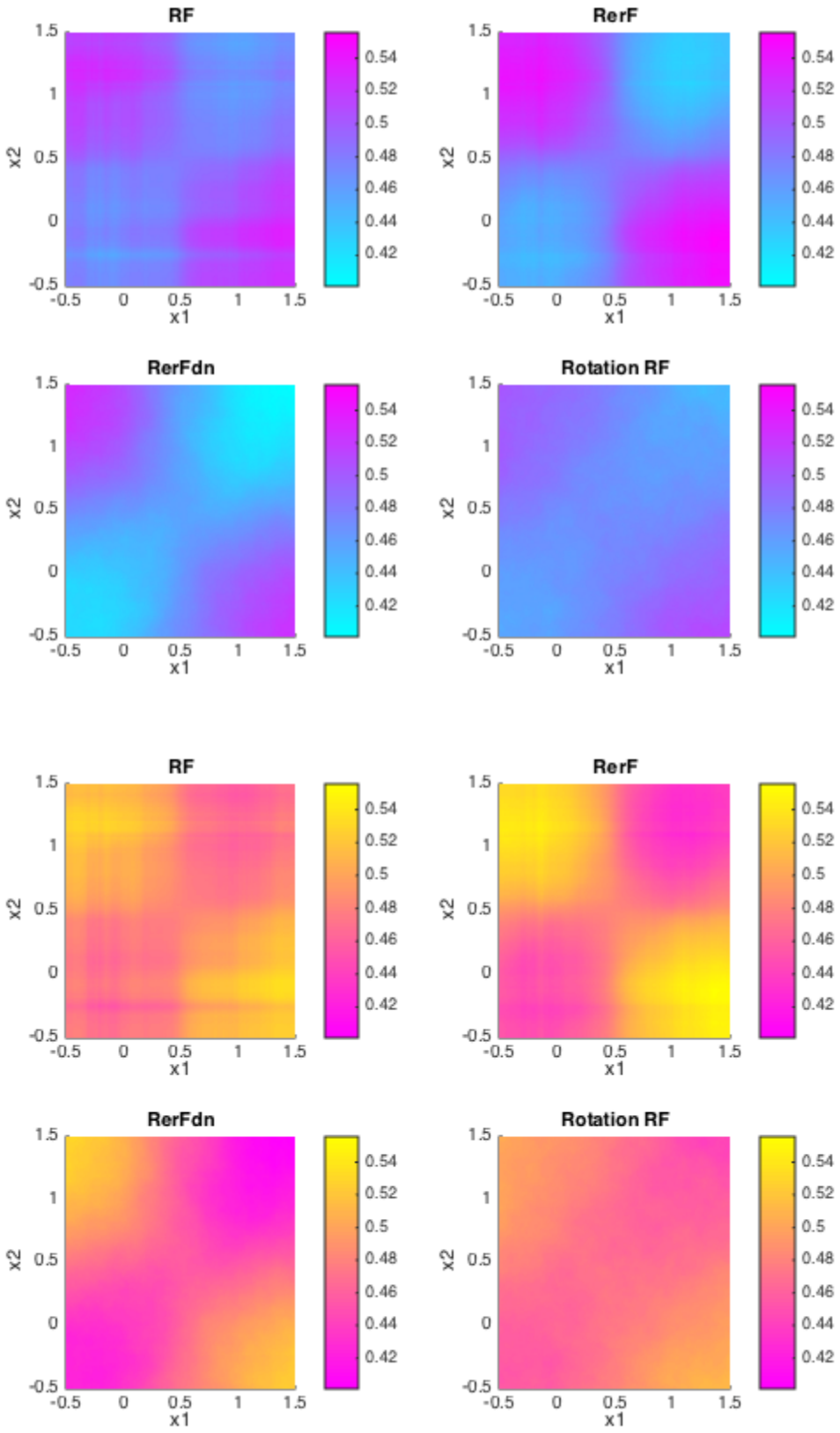
RF
RerF
RerFdn
Rotation RF
RF
RerF
RerFdn
Rotation RF
x1
x2
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-0.5
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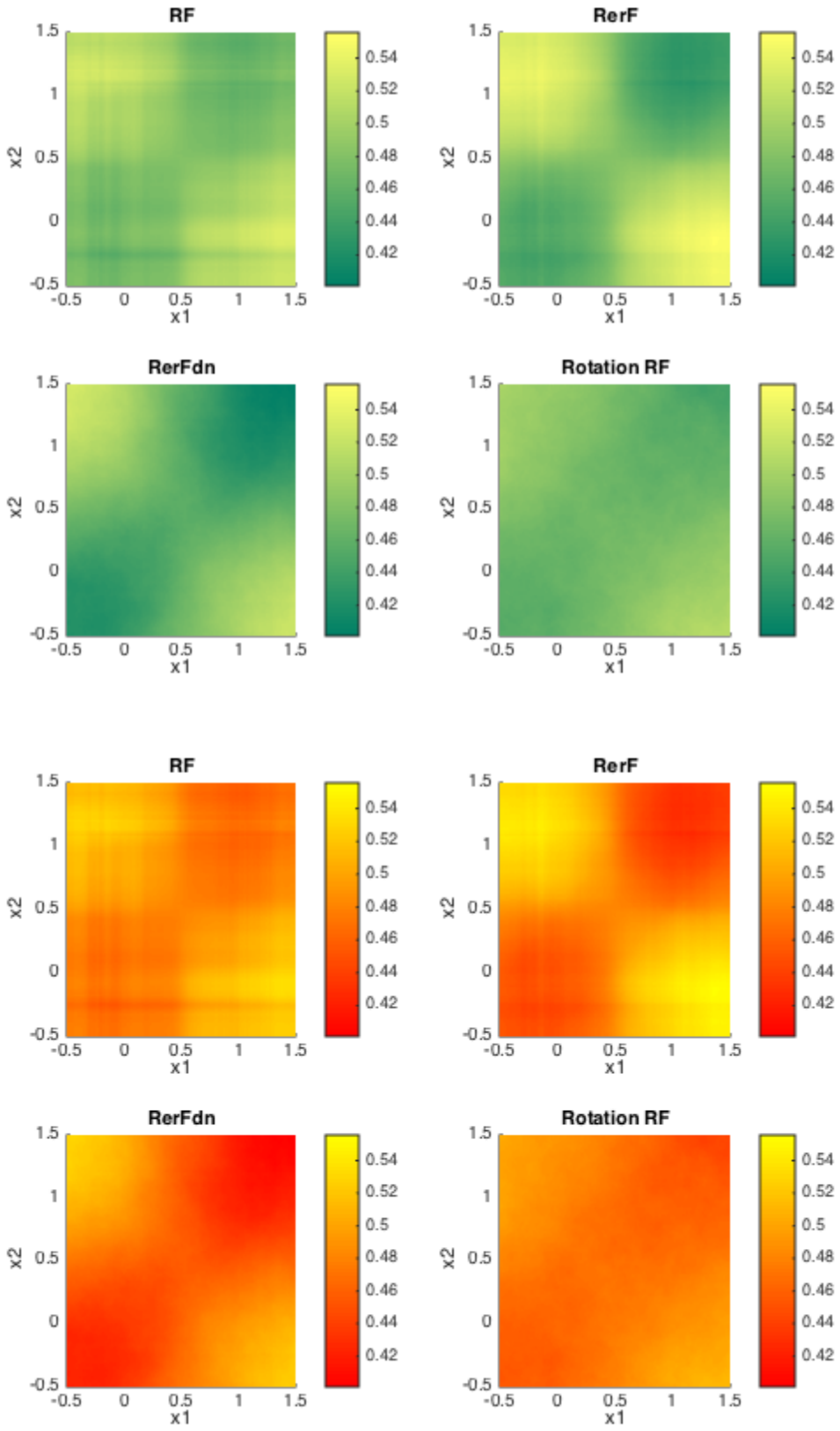
RF
RerF
RerFdn
Rotation RF
RF
RerF
RerFdn
Rotation RF
x1
x2
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-0.5
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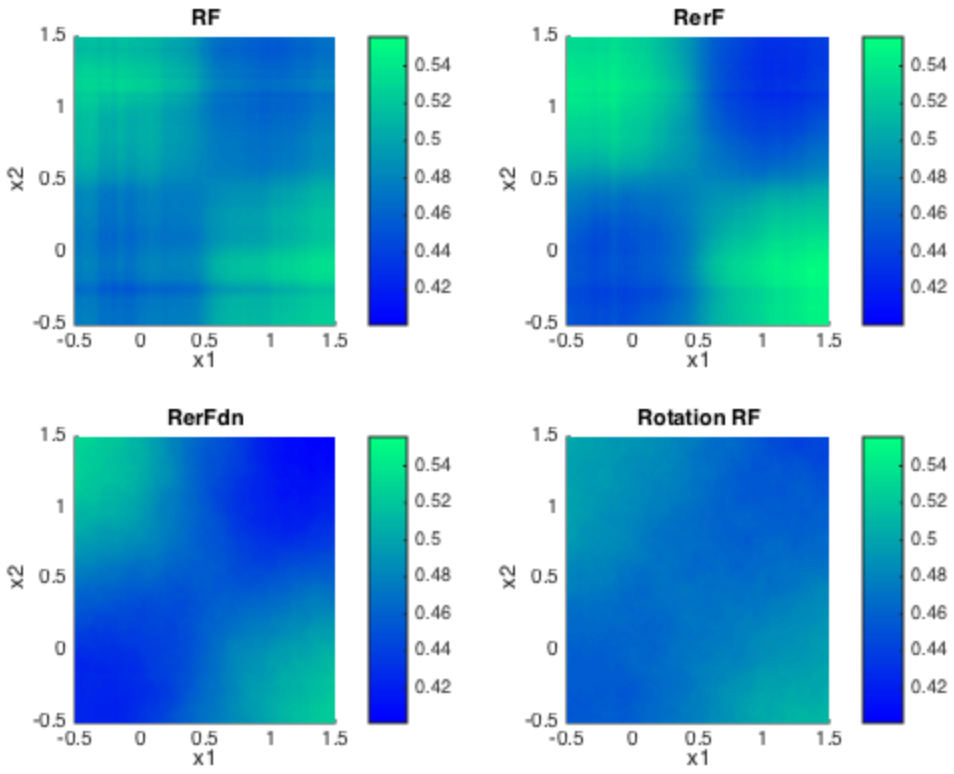

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