

# The iptconf class\*

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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  $\text{\LaTeX}$  installation (kernel 2022-06-01 or later). The following packages must be available:

- `geometry` — page layout.
- `xcolor` — colour support.
- `mathtools`, `amssymb` — mathematics.
- `fontsetup` (Lua $\text{\LaTeX}$ /Xe $\text{\LaTeX}$ ) or `fontenc/opensans` (pdf $\text{\LaTeX}$ ).
- `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

```
\documentclass[single=3]{iptconf}    % standalone, starting at page 3

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

\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{ukrainian}

\section{Introduction}
...

\end{document}
```

### 3.2 Class options

---

`incollection` `\documentclass[incollection]{iptconf}`

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

---

`\single` `\documentclass[ $\langle single = n \rangle$ ]{iptconf}`

Standalone mode with page numbers starting at  $\langle n \rangle$  (default 1). Use this option when compiling the paper outside the proceedings.

### 3.3 Preamble commands

---

`\title` `\title{ $\langle text \rangle$ }`

Sets the paper title. The title is stored internally and also written to `jobname.dat` as `\thispapertitle{ $\langle text \rangle$ }`.

---

`\author` `\author[ $\langle email \rangle$ ]{ $\langle name \rangle$ }{ $\langle affil-index \rangle$ }`

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

---

`\affiliation` `\affiliation{ $\langle institution \rangle$ }{ $\langle number \rangle$ }`

Registers an affiliation with superscript  $\langle number \rangle$ . The token `\ipt` may be used for the full Ukrainian name of the institute; it is collapsed to the abbreviation “ $\text{HH}\Phi\text{TI}$ ” in the YAML output.

---

`\udc` `\udc{ $\langle code \rangle$ }`

Stores the UDC (Universal Decimal Classification) code.

---

`\pacs` `\pacs{ $\langle codes \rangle$ }`

Stores PACS (Physics and Astronomy Classification Scheme) codes.

---

`\keywords` `\keywords{ $\langle list \rangle$ }`

Stores the keyword list, printed below the abstract.

---

`\abstract` `\abstract{ $\langle text \rangle$ }`

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

---

`\regform` `\regform{ $\langle key=value list \rangle$ }`

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

### 3.4 Body commands

---

`\PaperLanguage` `\PaperLanguage{ $\langle language \rangle$ }`

Selects  $\langle language \rangle$  (`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 \ProvidesFile{iptconf.cls}[2026/05/24 v1.0 IPT conference class]
3 \ProvidesExplClass{iptconf}{2026-05-24}{1.0}
4   {IPT conference class (Institute of Physics and Technology, KPI)}
5 \LoadClass[twocolumn, oneside]{article}[2022-06-01]
```

### 4.2 Class options

Options are declared with `l3keys`.

```
incollection
single
6 \DeclareKeys [ iptconf ]
7 {
8   incollection .code:n = \pagestyle{empty},
9   single .code:n =
10     {
11       \pagestyle{plain}
12       \setcounter{page}{#1}
13     },
14   single .default:n = 1,
15 }
16 \SetKeys [ iptconf ] { incollection }
17 \ProcessKeyOptions [iptconf]
```

(End of definition for `incollection` and `single`. These functions are documented on page 3.)

### 4.3 Page geometry

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

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

```
27 \let\@afterindentfalse\@afterindenttrue
28
29 \RequirePackage{xcolor}
```

## 4.4 Fonts and language

We branch on the engine: Lua<sup>L</sup>TeX/X<sup>L</sup>TeX use `fontsetup` for OpenType fonts; pdf<sup>L</sup>TeX falls back to Type 1 fonts with the OpenSans sans-serif family.

```

30 \bool_lazy_or:nnTF
31 { \sys_if_engine luatex_p: }
32 { \sys_if_engine xetex_p: }
33 {
34   \RequirePackage{mathtools}
35   \RequirePackage[default]{fontsetup}
36   \RequirePackage
37     [protrusion=true, tracking=true, babel=true]
38     {microtype}
39 }
40 {
41   \RequirePackage[T2A,T1]{fontenc}
42   \RequirePackage{cmap}
43   \renewcommand\sfdefault{opensans-LF}
44   \renewcommand\bfdefault{b}
45   \RequirePackage
46     [protrusion=true, expansion, tracking=true,
47     kerning=true, spacing=true, babel=true]
48     {microtype}
49   \RequirePackage{mathtools}
50   \RequirePackage{amssymb}
51 }
52
53 \RequirePackage{csquotes}
54 \RequirePackage[english, russian, ukrainian]{babel}

```

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

```

55 \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`.

```

56 \NewDocumentCommand{\newlanguagecommand}{mm}
57 {
58   \prop_new:c { \__iptconf_nlc_strip:N #1 }
59   \prop_gset_from_keyval:cn { \__iptconf_nlc_strip:N #1 } { #2 }
60   \NewDocumentCommand{#1}{o}
61   {
62     \IfNoValueTF { ##1 }
63     { \iptconf_nlc:NV #1 \language name }
64     { \iptconf_nlc:Nn #1 { ##1 } }
65   }
66 }

```

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

`\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
67 \cs_new:Nn \iptconf_nlc:Nn
68 {
69   \prop_if_in:cnTF { \__iptconf_nlc_strip:N #1 } { #2 }
70   { \prop_item:cn { \__iptconf_nlc_strip:N #1 } { #2 } }
71   { UNSET ~ TRANSLATION }
72 }
73 \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.

```

74 \cs_new:Nn \__iptconf_nlc_strip:N
75 { 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`

```

76 \newlanguagecommand{\iptbibname}{
77   ukrainian = {Перелік ~ використаних ~ джерел},
78   russian   = {Перечень ~ использованных ~ источников},
79   english   = {References}
80 }

```

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

`\keyname`

```

81 \newlanguagecommand{\keyname}{
82   ukrainian = {Ключові ~ слова},
83   russian   = {Ключевые ~ слова},
84   english   = {Keywords}
85 }

```

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

`\pacsnum`

```

86 \newlanguagecommand{\pacsnum}{
87   ukrainian = {PACS ~ номери},
88   russian   = {PACS ~ номера},
89   english   = {PACS ~ numbers}
90 }

```

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

`\udcnum`

```

91 \newlanguagecommand{\udcnum}{
92   ukrainian = {УДК},
93   russian   = {УДК},
94   english   = {UDC}
95 }

```

*(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.

```

96 \newlanguagecommand{\ipt}{
97   ukrainian = {Навчально-науковий ~ Фізико-технічний ~ інститут},
98   russian   = {Учебно-научный ~ Физико-технический ~ институт},
99   english   = {Institute ~ of ~ Physics ~ and ~ Technology}
100 }

```

*(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.

```

101 \NewDocumentCommand{ \PaperLanguage }{ m }
102 {
103   \selectlanguage{#1}
104   \maketitle
105   \writeformdata
106   \writearticleinfo
107 }

```

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

## 4.7 Bibliography

```

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

```

Fine-tune bibliography spacing and penalties.

```

123 \setlength\bibitemsep{0.5\itemsep}
124 \setlength\biblabelsep{1ex}
125 \appto{\bibsetup}{%
126   \clubpenalty\z@
127   \widowpenalty\z@
128   \interlinepenalty\z@
129 }

```

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

```

130 \AddToHook{enddocument}[my]{%
131   \ExplSyntaxOn

```

```

132 \tl_set:Nx \l__ipt_bibName_tl
133 { \iptconf_nlc:NV \iptbibname \languagename }
134 \ExplSyntaxOff
135 \printbibliography[ title = {\l__ipt_bibName_tl} ]
136 }

```

## 4.8 Lists

```

137 \RequirePackage{enumitem}
138 \setlist{nosep}

```

## 4.9 Balanced columns

flushend balances the two columns on the final page.

```

139 \RequirePackage{flushend}
140
141 \def\initialize@flushend{%
142   \global\let\saved@orig@@outputdblcol\@outputdblcol
143   \global\let\balanced@@outputdblcol\last@outputdblcol
144   \AddToHook{enddocument}[flushend]
145   { \let\@outputdblcol\balanced@@outputdblcol }%
146   \g@addto@macro\footnoterule{ \vskip\z@ }%
147   \savingsdiscards=\@ne
148 }

```

## 4.10 Speaker registration form

Keys for the \regform command.

```

149 \keys_define:nn { iptconf }
150 {
151   fullname      .str_set:N = \l_iptconf_fullname_str,
152   birthday      .str_set:N = \l_iptconf_birthday_str,
153   position      .str_set:N = \l_iptconf_position_str,
154   phone         .str_set:N = \l_iptconf_phone_str,
155   authoremail   .str_set:N = \l_iptconf_authoremail_str,
156   confsection   .str_set:N = \l_iptconf_confsection_str,
157   copynum       .str_set:N = \l_iptconf_copynum_str,
158   needliving    .str_set:N = \l_iptconf_needliving_str,
159   needinvitanion .str_set:N = \l_iptconf_needinvitanion_str,
160 }

```

**\regform**

```

161 \DeclareDocumentCommand \regform { m }
162 {
163   \keys_set:nn { iptconf } { #1 }
164 }

```

*(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.

```

165 \tl_new:N \l_iptconf_udc_tl

```

```

166 \tl_new:N \l_iptconf_pacs_tl
167 \tl_new:N \l_iptconf_abstract_tl
168 \tl_new:N \l_iptconf_keywords_tl
169 \tl_new:N \l_iptconf_author_tl
170 \tl_new:N \l_iptconf_author_email_tl
171 \tl_new:N \l_iptconf_author_affiliation_tl
172 \tl_new:N \l_iptconf_title_tl
173 \tl_new:N \l_iptconf_affiliation_tl
174 \tl_new:N \l_iptconf_affiliation_number_tl

Sequence variables for multi-valued data.

175 \seq_new:N \g_iptconf_authors_seq
176 \seq_new:N \g_iptconf_justauthors_seq
177 \seq_new:N \g_iptconf_affiliation_seq
178 \seq_new:N \g_iptconf_justaffiliation_seq

IO stream for the .dat auxiliary file.

179 \iow_new:N \g_iptconf_totoc_iow
180 \iow_open:Nn \g_iptconf_totoc_iow { \c_sys_jobname_str .dat }

```

#### 4.11.2 Preamble metadata commands

**\title**

```

181 \RenewDocumentCommand{\title}{ m }
182 {
183   \tl_set:Nn \l_iptconf_title_tl {#1}
184   \iow_now:Nx \g_iptconf_totoc_iow
185   {
186     \iow_char:N \\thispapertitle
187     \iow_char:N \{
188     \exp_not:n {#1}
189     \iow_char:N \}
190   }
191 }

```

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

**\author**

```

192 \RenewDocumentCommand{\author}{ 0{ } m m }
193 {
194   \tl_set:Nn \l_iptconf_author_tl          {#2}
195   \tl_set:Nn \l_iptconf_author_email_tl    {#1}
196   \tl_set:Nn \l_iptconf_author_affiliation_tl {#3}
197   \seq_gput_right:Nn \g_iptconf_justauthors_seq {#2}
198   \seq_gput_right:Nn \g_iptconf_authors_seq
199   {
200     #2\textsuperscript{#3}
201     \tl_if_empty:nTF {#1}
202     { }
203     { \textsuperscript{,}\thanks{#1} }
204   }
205   \iow_now:Nx \g_iptconf_totoc_iow
206   {
207     \iow_char:N \\thispaperauthor
208     \iow_char:N \{

```

```

209 \exp_not:n {#2}
210 \iow_char:N \}
211 }
212 }

```

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

### **\affiliation**

```

213 \NewDocumentCommand{\affiliation}{m m}
214 {
215   \tl_set:Nn \l_iptconf_affiliation_tl {#1}
216   \tl_set:Nn \l_iptconf_affiliation_number_tl {#2}
217   \seq_gput_right:Nn \g_iptconf_affiliation_seq
218     { \textsuperscript{#2}\ #1 }
219   \seq_gput_right:Nn \g_iptconf_justaffiliation_seq {#1}
220 }

```

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

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

```

221 \NewDocumentCommand{\@affiliation}{ }
222 {
223   \seq_use:Nnnn
224     \g_iptconf_affiliation_seq
225     {\\[2ex]} {\\[2ex]} {\\[2ex]}
226 }

```

*(End of definition for \@affiliation.)*

### **\udc**

```

227 \NewDocumentCommand\udc{ m }
228 {
229   \tl_set:Nn \l_iptconf_udc_tl {#1}
230 }

```

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

### **\pacs**

```

231 \NewDocumentCommand\pacs{ m }
232 {
233   \tl_set:Nn \l_iptconf_pacs_tl {#1}
234 }

```

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

### **\keywords**

```

235 \NewDocumentCommand\keywords{m}
236 {
237   \tl_set:Nn \l_iptconf_keywords_tl { #1 }
238 }

```

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

**\abstract**

```
239 \RenewDocumentCommand\abstract{ +m }
240 {
241   \tl_set:Nn \l_iptconf_abstract_tl {#1}
242 }
```

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

**\@abstract**

```
243 \NewDocumentCommand\@abstract{ }
244 {
245   \tl_use:N \l_iptconf_abstract_tl
246 }
```

(End of definition for \@abstract.)

Suppress the automatic date in the title.

```
247 \date{}
```

#### 4.11.3 Auxiliary author sequence

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

```
248 \NewDocumentCommand\authors{ }
249 {
250   \seq_use:Nnnn \g_iptconf_authors_seq {,~} {,~} {,~}
251 }
```

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

#### 4.11.4 The title block

**\@maketitle**

```
252 \RenewDocumentCommand\@maketitle{ }
253 {
254   \newpage
255   \tl_if_empty:NTF \l_iptconf_pacs_tl
256     { }
257     { \pacsnum\ \tl_use:N \l_iptconf_pacs_tl }
258   \tl_if_empty:NTF \l_iptconf_udc_tl
259     { }
260     { \udcnum\ \tl_use:N \l_iptconf_udc_tl }
261   \nopagebreak
262   \null
263   \vskip 1em
264   \begin{center}
265     \let\footnote\thanks
266     {\Large\bfseries\sffamily
267       \text_uppercase:n { \tl_use:N \l_iptconf_title_tl } \par
268     }
269     \vskip 1.5em
270     {\large
271       \lineskip .5em
272       \begin{center}
273         \authors
```

```

274     \end{center}
275     \par
276   }
277   \vskip 1ex
278   {\@affiliation}
279 \end{center}
280 }

```

(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.

```

281 \renewcommand\maketitle{\par
282   \begingroup
283   \iflanguage{ukrainian}%
284     {\renewcommand\thefootnote{\itshape\asbuk{footnote}}}%
285     {%
286       \iflanguage{russian}%
287         {\renewcommand\thefootnote{\itshape\asbuk{footnote}}}%
288         {%
289           \iflanguage{english}
290             {\renewcommand\thefootnote{\itshape\alph{footnote}}}%
291             {}%
292         }%
293     }%
294   \if@twocolumn
295     \ifnum \col@number=\@ne
296       \@maketitle
297       \noindent\hrulefill\par
298       \vspace{1.3ex}
299       {\large\bfseries \abstractname}
300       \begingroup
301         \quotation
302         \@abstract
303         \endquotation
304       \endgroup
305       \noindent{\bfseries \keyname}:\~\tl_use:N \l_iptconf_keywords_tl \par
306       \smallskip\noindent\hrulefill\medskip
307     \else
308       \twocolumn[\@maketitle
309         \noindent\hrulefill\par
310         \vspace{1.3ex}
311         {\large\bfseries \abstractname}
312         \begingroup
313           \quotation
314           \@abstract
315           \endquotation
316         \endgroup
317         \vskip 1em
318         \noindent{\bfseries \keyname}:\~\tl_use:N \l_iptconf_keywords_tl \par
319         \smallskip\noindent\hrulefill\bigskip
320       ]%
321     \fi
322   \else

```

```

323 \newpage
324 \global\@topnum\z@
325 \@maketitle
326 \fi
327 \@thanks
328 \endgroup
329 \setcounter{footnote}{0}%
330 \global\let\thanks\relax
331 \global\let\maketitle\relax
332 \global\let\@maketitle\relax
333 \global\let\@thanks\@empty
334 \global\let\@author\@empty
335 \global\let\@date\@empty
336 \global\let\@title\@empty
337 \global\let\title\relax
338 \global\let\author\relax
339 \global\let\date\relax
340 \global\let\and\relax
341 }

(End of definition for \maketitle. This function is documented on page ??.)
Write \finishauthors and close the stream at \end{document}.

342 \AtEndDocument
343 {
344 \iow_now:Nx \g_iptconf_totoc_iow { \iow_char:N \finishauthors }
345 \iow_close:N \g_iptconf_totoc_iow
346 }

```

## 4.12 Section headings

`\iptconf_secntformat:n` Adds a period after the section number.

```

347 \cs_gset_protected:Npn \iptconf_secntformat:n #1
348 {
349 \csname the#1\endcsname.\enskip
350 }
351 \cs_gset_eq:NN \@secntformat \iptconf_secntformat:n

(End of definition for \iptconf_secntformat:n.)

```

`\section`

```

352 \cs_gset_protected:Npn \iptconf_section:
353 {
354 \@startsection {section}{1}{\z@}%
355 {-2ex \@plus -1ex \@minus -.2ex}%
356 {1.3ex \@plus .2ex}%
357 {\normalfont\large\bfseries\raggedright}
358 }
359
360 \cs_new_protected:Npn \iptconf_section_star:n #1
361 {
362 \iptconf_section:*\{#1}
363 \addcontentsline{toc}{section}{#1}
364 }
365

```

```

366 \RenewDocumentCommand \section {s o m}
367 {
368   \IfBooleanTF{#1}
369   { \iptconf_section_star:n {#3} }
370   {
371     \IfNoValueTF{#2}
372     { \iptconf_section: {#3} }
373     { \iptconf_section: [#2]{#3} }
374   }
375 }

```

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

`\subsection`

```

376 \cs_gset_protected:Npn \iptconf_subsection:
377 {
378   \@startsection{subsection}{2}{\z@}%
379   {-3.25ex \@plus -1ex \@minus -.2ex}%
380   {1.5ex \@plus .2ex}%
381   {\normalfont\bfseries\raggedright}
382 }
383
384 \cs_new_protected:Npn \iptconf_subsection_star:n #1
385 {
386   \iptconf_subsection: *{#1}
387   \addcontentsline{toc}{subsection}{#1}
388 }
389
390 \RenewDocumentCommand \subsection {s o m}
391 {
392   \IfBooleanTF{#1}
393   { \iptconf_subsection_star:n {#3} }
394   {
395     \IfNoValueTF{#2}
396     { \iptconf_subsection: {#3} }
397     { \iptconf_subsection: [#2]{#3} }
398   }
399 }

```

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

## 4.13 Figures and tables

```

400 \RequirePackage[labelformat=simple]{subcaption}
401 \RequirePackage[labelsep=period]{caption}

```

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

```

402 \def\tabcaption{\def\@capttype{table}\caption}
403 \def\figcaption{\def\@capttype{figure}\caption}

```

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

```

404 \renewcommand\thesubfigure{(\alph{subfigure})}
405 \captionsetup[subfigure]{justification=centering, subrefformat=parens}

```

## 4.14 Hyperlinks

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

## 4.15 Metadata output

`\g_iptconf_regform_iow`

```
418 \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*.

```
419 \NewDocumentCommand \writeformdata {} {
420   \iow_open:Nn \g_iptconf_regform_iow
421     { \c_sys_jobname_str -regform.txt }
422   \iow_now:Nx \g_iptconf_regform_iow
423   {
424     \text_expand:n
425     { Повне ~ ім'я ~ доповідача: ~ \str_use:N \l_iptconf_fullname_str }
426     \iow_newline:
427     \text_expand:n
428     { Дата ~ народження: ~ \str_use:N \l_iptconf_birthday_str }
429     \iow_newline:
430     \text_expand:n
431     { Посада ~ доповідача: ~ \str_use:N \l_iptconf_position_str }
432     \iow_newline:
433     \text_expand:n
434     { Телефонний ~ номер: ~ \str_use:N \l_iptconf_phone_str }
435     \iow_newline:
436     \text_expand:n
437     { Email: ~ \str_use:N \l_iptconf_authoremail_str }
438     \iow_newline:
439     \text_expand:n
440     { Секція: ~ \str_use:N \l_iptconf_confsection_str }
441     \iow_newline:
442     \text_expand:n
443     { Кількість ~ копій: ~ \str_use:N \l_iptconf_copynum_str }
444     \iow_newline:
445     \text_expand:n
446     { Потреба ~ в ~ житлі: ~ \str_use:N \l_iptconf_needliving_str }
447     \iow_newline:
448     \text_expand:n
449     { Потреба ~ в ~ запрошенні: ~
450       \str_use:N \l_iptconf_needinvitanion_str }
```

```

451   \iow_newline:
452   }
453   \iow_close:N \g_iptconf_regform_iow
454 }

```

(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.

```

455 \NewDocumentCommand \writearticleinfo {} {
456
457   \text_declare_purify_equivalent:Nn \LaTeX { LaTeX }
458   \text_declare_purify_equivalent:Nn \TeX { TeX }
459   \text_declare_purify_equivalent:Nn \LaTeXe { LaTeX2e }
460
461   % Remove trailing period from keywords, then split into clist
462   \regex_replace_once:nnN { \.s*\z } {} \l_iptconf_keywords_tl
463   \clist_set:Nx \l_iptconf_keywords_clist
464     { \tl_use:N \l_iptconf_keywords_tl }
465
466   % Register Greek letter macros as their ASCII names for purification
467   \clist_map_inline:nn
468     {
469       alpha, beta, gamma, delta, epsilon, zeta, eta, theta,
470       iota, kappa, lambda, mu, nu, xi, omicron, pi, rho,
471       sigma, tau, upsilon, phi, chi, psi, omega,
472       Gamma, Delta, Theta, Lambda, Xi, Pi, Sigma, Upsilon, Phi, Psi, Omega
473     }
474     {
475       \exp_args:Ne \text_declare_purify_equivalent:Nn
476         { \cs:w ##1 \cs_end: } { ##1 }
477     }
478
479   % Clean author names: replace ~ with regular space
480   \seq_clear_new:N \g_cleanauthors_seq
481   \seq_map_inline:Nn \g_iptconf_justauthors_seq
482     {
483       \tl_set:Nn \l_tmpa_tl { ##1 }
484       \regex_replace_all:nnN { [\~] } { \ } \l_tmpa_tl
485       \seq_put_right:NV \g_cleanauthors_seq \l_tmpa_tl
486     }
487
488   % Purify title and abstract
489   \tl_set_eq:NN \l_cleanabstract_tl \l_iptconf_abstract_tl
490   \regex_replace_all:nnN { [\~] } { \ } \l_cleanabstract_tl
491   \tl_set_eq:NN \l_cleantitle_tl \l_iptconf_title_tl
492   \regex_replace_all:nnN { [\~] } { \ } \l_cleantitle_tl
493
494   \iow_open:Nn \g_iptconf_regform_iow
495     { \c_sys_jobname_str -info.yaml }
496
497   \iow_now:Nx \g_iptconf_regform_iow
498     { title: ~ " \text_purify:n { \l_cleantitle_tl } " }
499   \iow_now:Nx \g_iptconf_regform_iow

```

```

500     { speaker: ~ " \str_use:N \l_iptconf_fullname_str " }
501 \iow_now:Nx \g_iptconf_regform_iow
502     { section: ~ " \str_use:N \l_iptconf_confsection_str " }
503
504 \iow_now:Nn \g_iptconf_regform_iow { authors: }
505 \seq_map_inline:Nn \g_cleanauthors_seq
506 {
507     \iow_now:Nx \g_iptconf_regform_iow
508     { ~ - ~ " \text_purify:n {##1} " }
509 }
510
511 \iow_now:Nn \g_iptconf_regform_iow { affiliations: }
512 \seq_map_inline:Nn \g_iptconf_justaffiliation_seq
513 {
514     \str_if_eq:nnTF {##1} {\ipt}
515     { \iow_now:Nn \g_iptconf_regform_iow { ~ - ~ "HH ~ \Phi I" } }
516     {
517         \iow_now:Nx \g_iptconf_regform_iow
518         { ~ - ~ " \text_purify:n {##1} " }
519     }
520 }
521
522 \iow_now:Nx \g_iptconf_regform_iow { abstract: ~ > }
523 \iow_now:Nx \g_iptconf_regform_iow
524     { ~ " \text_purify:n { \l_cleanabstract_tl } " }
525
526 \iow_now:Nn \g_iptconf_regform_iow { keywords: }
527 \clist_map_inline:Nn \l_iptconf_keywords_clist
528 {
529     \iow_now:Nn \g_iptconf_regform_iow { ~ - ~ "##1" }
530 }
531
532 \iow_close:N \g_iptconf_regform_iow
533 }

```

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

## Change History

v1.0

General: First public release on CTAN . 1

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