

# Examples of generated L<sup>A</sup>T<sub>E</sub>X tables

Nuno Fachada

August 4, 2016

```
library(micompr)
mic <- micomp(4, 0.95,
  list(list(name = "NLvsJOK", grpout = pphpc_ok),
    list(name = "NLvsJNS", grpout = pphpc_noshuff),
    list(name = "NLvsJDIF", grpout = pphpc_diff)),
  concat = TRUE)
```

```
toLatex(mic,
caption = "Default table.")
```

Comp.	Data	Outputs			
		out1	out2	out3	out4
NLvsJOK	#PCs (95% var.)	5	3	7	10
	MNV (95% var.)	0.323	0.420	0.061	<u>0.026</u>
	Par. test (PC1)	0.821	0.470	0.971	0.473
	Non-par. test (PC1)	1.000	0.579	0.796	0.393
	PCS				
NLvsJNS	#PCs (95% var.)	3	2	4	2
	MNV (95% var.)	<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
	Par. test (PC1)	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
	Non-par. test (PC1)	<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
	PCS				
NLvsJDIF	#PCs (95% var.)	1	1	3	5
	MNV (95% var.)	NA	NA	<u>3e-14</u>	<u>5e-09</u>
	Par. test (PC1)	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	Non-par. test (PC1)	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
	PCS				

**Table 1** – Default table.

```
toLatex(mic,
        caption = "Booktabs.", booktabs = T)
```

Comp.	Data	Outputs			
		out1	out2	out3	out4
NLvsJOK	#PCs (95% var.)	5	3	7	10
	MNV (95% var.)	0.323	0.420	0.061	<u>0.026</u>
	Par. test (PC1)	0.821	0.470	0.971	0.473
	Non-par. test (PC1)	1.000	0.579	0.796	0.393
	PCS				
NLvsJNS	#PCs (95% var.)	3	2	4	2
	MNV (95% var.)	<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
	Par. test (PC1)	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
	Non-par. test (PC1)	<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
	PCS				
NLvsJDIF	#PCs (95% var.)	1	1	3	5
	MNV (95% var.)	NA	NA	<u>3e-14</u>	<u>5e-09</u>
	Par. test (PC1)	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	Non-par. test (PC1)	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
	PCS				

**Table 2** – Booktabs.

```
toLatex(mic,
  booktabs = T, labels_cmp_show = F,
  caption = "No comparison label.")
```

Data	Outputs			
	out1	out2	out3	out4
#PCs (95% var.)	5	3	7	10
MNV (95% var.)	0.323	0.420	0.061	<u>0.026</u>
Par. test (PC1)	0.821	0.470	0.971	<u>0.473</u>
Non-par. test (PC1)	1.000	0.579	0.796	0.393
PCS				
#PCs (95% var.)	3	2	4	2
MNV (95% var.)	<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
Par. test (PC1)	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
Non-par. test (PC1)	<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
PCS				
#PCs (95% var.)	1	1	3	5
MNV (95% var.)	NA	NA	<u>3e-14</u>	<u>5e-09</u>
Par. test (PC1)	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
Non-par. test (PC1)	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
PCS				

**Table 3** – No comparison label.

```

toLatex(mic,
  booktabs = T, labels_col_show = F,
  caption = "No data label.")

```

Comp.	Outputs			
	out1	out2	out3	out4
NLvsJOK	5	3	7	10
	0.323	0.420	0.061	<u>0.026</u>
	0.821	0.470	0.971	0.473
	1.000	0.579	0.796	0.393
				
NLvsJNS	3	2	4	2
	<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
	<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
				
NLvsJDIF	1	1	3	5
	NA	NA	<u>3e-14</u>	<u>5e-09</u>
	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
				

Table 4 – No data label.

```

toLatex(mic,
  booktabs = T, labels_cmp_show = F, labels_col_show = F,
  caption = "No data and comparison labels.")

```

Outputs			
out1	out2	out3	out4
5	3	7	10
0.323	0.420	0.061	<u>0.026</u>
0.821	0.470	0.971	<u>0.473</u>
1.000	0.579	0.796	0.393
			
3	2	4	2
<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
			
1	1	3	5
NA	NA	<u>3e-14</u>	<u>5e-09</u>
<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
			

**Table 5** – No data and comparison labels.

```

toLatex(mic,
  tag_comp = "Comparisons", tag_data = "What?",
  tag_outputs = "Outs.",
  data_labels = c("No. PCs", "MANOVA", "$t$-test",
    "Mann-Whitney", "PC1 vs PC2"),
  caption = "Alternative header tags and data labels.")

```

Comparisons	What?	Outs.			
		out1	out2	out3	out4
NLvsJOK	No. PCs	5	3	7	10
	MANOVA	0.323	0.420	0.061	<u>0.026</u>
	<i>t</i> -test	0.821	0.470	0.971	<u>0.473</u>
	Mann-Whitney	1.000	0.579	0.796	<u>0.393</u>
	PC1 vs PC2				
NLvsJNS	No. PCs	3	2	4	2
	MANOVA	<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
	<i>t</i> -test	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
	Mann-Whitney	<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
	PC1 vs PC2				
NLvsJDIF	No. PCs	1	1	3	5
	MANOVA	NA	NA	<u>3e-14</u>	<u>5e-09</u>
	<i>t</i> -test	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	Mann-Whitney	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
	PC1 vs PC2				

**Table 6** – Alternative header tags and data labels.

```

toLatex(mic,
        label_row_show = F,
        caption = "Do not show outputs tag.")

```

Comp.	Data	out1	out2	out3	out4
NLvsJOK	#PCs (95% var.)	5	3	7	10
	MNV (95% var.)	0.323	0.420	0.061	<u>0.026</u>
	Par. test (PC1)	0.821	0.470	0.971	0.473
	Non-par. test (PC1)	1.000	0.579	0.796	0.393
	PCS				
NLvsJNS	#PCs (95% var.)	3	2	4	2
	MNV (95% var.)	<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
	Par. test (PC1)	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
	Non-par. test (PC1)	<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
	PCS				
NLvsJDIF	#PCs (95% var.)	1	1	3	5
	MNV (95% var.)	NA	NA	<u>3e-14</u>	<u>5e-09</u>
	Par. test (PC1)	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	Non-par. test (PC1)	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
	PCS				

**Table 7** – Do not show outputs tag.

```

toLatex(mic,
  booktabs = T, labels_cmp_show = F,
  labels_col_show = F, label_row_show = F,
  caption = paste0("No data and comparison labels and ",
    "no outputs tag, with booktabs.))

```

out1	out2	out3	out4
5	3	7	10
0.323	0.420	0.061	0.026
0.821	0.470	0.971	0.473
1.000	0.579	0.796	0.393
			
3	2	4	2
<u>2e-09</u>	0.032	<u>8e-07</u>	<u>6e-18</u>
<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
<u>1e-05</u>	<u>0.009</u>	<u>0.001</u>	<u>1e-05</u>
			
1	1	3	5
NA	NA	<u>3e-14</u>	<u>5e-09</u>
<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>	<u>1e-05</u>
			

**Table 8** – No data and comparison labels and no outputs tag, with booktabs.

```

toLatex(mic,
  data_show = c("parp-1", "parp-2", "sep",
                "aparp-1", "aparp-2", "sep",
                "varexp-1", "varexp-2"),
  caption = "Different types of data, with separators.")

```

Comp.	Data	Outputs			
		out1	out2	out3	out4
NLvsJOK	Par. test (PC1)	0.821	0.470	0.971	0.473
	Par. test (PC2)	0.184	0.182	0.211	0.837
	Par. test* (PC1)	1.000	0.535	1.000	1.000
	Par. test* (PC2)	0.818	1.000	0.763	1.000
	% var. (PC1)	65.7	87.9	55.4	39.2
	% var. (PC2)	22.4	5.1	27.6	23.8
NLvsJNS	Par. test (PC1)	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
	Par. test (PC2)	<u>0.044</u>	<u>0.700</u>	<u>0.003</u>	<u>0.799</u>
	Par. test* (PC1)	<u>5e-06</u>	<u>0.010</u>	<u>0.002</u>	<u>2e-18</u>
	Par. test* (PC2)	0.108	1.000	<u>0.007</u>	1.000
	% var. (PC1)	52.1	93.2	50.0	90.8
	% var. (PC2)	40.6	2.8	36.8	5.0
NLvsJDIF	Par. test (PC1)	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	Par. test (PC2)	0.668	0.458	0.976	0.592
	Par. test* (PC1)	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	Par. test* (PC2)	1.000	1.000	1.000	1.000
	% var. (PC1)	97.9	98.8	78.4	85.6
	% var. (PC2)	1.4	0.6	14.6	3.6

**Table 9** – Different types of data, with separators.

```

toLatex(mic,
  booktabs = T,
  data_show = c("parp-1", "parp-2", "sep",
                "aparp-1", "aparp-2", "sep",
                "varexp-1", "varexp-2"),
  data_labels = c("$t$-test 1", "$t$-test 2",
                  "$t$-test 1 (wb)", "$t$-test 2 (wb)",
                  "Var 1", "Var 2"),
  caption = paste0("Different types of data, booktabs, ",
                  "custom data labels."))

```

Comp.	Data	Outputs			
		out1	out2	out3	out4
NLvsJOK	<i>t</i> -test 1	0.821	0.470	0.971	0.473
	<i>t</i> -test 2	0.184	0.182	0.211	0.837
	<i>t</i> -test 1 (wb)	1.000	0.535	1.000	1.000
	<i>t</i> -test 2 (wb)	0.818	1.000	0.763	1.000
	Var 1	65.7	87.9	55.4	39.2
	Var 2	22.4	5.1	27.6	23.8
NLvsJNS	<i>t</i> -test 1	<u>3e-06</u>	<u>0.009</u>	<u>0.001</u>	<u>2e-18</u>
	<i>t</i> -test 2	<u>0.044</u>	0.700	<u>0.003</u>	0.799
	<i>t</i> -test 1 (wb)	<u>5e-06</u>	<u>0.010</u>	<u>0.002</u>	<u>2e-18</u>
	<i>t</i> -test 2 (wb)	0.108	1.000	<u>0.007</u>	1.000
	Var 1	52.1	93.2	50.0	90.8
	Var 2	40.6	2.8	36.8	5.0
NLvsJDIF	<i>t</i> -test 1	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	<i>t</i> -test 2	0.668	0.458	0.976	0.592
	<i>t</i> -test 1 (wb)	<u>7e-17</u>	<u>7e-11</u>	<u>2e-15</u>	<u>2e-09</u>
	<i>t</i> -test 2 (wb)	1.000	1.000	1.000	1.000
	Var 1	97.9	98.8	78.4	85.6
	Var 2	1.4	0.6	14.6	3.6

**Table 10** – Different types of data, booktabs, custom data labels.

```

toLatex(mic,
  orientation = F,
  data_labels = c("NoPCs", "MNV", "$t$", "MW", NA),
  scoreplot_before =
    "\\raisebox{-0.5\\height}{\\resizebox {0.7cm} {0.7cm} {"
  caption = paste0("Transposed table with score plots and ",
    "NA in one of the data labels (such ",
    "that a default should be used).)")

```

Comp.	Outputs	Data					
		NoPCs	MNV	$t$	MW	PCS	
NLvsJOK	out1	5	0.323	0.821	1.000		
	out2	3	0.420	0.470	0.579		
	out3	7	0.061	0.971	0.796		
	out4	10	<u>0.026</u>	0.473	0.393		
NLvsJNS	out1	3	<u>2e-09</u>	<u>3e-06</u>	<u>1e-05</u>		
	out2	2	<u>0.032</u>	<u>0.009</u>	<u>0.009</u>		
	out3	4	<u>8e-07</u>	<u>0.001</u>	<u>0.001</u>		
	out4	2	<u>6e-18</u>	<u>2e-18</u>	<u>1e-05</u>		
NLvsJDIF	out1	1	NA	<u>7e-17</u>	<u>1e-05</u>		
	out2	1	NA	<u>7e-11</u>	<u>1e-05</u>		
	out3	3	<u>3e-14</u>	<u>2e-15</u>	<u>1e-05</u>		
	out4	5	<u>5e-09</u>	<u>2e-09</u>	<u>1e-05</u>		

**Table 11** – Transposed table with score plots and NA in one of the data labels (such that a default should be used).

```

toLatex(mic,
  orientation = F,
  booktabs = T,
  data_show = c("npcs-1", "mvp-1", "parp-1", "nparp-1"),
  data_labels = c("NoPCs", "MNV", "$t$", "MW"),
  caption = paste0("Transposed table, without score ",
    "plots, with booktabs."))

```

Comp.	Outputs	Data			
		NoPCs	MNV	$t$	MW
NLvsJOK	out1	5	0.323	0.821	1.000
	out2	3	0.420	0.470	0.579
	out3	7	0.061	0.971	0.796
	out4	10	<u>0.026</u>	0.473	0.393
NLvsJNS	out1	3	<u>2e-09</u>	<u>3e-06</u>	<u>1e-05</u>
	out2	2	<u>0.032</u>	<u>0.009</u>	<u>0.009</u>
	out3	4	<u>8e-07</u>	<u>0.001</u>	<u>0.001</u>
	out4	2	<u>6e-18</u>	<u>2e-18</u>	<u>1e-05</u>
NLvsJDIF	out1	1	NA	<u>7e-17</u>	<u>1e-05</u>
	out2	1	NA	<u>7e-11</u>	<u>1e-05</u>
	out3	3	<u>3e-14</u>	<u>2e-15</u>	<u>1e-05</u>
	out4	5	<u>5e-09</u>	<u>2e-09</u>	<u>1e-05</u>

**Table 12** – Transposed table, without score plots, with booktabs.

```

toLatex(mic,
  orientation = F,
  booktabs = T,
  pval_params = list(minval = 1e-6, na_str = "$\\times$"),
  data_show = c("npcs-1", "mvp-1", "parp-1", "nparp-1"),
  data_labels = c("NoPCs", "MNV", "$t$", "MW"),
  labels_cmp_show = F, labels_col_show = F,
  label_row_show = F,
  caption = paste0("Transposed table: without score ",
    "plots, with booktabs, custom ",
    "p-value parameters."))

```

NoPCs	MNV	$t$	MW
5	0.323	0.821	1.000
3	0.420	0.470	0.579
7	0.061	0.971	0.796
10	0.026	0.473	0.393
3	$\leq 1e-06$	$3e-06$	$1e-05$
2	0.032	0.009	0.009
4	$\leq 1e-06$	0.001	0.001
2	$\leq 1e-06$	$\leq 1e-06$	$1e-05$
1	$\times$	$\leq 1e-06$	$1e-05$
1	$\times$	$\leq 1e-06$	$1e-05$
3	$\leq 1e-06$	$\leq 1e-06$	$1e-05$
5	$\leq 1e-06$	$\leq 1e-06$	$1e-05$

**Table 13** – Transposed table: without score plots, with booktabs, custom p-value parameters.

```

toLatex(mic,
  orientation = F,
  booktabs = T,
  data_show = c("parp-1", "parp-2", "sep",
               "aparp-1", "aparp-2", "sep",
               "varexp-1", "varexp-2"),
  data_labels = c("$t_1$", "$t_2$",
                 "$t_1\\ast$", "$t_2\\ast$",
                 "$V_1$", "$V_2$"),
  caption = paste0("Transposed table, different types ",
                  "of data, booktabs, ",
                  "custom data labels."))

```

Comp.	Outputs	Data					
		$t_1$	$t_2$	$t_{1*}$	$t_{2*}$	$V_1$	$V_2$
NLvsJOK	out1	0.821	0.184	1.000	0.818	65.7	22.4
	out2	0.470	0.182	0.535	1.000	87.9	5.1
	out3	0.971	0.211	1.000	0.763	55.4	27.6
	out4	0.473	0.837	1.000	1.000	39.2	23.8
NLvsJNS	out1	<u>3e-06</u>	0.044	<u>5e-06</u>	0.108	52.1	40.6
	out2	<u>0.009</u>	0.700	<u>0.010</u>	1.000	93.2	2.8
	out3	<u>0.001</u>	<u>0.003</u>	<u>0.002</u>	<u>0.007</u>	50.0	36.8
	out4	<u>2e-18</u>	0.799	<u>2e-18</u>	1.000	90.8	5.0
NLvsJDIF	out1	<u>7e-17</u>	0.668	<u>7e-17</u>	1.000	97.9	1.4
	out2	<u>7e-11</u>	0.458	<u>7e-11</u>	1.000	98.8	0.6
	out3	<u>2e-15</u>	0.976	<u>2e-15</u>	1.000	78.4	14.6
	out4	<u>2e-09</u>	0.592	<u>2e-09</u>	1.000	85.6	3.6

**Table 14** – Transposed table, different types of data, booktabs, custom data labels.

```

toLatex(mic[[1, 1]],
        orientation = F,
        labels_cmp_show = F,
        label_row_show = F,
        booktabs = T,
        data_show = c("npcs-1", "mvp-1", "parp-1", "nparp-1", "scoreplot"),
        data_labels = c("NoPCs", "MNV", "$t$", "MW", "Scores"),
        caption = paste0("Table with a single cmpoutput object.))

```

Outputs	NoPCs	MNV	$t$	MW	Scores
out1	5	0.323	0.821	1.000	

**Table 15** – Table with a single cmpoutput object.