langsci-affiliations

Felix Kopecky*

Version 1.1 – 11th October 2022

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.

`\ResolveAffiliations` `\ResolveAffiliations [⟨options⟩] {⟨pairs of authors and affiliations⟩}`

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[a,b] & B. U. Thor[b]
[a]University of the Moon [b]University of Mars

The output can be customised using the `[⟨options⟩]`. They are described below.

*mailto:felix.kopecky@langsci-press.org. Please submit bug reports and feature requests to https://github.com/langsci/langsci-affiliations/issues.

\CountAuthorsFromAffiliations

New: 2021-12-06

`\CountAuthorsFromAffiliations [`⟨*options*⟩`] {`⟨*pairs of authors and affiliations*⟩`}`

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`.

\LinkToORCIDinAffiliations

New: 2022-09-27

`\LinkToORCIDinAffiliations {`⟨*orcid*⟩`}`

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 ouput 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 ther 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*⟩ (intially `;`)
: Separates the affiliations in the input, within dummy command `\affiliation`.

2 Implementation

```
⟨*package⟩
⟨@@=affiliations⟩
\RequirePackage{xparse}
\ProvidesExplPackage {langsci-affiliations}
{2022-10-11} {1.1}
{A LaTeX3 package to collect and order authors and affiliations}
```

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

```
\NewDocumentCommand{\ResolveAffiliations}{ O{} +m }
  {%
    \group_begin:
    \keys_set:nn { affiliations } { #1 }%
    \exp_args:No \affiliations_resolve:n { #2 }%
    \group_end:
  }
```

(*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.

```
\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`.

```
\NewExpandableDocumentCommand{\CountAuthorsFromAffiliations}{ O{} +m }
  {%
    \group_begin:
    \keys_set:nn { affiliations } { #1 }%
    \exp_args:No \affiliations_count_authors:n { #2 }%
    \group_end:
  }
```

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

\SetupAffiliations A command to define options.

```
\NewDocumentCommand{\SetupAffiliations}{ m }
  {%
    \keys_set:nn { affiliations } { #1 }
  }
```

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

```
\keys_define:nn { affiliations }
  {
    mark~style .tl_set:N
        = \l__affiliations_style_tl,
    mark~style .initial:n
        = { alphabetic },
    output~affiliation .bool_set:N
        = \l__affiliations_output_affiliation_bool,
    output~affiliation .initial:n
        = { true },
```

```
    orcid~placement .tl_set:N
        = \l__affiliations_orcid_place_tl,
    orcid~placement .initial:n
        = { none },
    output~in~groups .bool_set:N
        = \l__affiliations_output_grouped_bool,
    output~in~groups .initial:n
        = { true },
    separator~between~two .tl_set:N
        = \l__affiliations_separator_between_two_tl,
    separator~between~two .initial:n
        = {~\&~},
    separator~between~multiple .tl_set:N
        = \l__affiliations_separator_between_mult_tl,
    separator~between~multiple .initial:n
        = {,~},
    separator~between~final~two .tl_set:N
        = \l__affiliations_separator_between_last_two_tl,
    separator~between~final~two .initial:n
        = {~\&~},
    separator~between~affiliations .tl_set:N
        = \l__affiliations_afil_separator_tl,
    separator~between~affiliations .initial:n
        = {,},
    output~authors~font .cs_set:Np
        = \__affiliations_output_authors_font:,
    output~authors~font .initial:n
        = {\Large},
    output~affiliation~font .cs_set:Np
        = \__affiliations_output_affiliation_font:,
    output~affiliation~font .initial:n
        = {\normalsize},
    input~names~separator .tl_set:N
        = \l__affiliations_input_names_sep_tl,
    input~names~separator .initial:n
        = {~and~},
    input~affiliation~separator .tl_set:N
        = \l_affiliations_input_afil_sep_tl,
    input~affiliation~separator .initial:n
        = {;}
  }
```

\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

```
\cs_generate_variant:Nn \prop_put:Nnn { Nxx }
\cs_generate_variant:Nn \prop_put:Nnn { Nnx }
\cs_generate_variant:Nn \seq_set_split:Nnn { NVV }
\cs_generate_variant:Nn \seq_set_split:Nnn { NVn }
\cs_generate_variant:Nn \tl_replace_all:Nnn { NnV }
\clist_new:N \l__affiliations_tmpa_clist
\int_new:N \l__affiliations_tmpa_int
\int_new:N \g__affiliations_num_authors_int
\seq_new:N \l__affiliations_affiliations_seq
\seq_new:N \l__affiliations_authors_seq
```

```
\seq_new:N \l__affiliations_names_seq
\seq_new:N \l__affiliations_tmpa_seq
\seq_new:N \l__affiliations_tmpb_seq
\seq_new:N \l__affiliations_tmp_affil_seq
\seq_new:N \l__affiliations_tmp_orcid_seq
\tl_new:N \l__affiliations_tmpa_tl
\tl_new:N \l__affiliations_tmpb_tl
\tl_new:N \l__affiliations_tmpc_tl
\prop_new:N \l__affiliations_tmpa_prop
\prop_new:N \l__affiliations_output_prop
\prop_new:N \l__affiliations_affiliations_prop
\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.

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

(*End definition for* `\l__affiliations_icons_prop`.)

`\__affiliations_resolve_affiliations:` A helper macro to order affiliations. Is called by `\affiliations_resolve:n`.

```
\cs_new:Npn \__affiliations_resolve_affiliations: #1#2
  {
    \clist_clear:N \l__affiliations_tmpa_clist
    \tl_if_empty:nTF {#2}
      {
        \prop_put:Nnn \l__affiliations_output_prop {#1} {}
      }
      {
        \seq_set_split:NVn \l__affiliations_tmpa_seq
                           \l_affiliations_input_afil_sep_tl
                           { #2 }
        \seq_map_inline:Nn \l__affiliations_tmpa_seq
          {
            \prop_get:NnNTF \l__affiliations_affiliations_prop
                            {##1}
                            \l__affiliations_tmpa_tl
              {
                \clist_put_right:NV \l__affiliations_tmpa_clist
                                    \l__affiliations_tmpa_tl
              }
              {
                %Not yet present
                \clist_put_right:Nx \l__affiliations_tmpa_clist
                  {
                    \prop_count:N \l__affiliations_affiliations_prop
```

```
                }
              \prop_put:Nnx \l__affiliations_affiliations_prop {##1}
                { \prop_count:N \l__affiliations_affiliations_prop }
            }
        }
      \prop_put:NnV \l__affiliations_output_prop
                    {#1}
                    \l__affiliations_tmpa_clist
    }
}
```

(*End definition for* `\__affiliations_resolve_affiliations:`.)

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

```
\cs_new:Nn \__affiliations_output_affiliations:
  {
    \prop_map_inline:Nn \l__affiliations_affiliations_prop
      {
        \int_set:Nn \l__affiliations_tmpa_int { ##2 }
        \str_case_e:nn { \l__affiliations_style_tl }
          {
            {alphabetic}
              {
                \textsuperscript{\int_to_alph:n{ \int_eval:n
                  {  \l__affiliations_tmpa_int + 1  }
                } }
              }
            {numeric}
              { \textsuperscript{\int_eval:n {\l__affiliations_tmpa_int + 1} } }
            {circled}
              {
                \prop_item:Nn \l__affiliations_icons_prop
                              {\l__affiliations_tmpa_int}
              }
            {none} { }
          }
        \tl_rescan:nn {} {##1} ~
      }
  }
```

(*End definition for* `\__affiliations_output_affiliations:`.)

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

```
\cs_new:Npn \__affiliations_return_afil_text:n #1
  {
    \int_set:Nn \l__affiliations_tmpa_int { #1 }
    \str_case_e:nn { \l__affiliations_style_tl }
      {
        {alphabetic}
          {
            \seq_put_right:Nx \l__affiliations_tmpb_seq
                              { \int_to_alph:n{ \int_eval:n {#1 + 1} } }
           }
        {numeric}
          {
```

```
            \seq_put_right:Nx \l__affiliations_tmpb_seq
                              { \int_eval:n {\l__affiliations_tmpa_int + 1} }
          }
        {circled}
          {
            \seq_put_right:Nx \l__affiliations_tmpb_seq
                              { \prop_item:Nn \l__affiliations_icons_prop
                                              { \l__affiliations_tmpa_int} }
          }
        {none} { }
      }
  }
```

(*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).

```
\cs_new:Nn \__affiliations_output_authors:
  {
    \seq_clear:N \l__affiliations_tmpa_seq
    \prop_map_inline:Nn \l__affiliations_output_prop
      {
        \seq_clear:N \l__affiliations_tmpb_seq
        \clist_map_function:nN {##2} \__affiliations_return_afil_text:n
        \tl_set:Nn \l__affiliations_tmpb_tl
          {
            \seq_use:Nn \l__affiliations_tmpb_seq
                        {\l__affiliations_afil_separator_tl}
          }
        \str_case_e:nn { \l__affiliations_orcid_place_tl }
          {
            {none}
            {
              \seq_put_right:Nx \l__affiliations_tmpa_seq
                {
                  \tl_rescan:nn {} {##1}
                  \exp_not:N \textsuperscript{\tl_use:N \l__affiliations_tmpb_tl}
                }
            }
            {before}
            {
              \seq_put_right:Nx \l__affiliations_tmpa_seq
                {
                  \exp_not:N \__affiliations_recover_orcid:n { ##1 }
                  \tl_rescan:nn {} {##1}
                  \exp_not:N \textsuperscript{\tl_use:N \l__affiliations_tmpb_tl}
                }
            }
            {after}
            {
              \seq_put_right:Nx \l__affiliations_tmpa_seq
                {
                  \tl_rescan:nn {} {##1}
                  \exp_not:N \__affiliations_recover_orcid:n { ##1 }
                  \exp_not:N \textsuperscript{\tl_use:N \l__affiliations_tmpb_tl}
```

```
                }
            }
          }
      }
    \seq_use:Nnnn \l__affiliations_tmpa_seq
                  {\l__affiliations_separator_between_two_tl}
                  {\l__affiliations_separator_between_mult_tl}
                  {\l__affiliations_separator_between_last_two_tl}
  }
```

(*End definition for* `\__affiliations_output_authors:`.)

`\affiliations_resolve:n` The main macro.

```
\cs_new:Npn \affiliations_resolve:n #1
  {
    \tl_set:Nn \l__affiliations_tmpc_tl { #1 }
    \tl_replace_all:NnV \l__affiliations_tmpc_tl
                        { \and }
                        \l__affiliations_input_names_sep_tl
    \seq_set_split:NVV \l__affiliations_names_seq
                       \l__affiliations_input_names_sep_tl
                       \l__affiliations_tmpc_tl
    \seq_map_inline:Nn \l__affiliations_names_seq
      {
        \tl_clear_new:N \l__affiliations_names_tmp_tl
        \tl_set:Nn \l__affiliations_names_tmp_tl { ##1 }

```

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

```

        \regex_extract_once:nnN
          {\c{affiliation} \cB. (\c[^BE].*) \cE.}
          { ##1 }
          \l__affiliations_tmp_affil_seq

        \regex_extract_once:nnN
          {\c{orcid} \cB. (\c[^BE].*) \cE.}
          { ##1 }
          \l__affiliations_tmp_orcid_seq

```

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

```

        \regex_replace_all:nnN {\c{orcid} \cB. (\c[^BE].*) \cE.}
                               {}
                               \l__affiliations_names_tmp_tl
        \regex_replace_all:nnN {\c{affiliation} \cB. (\c[^BE].*) \cE.}
                               {}
                               \l__affiliations_names_tmp_tl

```

And store the data in two separate property lists.

```

```

```
      \prop_put:Nxx \l__affiliations_tmpa_prop
      { \tl_use:N \l__affiliations_names_tmp_tl }
      { \seq_item:Nn \l__affiliations_tmp_affil_seq {2} }

      \prop_put:Nxx \l__affiliations_orcids_prop
      { \tl_use:N \l__affiliations_names_tmp_tl }
      { \seq_item:Nn \l__affiliations_tmp_orcid_seq {2} }
    }
  \bool_if:NTF \l__affiliations_output_affiliation_bool
    {
      \bool_if:NTF \l__affiliations_output_grouped_bool
        {
          \prop_map_function:NN \l__affiliations_tmpa_prop
                                \__affiliations_resolve_affiliations:
          \group_begin:
            \__affiliations_output_authors_font:
            \__affiliations_output_authors:
          \group_end:\\[0.5ex]
          \group_begin:
            \__affiliations_output_affiliation_font:
            \__affiliations_output_affiliations:
          \group_end:
        }
        {
          \seq_clear:N \l__affiliations_tmpa_seq
          \prop_map_inline:Nn \l__affiliations_tmpa_prop
            {
              \str_case_e:nn { \l__affiliations_orcid_place_tl }
                {
                  {none}
                  {
                    \seq_put_right:Nx \l__affiliations_tmpa_seq
                      {
                        \group_begin:
                          \exp_not:N \__affiliations_output_authors_font:
                          \tl_rescan:nn {} {##1}\\[0.5ex]
                        \group_end:
                        \group_begin:
                          \exp_not:N \__affiliations_output_affiliation_font:
                          \tl_rescan:nn {} {##2}
                        \group_end:
                      }
                  }
                  {before}
                  {
                    \seq_put_right:Nx \l__affiliations_tmpa_seq
                      {
                        \group_begin:
                          \exp_not:N \__affiliations_output_authors_font:
                          \exp_not:N \__affiliations_recover_orcid:n { ##1 }
                          \tl_rescan:nn {} {##1}\\[0.5ex]
                        \group_end:
                        \group_begin:
                          \exp_not:N \__affiliations_output_affiliation_font:
```

```
                        \tl_rescan:nn {} {##2}
                      \group_end:
                    }
                }
                {after}
                {
                  \seq_put_right:Nx \l__affiliations_tmpa_seq
                    {
                      \group_begin:
                        \exp_not:N \__affiliations_output_authors_font:
                        \tl_rescan:nn {} {##1}
                        \exp_not:N \__affiliations_recover_orcid:n { ##1 }\\[0.5ex]
                      \group_end:
                      \group_begin:
                        \exp_not:N \__affiliations_output_affiliation_font:
                        \tl_rescan:nn {} {##2}
                      \group_end:
                    }
                }
              }
          }
        \seq_use:Nnnn \l__affiliations_tmpa_seq
                        {\l__affiliations_separator_between_two_tl}
                        {\l__affiliations_separator_between_mult_tl}
                        {\l__affiliations_separator_between_last_two_tl}
      }
    }
    {
      \group_begin:
      \__affiliations_output_authors_font:
      \seq_clear:N \l__affiliations_tmpa_seq
      \prop_map_inline:Nn \l__affiliations_tmpa_prop
        {
          \str_case_e:nn { \l__affiliations_orcid_place_tl }
            {
              {none}
                {
                  \seq_put_right:Nx \l__affiliations_tmpa_seq
                                    { \tl_rescan:nn {} {##1} }
                }
              {before}
                {
                  \seq_put_right:Nx \l__affiliations_tmpa_seq
                                    {
                                      \exp_not:N \__affiliations_recover_orcid:n { ##1 }
                                      \tl_rescan:nn {} {##1}
                                    }
                }
              {after}
                {
                  \seq_put_right:Nx \l__affiliations_tmpa_seq
                                    {
                                      \tl_rescan:nn {} {##1}
                                      \exp_not:N \__affiliations_recover_orcid:n { ##1 }
```

```
                                        }
                  }
                }
          }
        \seq_use:Nnnn \l__affiliations_tmpa_seq
                      {\l__affiliations_separator_between_two_tl}
                      {\l__affiliations_separator_between_mult_tl}
                      {\l__affiliations_separator_between_last_two_tl}
        \group_end:
      }
  }
```

(*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`.

```
\cs_new:Npn \affiliations_count_authors:n #1
  {
    \tl_set:Nn \l__affiliations_tmpc_tl { #1 }
    \tl_replace_all:NnV \l__affiliations_tmpc_tl
                        { \and }
                        \l__affiliations_input_names_sep_tl
    \seq_set_split:NVV \l__affiliations_names_seq
                       \l__affiliations_input_names_sep_tl
                       \l__affiliations_tmpc_tl
    \int_gset:Nn \g__affiliations_num_authors_int
      {  \seq_count:N \l__affiliations_names_seq  }
  }
```

(*End definition for* `\affiliations_count_authors:n`.)

`\__affiliations_recover_orcid:n` Return the ORCID associated with an author.

```
\cs_new:Npn \__affiliations_recover_orcid:n #1
  {
    \prop_get:NnNTF \l__affiliations_orcids_prop { #1 }
      \l__affiliations_tmpd_tl
      {
        \tl_if_empty:NTF \l__affiliations_tmpd_tl
          % No ORCID present; no action done.
          { }
          {
            \LinkToORCIDinAffiliations{\tl_use:N \l__affiliations_tmpd_tl}
          }
      }
      % No database entry for author; no action done.
      { }
  }
```

(*End definition for* `\__affiliations_recover_orcid:n`.)

⟨/package⟩