All Possible Combinations of Multiple Arrays

back to Fan's Intro Math for Econ, Matlab Examples, or MEconTools Repositories

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);
```

```
C
1
          0
2
          0
3
4
5
          0
  0.055556
1
2
   0.055556
3
   0.055556
4
  0.055556
5
  0.055556
1
    0.11111
2
    0.11111
3
    0.11111
    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
     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