

# The iptconf class\*

Version v1.2

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## Abstract

The `iptconf` class provides a two-column, A4 document layout for papers submitted to the annual conference of the Institute of Physics and Technology (IPT / ІНФІТІ) at Igor Sikorsky Kyiv Polytechnic Institute. The class supports Ukrainian, Russian and English as the paper language; automatically writes a speaker registration form (`.txt`) and structured article metadata (`.yaml`) as side effects of `\PaperLanguage`; and exports per-paper title/author data to a `.dat` auxiliary file suitable for building a book-of-abstracts index. The class requires Lua $\text{\LaTeX}$  or Xe $\text{\LaTeX}$  for full functionality; pdf $\text{\LaTeX}$  is supported with reduced font features.

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## 1 Introduction

The `iptconf` class was created to provide a uniform appearance for papers in the IPT conference proceedings while also automating the collection of metadata needed for the conference organisers. It wraps the standard `article` class in two-column mode and adds:

- A structured title block with multiple authors, numbered affiliations, and optional per-author e-mail footnotes.
- Language-aware strings (bibliography heading, keyword label, etc.) for Ukrainian, Russian and English via the `\newlanguagecommand` mechanism.
- A speaker registration form written to `jobname-regform.txt`.
- Structured YAML article metadata written to `jobname-info.yaml`.
- A `jobname.dat` auxiliary file recording `\thispapertitle` and `\thispaperauthor` entries for use by a book-of-abstracts driver.
- `biblatex` with the `gost-numeric` style, automatic language-sensitive bibliography heading.
- Balanced two-column output via `flushend`.

## 2 Package requirements

The class requires a reasonably modern `LATEX` installation (kernel 2022-06-01 or later). The following packages must be available:

- `geometry` — page layout.
- `xcolor` — colour support.
- `mathtools`, `amssymb` — mathematics.
- `fontsetup` (Lua<sup>L</sup><sub>A</sub>T<sub>E</sub>X/X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X) or `fontenc/opensans` (pdf<sup>L</sup><sub>A</sub>T<sub>E</sub>X).
- `microtype` — micro-typographic enhancements.
- `csquotes`, `babel` — language support.
- `biblatex` with `biber` and the `biblatex-gost` bundle.

- `enumitem` — list customisation.
- `flushend` — balanced columns on the last page.
- `subcaption`, `caption` — figure/table captions.
- `hyperref` — PDF hyperlinks and bookmarks.

## 3 Usage

### 3.1 Minimal document

```
% !TeX program = lualatex
% !TeX encoding = utf8
% !BIB TS-program = biber

\documentclass{iptconf}

\title{Title of the Paper}

\author[speaker@uni.edu]{First Speaker}{1,2}
\author{Second Author}{1}

\affiliation{\ipt}{1}
\affiliation{Another University}{2}

\udc{537.8}
% or \pacs{41.20.-q}
\abstract{Short abstract text.}
\keywords{Maxwell equations, wave propagation}

\regform{
  fullname      = Petro Ivanovych Kovalenko,
  birthday      = 01.01.1990,
  position       = PhD student,
  phone         = +380501234567,
  authoremail    = speaker@uni.edu,
  confsection    = Section A,
  copynum       = 1,
  needliving     = no,
  needinvitanion = no,
}

\begin{document}

\PaperLanguage{english}

\section*{Introduction}
...
\section{Methods}
...
```

`\section*{Conclusion}`

`\end{document}`

## 3.2 Class options

---

<code>incollection</code>	<code>\documentclass[<i>&lt;incollection&gt;</i>]{iptconf}</code>
---------------------------	---

Default mode. Page numbers are suppressed (`\pagestyle{empty}`), as the paper will be incorporated into a proceedings volume.

---

<code>single</code>	<code>\documentclass[<i>&lt;single=&lt;n&gt;</i>]{iptconf}</code>
---------------------	---

Standalone mode with page numbers starting at *<n>* (default 1). Use this option when compiling the paper outside the proceedings.

## 3.3 Preamble commands

---

<code>\title</code>	<code>\title{<i>&lt;text&gt;</i>}</code>
---------------------	--

Sets the paper title. The title is stored internally and also written to *jobname.dat* as `\thispapertitle{<text>}`.

---

<code>\author</code>	<code>\author[<i>&lt;email&gt;</i>]{<i>&lt;name&gt;</i>}{<i>&lt;affil-index&gt;</i>}</code>
----------------------	---

Adds an author. *<affil-index>* is a comma-separated list of affiliation numbers (e.g. 1,2). The optional *<email>* appears as a footnote. Each call also appends `\thispaperauthor{<name>}` to *jobname.dat*.

---

<code>\affiliation</code>	<code>\affiliation{<i>&lt;institution&gt;</i>}{<i>&lt;number&gt;</i>}</code>
---------------------------	--

Registers an affiliation with superscript *<number>*. The token `\ipt` may be used for the full Ukrainian name of the institute; it is collapsed to the abbreviation “HH ΦΤΠ” in the YAML output.

---

<code>\udc</code>	<code>\udc{<i>&lt;code&gt;</i>}</code>
-------------------	--

Stores the UDC (Universal Decimal Classification) code.

---

<code>\pacs</code>	<code>\pacs{<i>&lt;codes&gt;</i>}</code>
--------------------	--

Stores PACS (Physics and Astronomy Classification Scheme) codes.

---

<code>\keywords</code>	<code>\keywords{<i>&lt;list&gt;</i>}</code>
------------------------	---

Stores the keyword list, printed below the abstract.

---

<code>\abstract</code>	<code>\abstract{<i>&lt;text&gt;</i>}</code>
------------------------	---

Stores the abstract text (printed as part of `\maketitle`).

---

<code>\regform</code>	<code>\regform{<i>&lt;key=value list&gt;</i>}</code>
-----------------------	--

Stores speaker registration data. Keys: `fullname`, `birthday`, `position`, `phone`, `authoremail`, `confsection`, `copynum`, `needliving`, `needinvasion`. Written to *jobname-regform.txt* when `\PaperLanguage` is called.

## 3.4 Body commands

---

`\PaperLanguage` `\PaperLanguage{<language>}`

---

Selects `<language>` (ukrainian, russian, or english), calls `\maketitle`, and writes both the registration form and the YAML article-info file. This command should be the first thing inside `\begin{document}`.

---

`\newlanguagecommand` `\newlanguagecommand{<cmd>}{<lang=text, ...>}`

---

Defines `<cmd>` as a language-aware command. Without an optional argument it expands to the translation for the current `babel` language; with `\meta{cmd}[<lang>]` it uses the specified language. Missing translations produce the text `UNSET TRANSLATION`.

## 4 Implementation

### 4.1 Declaration

We require a recent kernel and load as an `expl3` class.

```

1 \NeedsTeXFormat{LaTeX2e}[2022-06-01]
2 \def\filedate{2026/05/28}
3 \def\fileversion{v1.2}
4 \ProvidesFile{iptconf.cls}[\filedate\space\fileversion\space IPT conference class]
5 \ProvidesExplClass{iptconf}{\filedate}{\fileversion}
6   {IPT conference class (Institute of Physics and Technology, KPI)}
7 \LoadClass[twocolumn, oneside]{article}[2022-06-01]
```

### 4.2 Class options

Options are declared with `l3keys`.

```

incollection
single
8 \DeclareKeys [ iptconf ]
9 {
10   incollection .code:n = \pagestyle{empty},
11   single .code:n =
12     {
13       \pagestyle{plain}
14       \setcounter{page}{#1}
15     },
16   single .default:n = 1,
17 }
18 \SetKeys [ iptconf ] { incollection }
19 \ProcessKeyOptions [iptconf]
```

(End of definition for `incollection` and `single`. These functions are documented on page 4.)

### 4.3 Page geometry

```
20 \RequirePackage[%
21   a4paper,
22   footskip = 1cm,
23   headsep  = 0.3cm,
24   top      = 2cm,
25   bottom   = 2cm,
26   left     = 2cm,
27   right    = 2cm,
28 ]{geometry}
```

Ensure the first paragraph of every section is indented (overrides the `article` class default).

```
29 \let\@afterindentfalse\@afterindenttrue
30
31 \RequirePackage{xcolor}
```

### 4.4 Fonts and language

We branch on the engine: `LuaATEX`/`XYLATEX` use `fontsetup` for OpenType fonts; `pdfATEX` falls back to Type 1 fonts with the `OpenSans` sans-serif family.

```
32 \RequirePackage{csquotes}
33 \RequirePackage[english, ukrainian]{babel}
34 \bool_lazy_or:nnTF
35   { \sys_if_engine luatex_p: }
36   { \sys_if_engine xetex_p: }
37   {
38     \RequirePackage{fontspec}
39     \setsansfont{Open Sans}
40     \setmainfont{CMU Serif}
41     \setmonofont{CMU Typewriter Text}
42   }
43   {
44     \RequirePackage[T2A,T1]{fontenc}
45     \RequirePackage{cmap}
46     \renewcommand\sfdefault{opensans-LF}
47     \renewcommand\bfdefault{b}
48   }
49 \RequirePackage{mathtools}
50 \RequirePackage{amssymb}
51 \RequirePackage[patch=footnote]{microtype}
```

Make `\boldmath` active inside `\bfseries` so that bold text in titles automatically uses bold math symbols.

```
52 \g@addto@macro\bfseries{\boldmath}
```

### 4.5 Language-aware commands

`\newlanguagecommand` Defines a new command `<cmd>` that selects its output text based on the current `babel` language (or an optional language override). Translations are stored in a `l3prop` named `g_iptconf_nlc_<csname>_prop`.

```
53 \NewDocumentCommand{\newlanguagecommand}{mm}
54 {
55   \prop_new:c { \__iptconf_nlc_strip:N #1 }
```

```

56 \prop_gset_from_keyval:cn { \__iptconf_nlc_strip:N #1 } { #2 }
57 \NewDocumentCommand{#1}{o}
58 {
59   \IfNoValueTF { ##1 }
60     { \iptconf_nlc:NV #1 \language name }
61     { \iptconf_nlc:Nn #1 { ##1 } }
62 }
63 }

```

(End of definition for \newlanguagecommand. This function is documented on page 5.)

\iptconf\_nlc:Nn Internal helper: given a command  $\langle N \rangle$  and a language name  $\langle n \rangle$ , fetch the translation from the prop.

\iptconf\_nlc:NV

```

64 \cs_new:Nn \iptconf_nlc:Nn
65 {
66   \prop_if_in:cnTF { \__iptconf_nlc_strip:N #1 } { #2 }
67     { \prop_item:cn { \__iptconf_nlc_strip:N #1 } { #2 } }
68     { UNSET ~ TRANSLATION }
69 }
70 \cs_generate_variant:Nn \iptconf_nlc:Nn { NV }

```

(End of definition for \iptconf\_nlc:Nn.)

\\_\_iptconf\_nlc\_strip:N Builds the prop name from a command name.

```

71 \cs_new:Nn \__iptconf_nlc_strip:N
72 { g_iptconf_nlc_ \cs_to_str:N #1 _prop }

```

(End of definition for \\_\_iptconf\_nlc\_strip:N.)

#### 4.5.1 Built-in language-aware strings

\iptbibname

```

73 \newlanguagecommand{\iptbibname}{
74   ukrainian = {Перелік ~ використаних ~ джерел},
75   russian   = {Перечень ~ использованных ~ источников},
76   english   = {References}
77 }

```

(End of definition for \iptbibname. This function is documented on page ??.)

\keyname

```

78 \newlanguagecommand{\keyname}{
79   ukrainian = {Ключові ~ слова},
80   russian   = {Ключевые ~ слова},
81   english   = {Keywords}
82 }

```

(End of definition for \keyname. This function is documented on page ??.)

\pacsum

```

83 \newlanguagecommand{\pacsum}{
84   ukrainian = {PACS ~ номери},
85   russian   = {PACS ~ номера},
86   english   = {PACS ~ numbers}
87 }

```

(End of definition for `\pacnum`. This function is documented on page ??.)

`\udcnum`

```
88 \newlanguagecommand{\udcnum}{  
89   ukrainian = {\УДК},  
90   russian   = {\УДК},  
91   english   = {UDC}  
92 }
```

(End of definition for `\udcnum`. This function is documented on page ??.)

`\ipt` Expands to the full name of the institute in the current language. Use this token inside `\affiliation` to obtain consistent output and automatic abbreviation in YAML export.

```
93 \newlanguagecommand{\ipt}{  
94   ukrainian = {\Навчально-науковий ~ Фізико-технічний ~ інститут},  
95   russian   = {\Учебно-научный ~ Физико-технический ~ институт},  
96   english   = {Institute ~ of ~ Physics ~ and ~ Technology}  
97 }
```

(End of definition for `\ipt`. This function is documented on page ??.)

## 4.6 `\PaperLanguage`

`\PaperLanguage` Selects the document language, typesets the title block, and writes both metadata output files.

```
98 \NewDocumentCommand{ \PaperLanguage }{ m }  
99 {  
100   \selectlanguage{#1}  
101   \maketitle  
102   \writeformdata  
103   \writearticleinfo  
104 }
```

(End of definition for `\PaperLanguage`. This function is documented on page 5.)

## 4.7 Bibliography

```
105 \RequirePackage[  
106   backend      = biber,  
107   bibstyle     = gost-numeric,  
108   sorting      = none,  
109   maxnames     = 10,  
110   autolang     = other,  
111   isbn         = true,  
112   url          = true,  
113   doi          = true,  
114   defernumbers = true,  
115 ]{biblatex}  
116  
117 \setcounter{biburllcpenalty}{100}  
118 \setcounter{biburlucpenalty}{200}  
119 \setcounter{biburlnumpenalty}{100}
```

Fine-tune bibliography spacing and penalties.

```
120 \setlength\bibitemsep{0.5\itemsep}
```



```

121 \setlength\biblabelexp{1ex}
122 \appto{\bibsetup}{%
123   \clubpenalty\z@
124   \widowpenalty\z@
125   \interlinepenalty\z@
126 }

```

Automatically print the bibliography at `\end{document}`, using a language-sensitive heading.

```

127 \AddToHook{enddocument}[my]{%
128   \ExplSyntaxOn
129   \tl_set:Nx \l__ipt_bibName_tl
130     { \iptconf_nlc:NV \iptbibname \language_name }
131   \ExplSyntaxOff
132   \printbibliography[ title = {\l__ipt_bibName_tl} ]
133 }

```

## 4.8 Lists

```

134 \RequirePackage{enumitem}
135 \setlist{nosep}

```

## 4.9 Balanced columns

`flushend` balances the two columns on the final page.

```

136 \RequirePackage{flushend}
137
138 \def\initialize@flushend{%
139   \global\let\saved@orig@@outputdblcol\@outputdblcol
140   \global\let\balanced@@outputdblcol\last@outputdblcol
141   \AddToHook{enddocument}[flushend]
142     { \let\@outputdblcol\balanced@@outputdblcol }%
143   \g@addto@macro\footnoterule{ \vskip\z@ }%
144   \savingsvdiscards=\@ne
145 }

```

## 4.10 Speaker registration form

Keys for the `\regform` command.

```

146 \keys_define:nn { iptconf }
147 {
148   fullname      .str_set:N = \l_iptconf_fullname_str,
149   birthday      .str_set:N = \l_iptconf_birthday_str,
150   position      .str_set:N = \l_iptconf_position_str,
151   phone         .str_set:N = \l_iptconf_phone_str,
152   authoremail   .str_set:N = \l_iptconf_authoremail_str,
153   confsection   .str_set:N = \l_iptconf_confsection_str,
154   copynum       .str_set:N = \l_iptconf_copynum_str,
155   needliving    .str_set:N = \l_iptconf_needliving_str,
156   needinvasion .str_set:N = \l_iptconf_needinvasion_str,
157 }

```

`\regform`

```

158 \DeclareDocumentCommand \regform { m }
159 {

```

```

160 \keys_set:nn { iptconf } { #1 }
161 }

```

(End of definition for `\regform`. This function is documented on page 4.)

## 4.11 Title machinery

### 4.11.1 Variable declarations

Token list variables for single-valued metadata.

```

162 \tl_new:N \l_iptconf_udc_tl
163 \tl_new:N \l_iptconf_pacs_tl
164 \tl_new:N \l_iptconf_abstract_tl
165 \tl_new:N \l_iptconf_keywords_tl
166 \tl_new:N \l_iptconf_author_tl
167 \tl_new:N \l_iptconf_author_email_tl
168 \tl_new:N \l_iptconf_author_affiliation_tl
169 \tl_new:N \l_iptconf_title_tl
170 \tl_new:N \l_iptconf_affiliation_tl
171 \tl_new:N \l_iptconf_affiliation_number_tl

```

Sequence variables for multi-valued data.

```

172 \seq_new:N \g_iptconf_authors_seq
173 \seq_new:N \g_iptconf_justauthors_seq
174 \seq_new:N \g_iptconf_affiliation_seq
175 \seq_new:N \g_iptconf_justaffiliation_seq

```

IO stream for the .dat auxiliary file.

```

176 \iow_new:N \g_iptconf_totoc_iow
177 \iow_open:Nn \g_iptconf_totoc_iow { \c_sys_jobname_str .dat }

```

### 4.11.2 Preamble metadata commands

`\title`

```

178 \RenewDocumentCommand{\title}{ m }
179 {
180   \tl_set:Nn \l_iptconf_title_tl {#1}
181   \iow_now:Nx \g_iptconf_totoc_iow
182   {
183     \iow_char:N \\thispapertitle
184     \iow_char:N \{
185     \exp_not:n {#1}
186     \iow_char:N \}
187   }
188 }

```

(End of definition for `\title`. This function is documented on page 4.)

`\author`

```

189 \RenewDocumentCommand{\author}{ 0{ } m m }
190 {
191   \tl_set:Nn \l_iptconf_author_tl           {#2}
192   \tl_set:Nn \l_iptconf_author_email_tl     {#1}
193   \tl_set:Nn \l_iptconf_author_affiliation_tl {#3}
194   \seq_gput_right:Nn \g_iptconf_justauthors_seq {#2}

```

```

195 \seq_gput_right:Nn \g_iptconf_authors_seq
196 {
197   #2\textsuperscript{#3}
198   \tl_if_empty:nTF {#1}
199     { }
200     { \textsuperscript{,}\thanks{#1} }
201 }
202 \iow_now:Nx \g_iptconf_totoc_iow
203 {
204   \iow_char:N \thispaperauthor
205   \iow_char:N \{
206   \exp_not:n {#2}
207   \iow_char:N \}
208 }
209 }

```

(End of definition for \author. This function is documented on page 4.)

### \affiliation

```

210 \NewDocumentCommand{\affiliation}{m m}
211 {
212   \tl_set:Nn \l_iptconf_affiliation_tl {#1}
213   \tl_set:Nn \l_iptconf_affiliation_number_tl {#2}
214   \seq_gput_right:Nn \g_iptconf_affiliation_seq
215     { \textsuperscript{#2}\ #1 }
216   \seq_gput_right:Nn \g_iptconf_justaffiliation_seq {#1}
217 }

```

(End of definition for \affiliation. This function is documented on page 4.)

\@affiliation Typesets the affiliation list with \[2ex] separators.

```

218 \NewDocumentCommand{\@affiliation}{ }
219 {
220   \seq_use:Nnnn
221     \g_iptconf_affiliation_seq
222     {\[2ex]} {\[2ex]} {\[2ex]}
223 }

```

(End of definition for \@affiliation.)

### \udc

```

224 \NewDocumentCommand\udc{ m }
225 {
226   \tl_set:Nn \l_iptconf_udc_tl {#1}
227 }

```

(End of definition for \udc. This function is documented on page 4.)

### \pacs

```

228 \NewDocumentCommand\pacs{ m }
229 {
230   \tl_set:Nn \l_iptconf_pacs_tl {#1}
231 }

```

(End of definition for \pacs. This function is documented on page 4.)

**\keywords**

```
232 \NewDocumentCommand\keywords{m}
233 {
234   \tl_set:Nn \l_iptconf_keywords_tl { #1 }
235 }
```

(End of definition for \keywords. This function is documented on page 4.)

**\abstract**

```
236 \RenewDocumentCommand\abstract{ +m }
237 {
238   \tl_set:Nn \l_iptconf_abstract_tl {#1}
239 }
```

(End of definition for \abstract. This function is documented on page 4.)

**\@abstract**

```
240 \NewDocumentCommand\@abstract{ }
241 {
242   \tl_use:N \l_iptconf_abstract_tl
243 }
```

(End of definition for \@abstract.)

Suppress the automatic date in the title.

```
244 \date{}
```

#### 4.11.3 Auxiliary author sequence

**\authors** Outputs the comma-separated list of authors with affiliation superscripts and optional e-mail footnotes.

```
245 \NewDocumentCommand\authors{ }
246 {
247   \seq_use:Nnnn \g_iptconf_authors_seq {,~} {,~} {,~}
248 }
```

(End of definition for \authors. This function is documented on page ??.)

#### 4.11.4 The title block

**\@maketitle**

```
249 \RenewDocumentCommand\@maketitle{ }
250 {
251   \newpage
252   \tl_if_empty:NTF \l_iptconf_pacs_tl
253     { }
254     { \pacsnum\ \tl_use:N \l_iptconf_pacs_tl }
255   \tl_if_empty:NTF \l_iptconf_udc_tl
256     { }
257     { \udcnum\ \tl_use:N \l_iptconf_udc_tl }
258   \nopagebreak
259   \null
260   \vskip 1em
261   \begin{center}
262     \let\footnote\thanks
```

```

263     {\Large\bfseries\sffamily
264       \text_uppercase:n { \tl_use:N \l_iptconf_title_tl } \par
265     }
266     \vskip 1.5em
267     {\large
268       \lineskip .5em
269       \begin{center}
270         \authors
271       \end{center}
272     \par
273   }
274   \vskip 1ex
275   {\@affiliation}
276 \end{center}
277 }

```

(End of definition for \@maketitle.)

**\maketitle** Sets the footnote counter format (Cyrillic letters for Slavic languages, Latin letters for English), then dispatches to the appropriate one- or two-column layout.

```

278 \renewcommand\maketitle{\par
279   \begingroup
280   \iflanguage{ukrainian}%
281     {\renewcommand\thefootnote{\itshape\asbuk{footnote}}}%
282     {%
283       \iflanguage{russian}%
284         {\renewcommand\thefootnote{\itshape\asbuk{footnote}}}%
285         {%
286           \iflanguage{english}
287             {\renewcommand\thefootnote{\itshape\alph{footnote}}}%
288             {}%
289           }%
290         }%
291   \if@twocolumn
292     \ifnum \col@number=\@ne
293       \@maketitle
294       \noindent\hrulefill\par
295       \vspace{1.3ex}
296       {\large\bfseries \abstractname}
297       \begingroup
298         \quotation
299         \@abstract
300       \endquotation
301     \endgroup
302     \noindent{\bfseries \keyname}:\sim\tl_use:N \l_iptconf_keywords_tl \par
303     \smallskip\noindent\hrulefill\medskip
304   \else
305     \twocolumn[\@maketitle
306       \noindent\hrulefill\par
307       \vspace{1.3ex}
308       {\large\bfseries \abstractname}
309       \begingroup
310         \quotation
311       \@abstract

```

```

312         \endquotation
313     \endgroup
314     \vskip 1em
315     \noindent{\bfseries \keyname}:\tl_use:N \l_iptconf_keywords_tl \par
316     \smallskip\noindent\hrulefill\bigskip
317 ]%
318 \fi
319 \else
320     \newpage
321     \global\@topnum\z@
322     \@maketitle
323 \fi
324 \@thanks
325 \endgroup
326 \setcounter{footnote}{0}%
327 \global\let\thanks\relax
328 \global\let\maketitle\relax
329 \global\let\@maketitle\relax
330 \global\let\@thanks\@empty
331 \global\let\@author\@empty
332 \global\let\@date\@empty
333 \global\let\@title\@empty
334 \global\let\title\relax
335 \global\let\author\relax
336 \global\let\date\relax
337 \global\let\and\relax
338 }

```

(End of definition for \maketitle. This function is documented on page ??.)

Write \finishauthors and close the stream at \end{document}.

```

339 \AtEndDocument
340 {
341     \iow_now:Nx \g_iptconf_totoc_iow { \iow_char:N \finishauthors }
342     \iow_close:N \g_iptconf_totoc_iow
343 }

```

## 4.12 Section headings

\iptconf\_secntformat:n Adds a period after the section number.

```

344 \cs_gset_protected:Npn \iptconf_secntformat:n #1
345 {
346     \csname the#1\endcsname.\enskip
347 }
348 \cs_gset_eq:NN \@secntformat \iptconf_secntformat:n

```

(End of definition for \iptconf\_secntformat:n.)

\section

```

349 \cs_gset_protected:Npn \iptconf_section:
350 {
351     \@startsection {section}{1}{\z@}%
352     {-2ex \@plus -1ex \@minus -.2ex}%
353     {1.3ex \@plus .2ex}%
354     {\normalfont\large\bfseries\raggedright}

```

```

355 }
356
357 \cs_new_protected:Npn \iptconf_section_star:n #1
358 {
359   \iptconf_section:*\{#1}
360   \addcontentsline{toc}{section}{#1}
361 }
362
363 \RenewDocumentCommand \section {s o m}
364 {
365   \IfBooleanTF{#1}
366   { \iptconf_section_star:n {#3} }
367   {
368     \IfNoValueTF{#2}
369     { \iptconf_section: {#3} }
370     { \iptconf_section: [#2]{#3} }
371   }
372 }

```

*(End of definition for \section. This function is documented on page ??.)*

**\subsection**

```

373 \cs_gset_protected:Npn \iptconf_subsection:
374 {
375   \@startsection{subsection}{2}{\z@}%
376   {-3.25ex \@plus -1ex \@minus -.2ex}%
377   {1.5ex \@plus .2ex}%
378   {\normalfont\bfseries\raggedright}
379 }
380
381 \cs_new_protected:Npn \iptconf_subsection_star:n #1
382 {
383   \iptconf_subsection:*\{#1}
384   \addcontentsline{toc}{subsection}{#1}
385 }
386
387 \RenewDocumentCommand \subsection {s o m}
388 {
389   \IfBooleanTF{#1}
390   { \iptconf_subsection_star:n {#3} }
391   {
392     \IfNoValueTF{#2}
393     { \iptconf_subsection: {#3} }
394     { \iptconf_subsection: [#2]{#3} }
395   }
396 }

```

*(End of definition for \subsection. This function is documented on page ??.)*

## 4.13 Figures and tables

```

397 \RequirePackage[labelformat=simple]{subcaption}
398 \RequirePackage[labelsep=period]{caption}

```

`\figcaption` Allow `\figcaption` and `\tabcaption` outside a float, as is common in double-column layouts where floats span the column.

```
399 \def\tabcaption{\def\@capttype{table}\caption}
400 \def\figcaption{\def\@capttype{figure}\caption}
```

*(End of definition for `\figcaption` and `\tabcaption`. These functions are documented on page ??.)*

```
401 \renewcommand\thesubfigure{(\alph{subfigure})}
402 \captionsetup[subfigure]{justification=centering, subrefformat=parens}
```

## 4.14 Hyperlinks

```
403 \RequirePackage[
404   colorlinks      = true,
405   urlcolor        = blue,
406   linkcolor       = red!60!black,
407   citecolor       = green!50!black,
408   bookmarks,
409   bookmarksnumbered = true,
410   breaklinks      = true,
411   unicode,
412   linktoc         = all,
413   hypertexnames   = false,
414 ]{hyperref}
```

## 4.15 Metadata output

`\g_iptconf_regform_iow`

```
415 \iow_new:N \g_iptconf_regform_iow
```

*(End of definition for `\g_iptconf_regform_iow`.)*

`\writeformdata` Writes the speaker registration form to `jobname-regform.txt`.

```
416 \NewDocumentCommand \writeformdata {} {
417   \iow_open:Nn \g_iptconf_regform_iow
418     { \c_sys_jobname_str -regform.txt }
419   \iow_now:Nx \g_iptconf_regform_iow
420   {
421     \text_expand:n
422     { Повне ~ ім'я ~ доповідача: ~ \str_use:N \l_iptconf_fullname_str }
423     \iow_newline:
424     \text_expand:n
425     { Дата ~ народження: ~ \str_use:N \l_iptconf_birthday_str }
426     \iow_newline:
427     \text_expand:n
428     { Посада ~ доповідача: ~ \str_use:N \l_iptconf_position_str }
429     \iow_newline:
430     \text_expand:n
431     { Телефонний ~ номер: ~ \str_use:N \l_iptconf_phone_str }
432     \iow_newline:
433     \text_expand:n
434     { Email: ~ \str_use:N \l_iptconf_authoremail_str }
435     \iow_newline:
436     \text_expand:n
437     { Секція: ~ \str_use:N \l_iptconf_confsection_str }
```



```

438 \iow_newline:
439 \text_expand:n
440 { Кількість ~ копій: ~ \str_use:N \l_iptconf_copynum_str }
441 \iow_newline:
442 \text_expand:n
443 { Потреба ~ в ~ житлі: ~ \str_use:N \l_iptconf_needliving_str }
444 \iow_newline:
445 \text_expand:n
446 { Потреба ~ в ~ запрошенні: ~
447   \str_use:N \l_iptconf_needinvitanion_str }
448 \iow_newline:
449 }
450 \iow_close:N \g_iptconf_regform_iow
451 }

```

(End of definition for \writeformdata. This function is documented on page ??.)

**\writearticleinfo** Writes structured YAML article metadata to *jobname-info.yaml*. Mathematical macros and special tokens are purified before output. The generated file contains the following fields in order: title, language, year, speaker, udc, section, authors (list), affiliations (list), abstract, keywords (list). The language value is taken from the active babel language at the time \PaperLanguage is called; year is the current calendar year; udc is the code supplied to \udc.

```

452 \NewDocumentCommand \writearticleinfo {} {
453
454   \text_declare_purify_equivalent:Nn \LaTeX { LaTeX }
455   \text_declare_purify_equivalent:Nn \TeX { TeX }
456   \text_declare_purify_equivalent:Nn \LaTeXe { LaTeX2e }
457
458   % Remove trailing period from keywords, then split into clist
459   \regex_replace_once:nnN { \.s*\z } {} \l_iptconf_keywords_tl
460   \clist_set:Nx \l_iptconf_keywords_clist
461     { \tl_use:N \l_iptconf_keywords_tl }
462
463   % Register Greek letter macros as their ASCII names for purification
464   \clist_map_inline:nn
465   {
466     alpha, beta, gamma, delta, epsilon, zeta, eta, theta,
467     iota, kappa, lambda, mu, nu, xi, omicron, pi, rho,
468     sigma, tau, upsilon, phi, chi, psi, omega,
469     Gamma, Delta, Theta, Lambda, Xi, Pi, Sigma, Upsilon, Phi, Psi, Omega
470   }
471   {
472     \exp_args:Ne \text_declare_purify_equivalent:Nn
473       { \cs:w ##1 \cs_end: } { ##1 }
474   }
475
476   % Clean author names: replace ~ with regular space
477   \seq_clear_new:N \g_cleanauthors_seq
478   \seq_map_inline:Nn \g_iptconf_justauthors_seq
479   {
480     \tl_set:Nn \l_tmpa_tl { ##1 }
481     \regex_replace_all:nnN { [\~] } { \ } \l_tmpa_tl
482     \seq_put_right:NV \g_cleanauthors_seq \l_tmpa_tl

```

```

483 }
484
485 % Purify title and abstract
486 \tl_set_eq:NN \l_cleanabstract_tl \l_iptconf_abstract_tl
487 \regex_replace_all:nnN { [\${} ] } { } \l_cleanabstract_tl
488 \tl_set_eq:NN \l_cleantitle_tl \l_iptconf_title_tl
489 \regex_replace_all:nnN { [\${} ] } { } \l_cleantitle_tl
490
491 \iow_open:Nn \g_iptconf_regform_iow
492   { \c_sys_jobname_str -info.yaml }
493
494 \iow_now:Nx \g_iptconf_regform_iow
495   { title: ~ " \text_purify:n { \l_cleantitle_tl } " }
496 \iow_now:Nx \g_iptconf_regform_iow
497   { language: ~ \languagename }
498 \iow_now:Nx \g_iptconf_regform_iow
499   { year: ~ \the\year }
500 \iow_now:Nx \g_iptconf_regform_iow
501   { speaker: ~ " \str_use:N \l_iptconf_fullname_str " }
502 \iow_now:Nx \g_iptconf_regform_iow
503   { udc: ~ " \tl_use:N \l_iptconf_udc_tl " }
504 \iow_now:Nx \g_iptconf_regform_iow
505   { section: ~ " \str_use:N \l_iptconf_confsection_str " }
506
507 \iow_now:Nn \g_iptconf_regform_iow { authors: }
508 \seq_map_inline:Nn \g_cleanauthors_seq
509 {
510   \iow_now:Nx \g_iptconf_regform_iow
511     { ~ - ~ " \text_purify:n {##1} " }
512 }
513
514 \iow_now:Nn \g_iptconf_regform_iow { affiliations: }
515 \seq_map_inline:Nn \g_iptconf_justaffiliation_seq
516 {
517   \str_if_eq:nnTF {##1} {\ipt}
518     { \iow_now:Nn \g_iptconf_regform_iow { ~ - ~ "HH ~ \Phi I" } }
519     {
520       \iow_now:Nx \g_iptconf_regform_iow
521         { ~ - ~ " \text_purify:n {##1} " }
522     }
523 }
524
525 \iow_now:Nx \g_iptconf_regform_iow { abstract: ~ > }
526 \iow_now:Nx \g_iptconf_regform_iow
527   { ~ " \text_purify:n { \l_cleanabstract_tl } " }
528
529 \iow_now:Nn \g_iptconf_regform_iow { keywords: }
530 \clist_map_inline:Nn \l_iptconf_keywords_clist
531 {
532   \iow_now:Nn \g_iptconf_regform_iow { ~ - ~ "##1" }
533 }
534
535 \iow_close:N \g_iptconf_regform_iow
536 }

```

(End of definition for `\writearticleinfo`. This function is documented on page ??.)

# Change History

v1.0		the generated YAML metadata file	1
	General: First public release on CTAN		1
v1.1		General: Changed fonts to CMU	
	General: <code>\writearticleinfo</code> : added	(Computer Modern Unicode) for	
	language, year, and <code>udc</code> fields to	better consistency across	1

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