

# langsci-affiliations

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## 1 User guide

This package provides a command `\ResolveAffiliations`, which collects author–affiliation pairs and outputs them according to the user configuration. It is aimed at class authors, i.e. maintainers of document templates in publishing houses, universities, etc.

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<code>\ResolveAffiliations</code>	<code>\ResolveAffiliations [<i>options</i>] {<i>pairs of authors and affiliations</i>}</code>
-----------------------------------	---

---

Takes the `{pairs of authors and affiliations}`, orders them internally and outputs them according to the [*options*].

`{Pairs of authors and affiliations}` is a list of authors and affiliations, separated by a customisable string. The defaults for the separators are `and` for authors and `;` for affiliations. The conventional author separator `\and` is automatically converted to the chosen author separator. Affiliations are given within `\affiliation` within the `{pairs}` argument. This command is not defined by this package and possibly existing definitions are left unchanged.

For example:

```
\ResolveAffiliations{
  A. U. Thor\affiliation{University of the Moon; University of Mars}
  and B. U. Thor\affiliation{University of Mars}
}
```

results in:

A. U. Thor<sup>a,b</sup> & B. U. Thor<sup>b</sup>

<sup>a</sup>University of the Moon <sup>b</sup>University of Mars

The output can be customised using the [*options*]. They are described below.

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<hr/> <code>\CountAuthorsFromAffiliations</code> <hr/>	<code>\CountAuthorsFromAffiliations</code> [ <i>&lt;options&gt;</i> ] { <i>&lt;pairs of authors and affiliations&gt;</i> }
New: 2021-12-06	

A document command to count the numbers of authors given in a list. Useful for conditional behaviour of document classes based on the numbers of authors. It takes the same optional arguments as `\ResolveAffiliations`. For example, a custom author separator is recognised by this command.

The result is stored in the global integer variable `\g__affiliations_num_authors_int`.

<hr/> <code>\LinkToORCIDinAffiliations</code> <hr/>	<code>\LinkToORCIDinAffiliations</code> { <i>&lt;orcid&gt;</i> }
New: 2022-09-27	

This document command is intended as a user interface to customise the way ORCIDs are output. For example, it can be set to forward the input ORCIDs to `\orcidlink` from the `orcidlink` package:

```
\RenewDocumentCommand{\LinkToORCIDinAffiliations}{ +m }
{
  \,\orcidlink{#1}%
}
```

---

**\SetupAffiliations**

---

**\SetupAffiliations** {*options*}

Options can be set either globally or locally. With **\SetupAffiliations**{*options*}, they apply globally. If they are set with **\ResolveAffiliations**[*options*], they apply locally.

**mark style** = *style* (initially **alphabetic**)  
Controls which markers should be used in the indexes of affiliations. Can be a either of {**alphabetic**, **numeric**, **circled**, **none**}.

**output affiliation** = *boolean* (initially **true**)  
Affiliations are output if true, otherwise not.

**orcid placement** = *choice* (initially **none**)  
Decide whether and where to place ORCIDs around author names. Valid choices are {**none**, **before**, **after**}.

**output in groups** = *boolean* (initially **true**)  
If **true**, authors and affiliations are output in the same line. When **false** each author and affiliation gets its own line. Only available if **output affiliation=true**.

**output authors font** = *font commands* (initially **\Large**)  
Stores the font settings for the output of authors.

**output affiliation font** = *font commands* (initially **\normalsize**)  
Stores the font settings for outputting affiliations.

Output separators between authors and affiliations are customisable as well:

**separator between two** = *tokens* (initially **~&~**)  
If there are only two authors, use these *tokens* to separate them.

**separator between multiple** = *tokens* (initially **,~**)  
If there are more than two authors, use these *tokens* to separate every pair except the last one.

**separator between final two** = *tokens* (initially **~&~**)  
Use these *tokens* to separate the last pair of authors if there are more than two.

**separator between affiliations** = *tokens* (initially **,**)  
Use these to separate affiliations after each author. The affiliations in the affiliation line are always separated by a space.

The way the input is digested can be customised with these two settings:

**input names separator** = *tokens* (initially **~and~**)  
Separates the author names in the input.

**input affiliation separator** = *tokens* (initially **;**)  
Separates the affiliations in the input, within dummy command **\affiliation**.

## 2 Implementation

```

1 <*package>
2 <@@=affiliations>
3 \RequirePackage{xparse}
4 \ProvidesExplPackage {langsci-affiliations}
5 {2022-10-11} {1.1}
6 {A LaTeX3 package to collect and order authors and affiliations}

```

**\ResolveAffiliations** The top-level document command. It is grouped to keep assignments local.

```

7 \NewDocumentCommand{\ResolveAffiliations}{ 0{ } +m }
8 {
9   \group_begin:
10   \keys_set:nn { affiliations } { #1 }%
11   \exp_args:No \affiliations_resolve:n { #2 }%
12   \group_end:
13 }

```

*(End definition for \ResolveAffiliations. This function is documented on page 1.)*

**\LinkToORCIDinAffiliations** The action taken to link to an ORCID. Designed to be overwritten by the user.

```

14 \ProvideDocumentCommand{\LinkToORCIDinAffiliations}{ +m }{ #1 }

```

*(End definition for \LinkToORCIDinAffiliations. This function is documented on page 2.)*

**\CountAuthorsFromAffiliations** Count authors and leave the result in the global integer variable `\g__affiliations_num_authors_int`.

```

15 \NewExpandableDocumentCommand{\CountAuthorsFromAffiliations}{ 0{ } +m }
16 {
17   \group_begin:
18   \keys_set:nn { affiliations } { #1 }%
19   \exp_args:No \affiliations_count_authors:n { #2 }%
20   \group_end:
21 }

```

*(End definition for \CountAuthorsFromAffiliations. This function is documented on page 2.)*

**\SetupAffiliations** A command to define options.

```

22 \NewDocumentCommand{\SetupAffiliations}{ m }
23 {
24   \keys_set:nn { affiliations } { #1 }
25 }

```

*(End definition for \SetupAffiliations. This function is documented on page 3.)*

```

26 \keys_define:nn { affiliations }
27 {
28   mark~style .tl_set:N
29     = \l__affiliations_style_tl,
30   mark~style .initial:n
31     = { alphabetic },
32   output~affiliation .bool_set:N
33     = \l__affiliations_output_affiliation_bool,
34   output~affiliation .initial:n
35     = { true },

```

```

36   orcid~placement .tl_set:N
37       = \l__affiliations_orcid_place_tl,
38   orcid~placement .initial:n
39       = { none },
40   output~in~groups .bool_set:N
41       = \l__affiliations_output_grouped_bool,
42   output~in~groups .initial:n
43       = { true },
44   separator~between~two .tl_set:N
45       = \l__affiliations_separator_between_two_tl,
46   separator~between~two .initial:n
47       = {\&~},
48   separator~between~multiple .tl_set:N
49       = \l__affiliations_separator_between_mult_tl,
50   separator~between~multiple .initial:n
51       = {,~},
52   separator~between~final~two .tl_set:N
53       = \l__affiliations_separator_between_last_two_tl,
54   separator~between~final~two .initial:n
55       = {\&~},
56   separator~between~affiliations .tl_set:N
57       = \l__affiliations_afil_separator_tl,
58   separator~between~affiliations .initial:n
59       = {,},
60   output~authors~font .cs_set:Np
61       = \__affiliations_output_authors_font:,
62   output~authors~font .initial:n
63       = {\Large},
64   output~affiliation~font .cs_set:Np
65       = \__affiliations_output_affiliation_font:,
66   output~affiliation~font .initial:n
67       = {\normalsize},
68   input~names~separator .tl_set:N
69       = \l__affiliations_input_names_sep_tl,
70   input~names~separator .initial:n
71       = {\and~},
72   input~affiliation~separator .tl_set:N
73       = \l__affiliations_input_afil_sep_tl,
74   input~affiliation~separator .initial:n
75       = {;}
76 }

```

\prop\_put:Nxx

\prop\_put:Nnx

\seq\_set\_split:Nvn

\l\_\_affiliations\_tmpa\_clist

\l\_\_affiliations\_tmpa\_int

\g\_\_affiliations\_num\_authors\_int

\l\_\_affiliations\_affiliations\_seq

\l\_\_affiliations\_authors\_seq

\l\_\_affiliations\_names\_seq

\l\_\_affiliations\_tmpa\_seq

\l\_\_affiliations\_tmpb\_seq

\l\_\_affiliations\_tmpa\_tl

\l\_\_affiliations\_tmpb\_tl

\l\_\_affiliations\_output\_prop

\l\_\_affiliations\_affiliations\_prop

Variants and variables

77

78 \cs\_generate\_variant:Nn \prop\_put:Nnn { Nxx }

79 \cs\_generate\_variant:Nn \prop\_put:Nnn { Nnx }

80 \cs\_generate\_variant:Nn \seq\_set\_split:Nnn { NVV }

81 \cs\_generate\_variant:Nn \seq\_set\_split:Nnn { NVn }

82 \cs\_generate\_variant:Nn \tl\_replace\_all:Nnn { NnV }

83 \clist\_new:N \l\_\_affiliations\_tmpa\_clist

84 \int\_new:N \l\_\_affiliations\_tmpa\_int

85 \int\_new:N \g\_\_affiliations\_num\_authors\_int

86 \seq\_new:N \l\_\_affiliations\_affiliations\_seq

87 \seq\_new:N \l\_\_affiliations\_authors\_seq

```

88 \seq_new:N \l__affiliations_names_seq
89 \seq_new:N \l__affiliations_tmpa_seq
90 \seq_new:N \l__affiliations_tmpb_seq
91 \seq_new:N \l__affiliations_tmp_affil_seq
92 \seq_new:N \l__affiliations_tmp_orcid_seq
93 \tl_new:N \l__affiliations_tmpa_tl
94 \tl_new:N \l__affiliations_tmpb_tl
95 \tl_new:N \l__affiliations_tmppc_tl
96 \prop_new:N \l__affiliations_tmpa_prop
97 \prop_new:N \l__affiliations_output_prop
98 \prop_new:N \l__affiliations_affiliations_prop
99 \prop_new:N \l__affiliations_orcids_prop

```

(End definition for \prop\_put:Nxx and others.)

\l\_\_affiliations\_icons\_prop The data for the circled mark style. Since this uses the \char, it is only available in XeLaTeX.

```

100 \prop_const_from_keyval:Nn \l__affiliations_icons_prop
101 {
102     0 = \char"2460, 1 = \char"2461, 2 = \char"2462, 3 = \char"2463,
103     4 = \char"2464, 5 = \char"2465, 6 = \char"2466, 7 = \char"2467,
104     8 = \char"2468, 9 = \char"2469, 10 = \char"246A, 11 = \char"246B,
105     12 = \char"246C, 13 = \char"246D, 14 = \char"246E, 15 = \char"246F,
106     16 = \char"2470, 17 = \char"2471, 18 = \char"2472, 19 = \char"2473
107 }

```

(End definition for \l\_\_affiliations\_icons\_prop.)

\\_\_affiliations\_resolve\_affiliations: A helper macro to order affiliations. Is called by \affiliations\_resolve:n.

```

108 \cs_new:Npn \__affiliations_resolve_affiliations: #1#2
109 {
110     \clist_clear:N \l__affiliations_tmpa_clist
111     \tl_if_empty:nTF {#2}
112     {
113         \prop_put:Nnn \l__affiliations_output_prop {#1} {}
114     }
115     {
116         \seq_set_split:Nvn \l__affiliations_tmpa_seq
117             \l__affiliations_input_afil_sep_tl
118             { #2 }
119         \seq_map_inline:Nn \l__affiliations_tmpa_seq
120         {
121             \prop_get:NnNTF \l__affiliations_affiliations_prop
122                 {##1}
123                 \l__affiliations_tmpa_tl
124             {
125                 \clist_put_right:Nv \l__affiliations_tmpa_clist
126                     \l__affiliations_tmpa_tl
127             }
128         }
129         %Not yet present
130         \clist_put_right:Nx \l__affiliations_tmpa_clist
131         {
132             \prop_count:N \l__affiliations_affiliations_prop

```

```

133         }
134         \prop_put:Nnx \l__affiliations_affiliations_prop {##1}
135         { \prop_count:N \l__affiliations_affiliations_prop }
136     }
137 }
138 \prop_put:NnV \l__affiliations_output_prop
139     {#1}
140     \l__affiliations_tmpa_clist
141 }
142 }

```

(End definition for `\__affiliations_resolve_affiliations:.`)

`\__affiliations_output_affiliations:` A helper macro that outputs the list of affiliations, usually below the list of authors.

```

143 \cs_new:Nn \__affiliations_output_affiliations:
144 {
145     \prop_map_inline:Nn \l__affiliations_affiliations_prop
146     {
147         \int_set:Nn \l__affiliations_tmpa_int { ##2 }
148         \str_case_e:nn { \l__affiliations_style_tl }
149         {
150             {alphabetic}
151             {
152                 \textsuperscript{\int_to_alph:n{ \int_eval:n
153                     { \l__affiliations_tmpa_int + 1 } }
154                 } }
155             }
156             {numeric}
157             { \textsuperscript{\int_eval:n { \l__affiliations_tmpa_int + 1 } } }
158             {circled}
159             {
160                 \prop_item:Nn \l__affiliations_icons_prop
161                 { \l__affiliations_tmpa_int }
162             }
163             {none} { }
164         }
165         \tl_rescan:nn {} {##1} ~
166     }
167 }

```

(End definition for `\__affiliations_output_affiliations:.`)

`\__affiliations_return_afil_text:n` A helper macro that returns the affiliation marks.

```

168 \cs_new:Npn \__affiliations_return_afil_text:n #1
169 {
170     \int_set:Nn \l__affiliations_tmpa_int { #1 }
171     \str_case_e:nn { \l__affiliations_style_tl }
172     {
173         {alphabetic}
174         {
175             \seq_put_right:Nx \l__affiliations_tmpb_seq
176             { \int_to_alph:n{ \int_eval:n {#1 + 1} } }
177         }
178         {numeric}
179         {

```

```

180         \seq_put_right:Nx \l__affiliations_tmpb_seq
181         { \int_eval:n {\l__affiliations_tmpa_int + 1} }
182     }
183     {circled}
184     {
185         \seq_put_right:Nx \l__affiliations_tmpb_seq
186         { \prop_item:Nn \l__affiliations_icons_prop
187           { \l__affiliations_tmpa_int} }
188     }
189     {none} { }
190 }
191 }

```

(End definition for `\__affiliations_return_afil_text:n`.)

`\__affiliations_output_authors:` A helper macro to output the list of authors, with affiliation marks (if any).

```

192 \cs_new:Nn \__affiliations_output_authors:
193 {
194     \seq_clear:N \l__affiliations_tmpa_seq
195     \prop_map_inline:Nn \l__affiliations_output_prop
196     {
197         \seq_clear:N \l__affiliations_tmpb_seq
198         \clist_map_function:nN {##2} \__affiliations_return_afil_text:n
199         \tl_set:Nn \l__affiliations_tmpb_tl
200         {
201             \seq_use:Nn \l__affiliations_tmpb_seq
202             {\l__affiliations_afil_separator_tl}
203         }
204         \str_case_e:nn { \l__affiliations_orcid_place_tl }
205         {
206             {none}
207             {
208                 \seq_put_right:Nx \l__affiliations_tmpa_seq
209                 {
210                     \tl_rescan:nn {} {##1}
211                     \exp_not:N \textsuperscript{\tl_use:N \l__affiliations_tmpb_tl}
212                 }
213             }
214             {before}
215             {
216                 \seq_put_right:Nx \l__affiliations_tmpa_seq
217                 {
218                     \exp_not:N \__affiliations_recover_orcid:n { ##1 }
219                     \tl_rescan:nn {} {##1}
220                     \exp_not:N \textsuperscript{\tl_use:N \l__affiliations_tmpb_tl}
221                 }
222             }
223             {after}
224             {
225                 \seq_put_right:Nx \l__affiliations_tmpa_seq
226                 {
227                     \tl_rescan:nn {} {##1}
228                     \exp_not:N \__affiliations_recover_orcid:n { ##1 }
229                     \exp_not:N \textsuperscript{\tl_use:N \l__affiliations_tmpb_tl}

```



```

230         }
231     }
232 }
233 }
234 \seq_use:Nnnn \l__affiliations_tmpa_seq
235             {\l__affiliations_separator_between_two_tl}
236             {\l__affiliations_separator_between_mult_tl}
237             {\l__affiliations_separator_between_last_two_tl}
238 }

```

(End definition for `\__affiliations_output_authors:`)

`\affiliations_resolve:n` The main macro.

```

239 \cs_new:Npn \affiliations_resolve:n #1
240 {
241     \tl_set:Nn \l__affiliations_tmpc_tl { #1 }
242     \tl_replace_all:NnV \l__affiliations_tmpc_tl
243         { \and }
244         \l__affiliations_input_names_sep_tl
245     \seq_set_split:NVV \l__affiliations_names_seq
246         \l__affiliations_input_names_sep_tl
247         \l__affiliations_tmpc_tl
248     \seq_map_inline:Nn \l__affiliations_names_seq
249     {
250         \tl_clear_new:N \l__affiliations_names_tmp_tl
251         \tl_set:Nn \l__affiliations_names_tmp_tl { ##1 }
252     }

```

Regex-parsing: We store the `{\langle affiliations \rangle}` found in `\affiliation` to a separate sequence, and the `{\langle orcid \rangle}` found in `\orcid` to another sequence.

```

253
254     \regex_extract_once:nnN
255         {\c{affiliation} \cB. (\c[~BE].*) \cE.}
256         { ##1 }
257         \l__affiliations_tmp_affil_seq
258
259     \regex_extract_once:nnN
260         {\c{orcid} \cB. (\c[~BE].*) \cE.}
261         { ##1 }
262         \l__affiliations_tmp_orcid_seq
263

```

Now strip all instances of `\affiliations{\langle list \rangle}` and `\orcid {\langle id \rangle}` to receive the name of the author.

```

264
265     \regex_replace_all:nnN {\c{orcid} \cB. (\c[~BE].*) \cE.}
266         {}
267         \l__affiliations_names_tmp_tl
268     \regex_replace_all:nnN {\c{affiliation} \cB. (\c[~BE].*) \cE.}
269         {}
270         \l__affiliations_names_tmp_tl
271

```

And store the data in two separate property lists.

272

```

273 \prop_put:Nxx \l__affiliations_tmpa_prop
274 { \tl_use:N \l__affiliations_names_tmp_tl }
275 { \seq_item:Nn \l__affiliations_tmp_affil_seq {2} }
276
277 \prop_put:Nxx \l__affiliations_orcids_prop
278 { \tl_use:N \l__affiliations_names_tmp_tl }
279 { \seq_item:Nn \l__affiliations_tmp_orcid_seq {2} }
280 }
281 \bool_if:NTF \l__affiliations_output_affiliation_bool
282 {
283   \bool_if:NTF \l__affiliations_output_grouped_bool
284   {
285     \prop_map_function:NN \l__affiliations_tmpa_prop
286       \__affiliations_resolve_affiliations:
287     \group_begin:
288       \__affiliations_output_authors_font:
289       \__affiliations_output_authors:
290     \group_end:\[0.5ex]
291     \group_begin:
292       \__affiliations_output_affiliation_font:
293       \__affiliations_output_affiliations:
294     \group_end:
295   }
296   {
297     \seq_clear:N \l__affiliations_tmpa_seq
298     \prop_map_inline:Nn \l__affiliations_tmpa_prop
299     {
300       \str_case_e:nn { \l__affiliations_orcid_place_tl }
301       {
302         {none}
303         {
304           \seq_put_right:Nx \l__affiliations_tmpa_seq
305           {
306             \group_begin:
307             \exp_not:N \__affiliations_output_authors_font:
308             \tl_rescan:nn {} {##1}\[0.5ex]
309             \group_end:
310             \group_begin:
311             \exp_not:N \__affiliations_output_affiliation_font:
312             \tl_rescan:nn {} {##2}
313             \group_end:
314           }
315         }
316       {before}
317       {
318         \seq_put_right:Nx \l__affiliations_tmpa_seq
319         {
320           \group_begin:
321           \exp_not:N \__affiliations_output_authors_font:
322           \exp_not:N \__affiliations_recover_orcid:n { ##1 }
323           \tl_rescan:nn {} {##1}\[0.5ex]
324           \group_end:
325           \group_begin:
326           \exp_not:N \__affiliations_output_affiliation_font:

```

```

327         \tl_rescan:nn {} {##2}
328     \group_end:
329 }
330 }
331 {after}
332 {
333     \seq_put_right:Nx \l__affiliations_tmpa_seq
334     {
335         \group_begin:
336         \exp_not:N \__affiliations_output_authors_font:
337         \tl_rescan:nn {} {##1}
338         \exp_not:N \__affiliations_recover_orcid:n { ##1 }\\[0.5ex]
339         \group_end:
340         \group_begin:
341         \exp_not:N \__affiliations_output_affiliation_font:
342         \tl_rescan:nn {} {##2}
343         \group_end:
344     }
345 }
346 }
347 }
348 \seq_use:Nnnn \l__affiliations_tmpa_seq
349     {\l__affiliations_separator_between_two_tl}
350     {\l__affiliations_separator_between_mult_tl}
351     {\l__affiliations_separator_between_last_two_tl}
352 }
353 }
354 {
355     \group_begin:
356     \__affiliations_output_authors_font:
357     \seq_clear:N \l__affiliations_tmpa_seq
358     \prop_map_inline:Nn \l__affiliations_tmpa_prop
359     {
360         \str_case_e:nn { \l__affiliations_orcid_place_tl }
361         {
362             {none}
363             {
364                 \seq_put_right:Nx \l__affiliations_tmpa_seq
365                 { \tl_rescan:nn {} {##1} }
366             }
367             {before}
368             {
369                 \seq_put_right:Nx \l__affiliations_tmpa_seq
370                 {
371                     \exp_not:N \__affiliations_recover_orcid:n { ##1 }
372                     \tl_rescan:nn {} {##1}
373                 }
374             }
375             {after}
376             {
377                 \seq_put_right:Nx \l__affiliations_tmpa_seq
378                 {
379                     \tl_rescan:nn {} {##1}
380                     \exp_not:N \__affiliations_recover_orcid:n { ##1 }

```

```

381                                     }
382                                 }
383                            }
384                    }
385        \seq_use:Nnnn \l__affiliations_tmpa_seq
386                        {\l__affiliations_separator_between_two_tl}
387                        {\l__affiliations_separator_between_mult_tl}
388                        {\l__affiliations_separator_between_last_two_tl}
389        \group_end:
390    }
391 }

```

(End definition for \affiliations\_resolve:n.)

\affiliations\_count\_authors:n Count the numbers of authors and saves the result in the global integer variable \g\_\_affiliations\_num\_authors\_int.

```

392 \cs_new:Npn \affiliations_count_authors:n #1
393 {
394     \tl_set:Nn \l__affiliations_tmpc_tl { #1 }
395     \tl_replace_all:NnV \l__affiliations_tmpc_tl
396                     { \and }
397                     \l__affiliations_input_names_sep_tl
398     \seq_set_split:NVV \l__affiliations_names_seq
399                     \l__affiliations_input_names_sep_tl
400                     \l__affiliations_tmpc_tl
401     \int_gset:Nn \g__affiliations_num_authors_int
402     { \seq_count:N \l__affiliations_names_seq }
403 }

```

(End definition for \affiliations\_count\_authors:n.)

\\_\_affiliations\_recover\_orcid:n Return the ORCID associated with an author.

```

404 \cs_new:Npn \__affiliations_recover_orcid:n #1
405 {
406     \prop_get:NnNTF \l__affiliations_orcids_prop { #1 }
407     \l__affiliations_tmpd_tl
408     {
409         \tl_if_empty:NTF \l__affiliations_tmpd_tl
410         % No ORCID present; no action done.
411         { }
412         {
413             \LinkToORCIDinAffiliations{\tl_use:N \l__affiliations_tmpd_tl}
414         }
415     }
416     % No database entry for author; no action done.
417     { }
418 }

```

(End definition for \\_\_affiliations\_recover\_orcid:n.)

419 </package>