

# Cells: All Possible Combinations of Multiple Arrays

back to [Fan's Reusable Matlab Repository](#) or [Dynamic Asset Repository](#).

## Given Several Arrays of Possibly different Length in Container, all Possible combinations

```
param_tstar_map = containers.Map('KeyType','char', 'ValueType','any');
param_tstar_map('a') = linspace(1, 5, 5);
param_tstar_map('b') = linspace(0.87, 0.97, 6);
param_tstar_map('c') = linspace(0, 0.5, 10);

cl_st_param_keys = {'a','c'};
cl_ar_param_subset_values = values(param_tstar_map, {'a','c'});

cl_mt_all = cl_ar_param_subset_values;
[cl_mt_all{:}] = ndgrid(cl_ar_param_subset_values{:});
mt_param_vals_combi = cell2mat(cellfun(@(m) m(:), cl_mt_all, 'uni', 0));

tb_all_combi = array2table(mt_param_vals_combi, 'VariableNames', cl_st_param_keys);

disp(tb_all_combi);
```

a	c
1	0
2	0
3	0
4	0
5	0
1	0.055556
2	0.055556
3	0.055556
4	0.055556
5	0.055556
1	0.11111
2	0.11111
3	0.11111
4	0.11111
5	0.11111
1	0.16667
2	0.16667
3	0.16667
4	0.16667
5	0.16667
1	0.22222
2	0.22222
3	0.22222
4	0.22222
5	0.22222
1	0.27778
2	0.27778
3	0.27778
4	0.27778
5	0.27778
1	0.33333
2	0.33333
3	0.33333

4	0.33333
5	0.33333
1	0.38889
2	0.38889
3	0.38889
4	0.38889
5	0.38889
1	0.44444
2	0.44444
3	0.44444
4	0.44444
5	0.44444
1	0.5
2	0.5
3	0.5
4	0.5
5	0.5