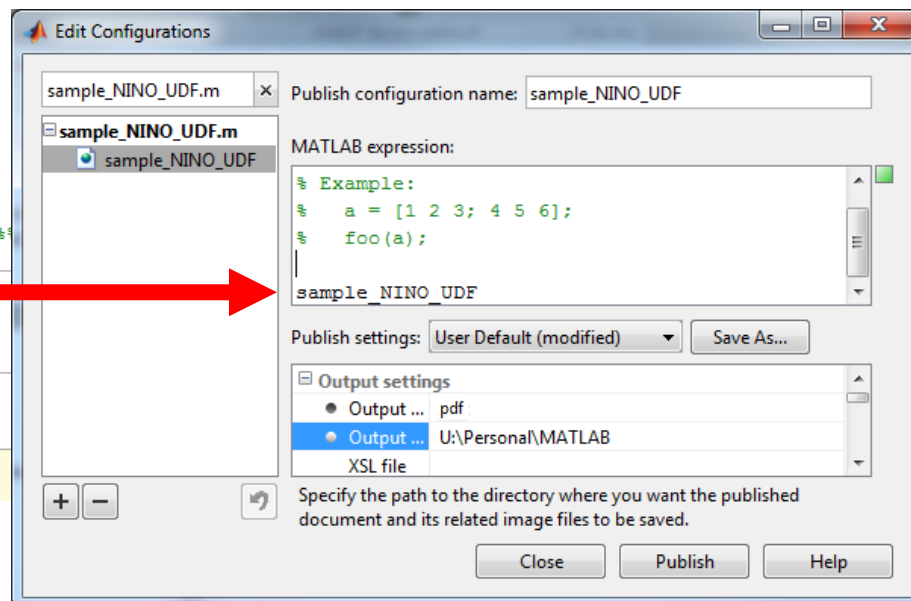


Publishing a User-Defined Function with no input arguments

The key to publishing functions is to call the function in the MATLAB expression window in the Publishing dialog box. With no input arguments, the function call and publishing are straightforward.

Example: No input, no output function

```
1 function sample_NINO_UDF
2 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
3 % ENGR 132
4 % Program Description
5 % This is a sample UDF that multiplies vectors A and B and reports the
6 % 3rd element of the resulting vector
7 %
8 % Function Call
9 % sample_NINO_UDF
10 %
11 % Input Arguments
12 % 1. None
13 %
14 % Output Arguments
15 % 1. None
16 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
17
18 %% INITIALIZATION
19 A = [1, 3, 5, 7, 9, 11];
20 B = [10, 20, 30, 40, 50, 60];
21
22 %% CALCULATIONS
23 D = A.*B;
24
25 %% FORMATTED TEXT DISPLAY
26 fprintf('The first calculated value of D is %i\n',D(1))
```



Make sure that the function call is in the MATLAB expression window and that the output file format is PDF. Then, click Publish.

Publishing a User-Defined Function with input arguments

If the function requires any input arguments, then you must load the input arguments into MATLAB **BEFORE** you call the function to publish

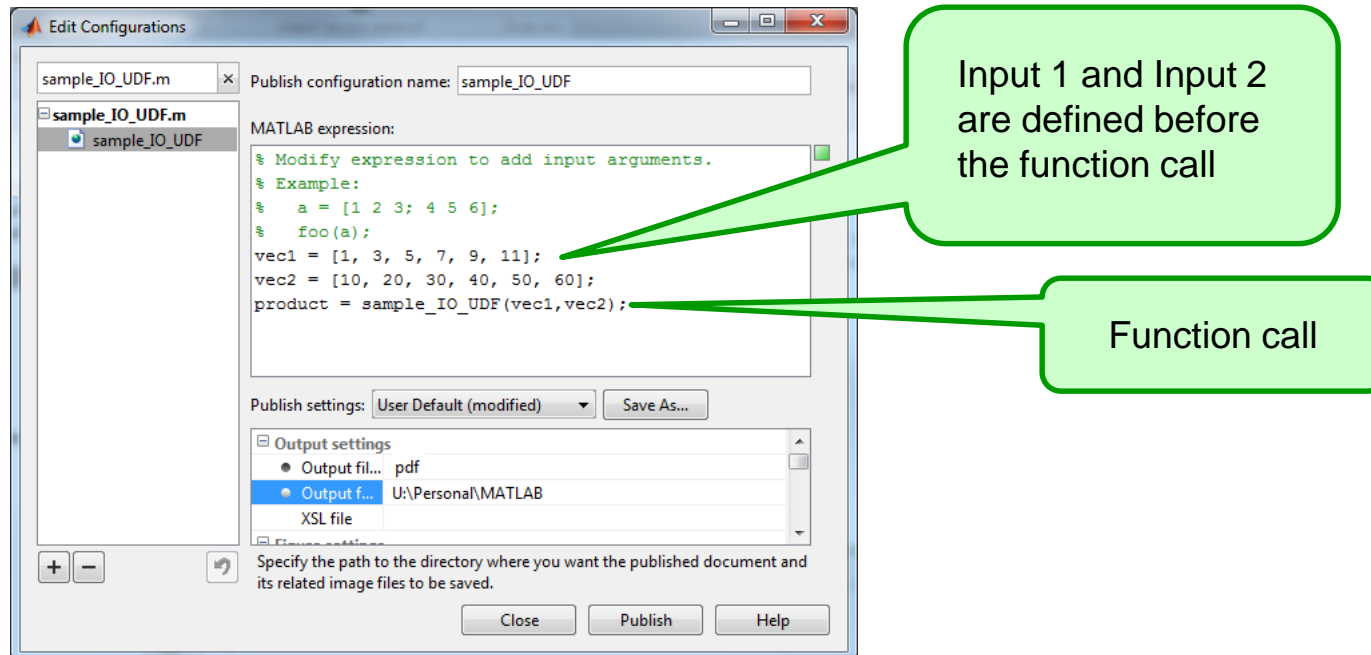
Example: Input-output function

```
1 function D = sample_IO_UDF(A,B)
2 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
3 % ENGR 132
4 % Program Description
5 %   This is a sample UDF that accepts vectors A and B as input, returns
6 %   vector D as output, and prints the 3rd element of D to the command
7 %   window
8 %
9 % Function Call
10 %   D = sample_IO_UDF(A,B)
11 %
12 % Input Arguments
13 %   1. A = any vector
14 %   2. B = any vector with same dimensions as A
15 %
16 % Output Arguments
17 %   1. D = element-by-element product of A and B
18 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
19
20 %% CALCULATIONS
21 D = A.*B;
22
23 %% FORMATTED TEXT DISPLAY
24 fprintf('The first calculated value of D is %i\n',D(1))
```

This function requires two vector inputs. You have two options to load the input vectors into MATLAB...

Option 1: Assign Inputs while Publishing

If you will use single values or short vectors as input arguments, then you may find it easiest to add them into the MATLAB expression window from the Publish menu:

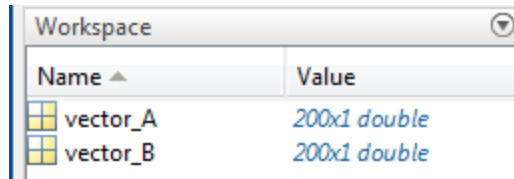


Once you've assigned your inputs and added the function call, click Publish.

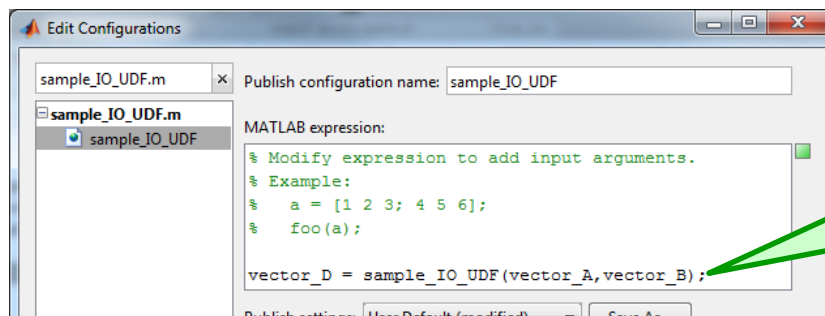
Option 2: Input Arguments Assigned in Workspace

Maybe your input arguments will come from a long vector or from imported data. In that case, load the inputs in the command window so that they appear in the workspace. Once you can see the vectors in the workspace, then you can use them as input arguments in the MATLAB expression window.

1. Load input arguments into MATLAB workspace



2. Open the Publishing window
3. Add the input and output arguments to the function call in the MATLAB expression window



Function call uses
the two vectors
assigned in the
workspace

4. Click publish

Files to Submit

- Original m-file for UDF
- Published document
- The m-files for any sub-UDFs that were not published but were part of the problem
- Any data files that are loaded into any of the m-files