

The ejpecp class^{*†}

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1 Introduction

The *ejpecp* L^AT_EX 2_ε class is designed for the typesetting of articles for the mathematical research periodicals Electronic Journal of Probability (EJP) and Electronic Communications in Probability (ECP).

2 Usage

This class works only with the pdf_latex engine. See the sample file for its usage.

3 Implementation

```
1 %% We declare and handle our class options
2 \DeclareOption{EJP}{%
3   \newcommand{\@EJP}{}
4   \newcommand{\@JOURNAL}{EJP}
5   \newcommand{\@JOURNALA}{Electron. J. Probab.}
6   \newcommand{\@JOURNALL}{Electronic Journal of Probability}
7   \newcommand{\@ISSN}{1083-6489}
8   \newcommand{\@URL}{www.imstat.org/ejp}
9 }
10 \DeclareOption{ECP}{%
11   \newcommand{\@ECP}{}
12   \newcommand{\@JOURNAL}{ECP}
13   \newcommand{\@JOURNALA}{Electron. Commun. Probab.}
14   \newcommand{\@JOURNALL}{Electronic Communications in Probability}
15   \newcommand{\@ISSN}{1083-589X}
16   \newcommand{\@URL}{www.imstat.org/ecp}
17 }
18 \DeclareOption{NOAMS}{% prevents the load of AMS packages
19   \newcommand{\@NOAMS}{}
20 }
21 \DeclareOption{NODS}{% asks to avoid renaming \mathbb into \mathds
22   \newcommand{\@NODS}{}
23 }
24 \DeclareOption{PSTRICKS}{% pstricks and pspicture.
25   % File must be compiled with "latex --shell-escape", then use dvipdf
26   \newcommand{\@PSTRICKS}{}
27 }
28 \DeclareOption{draft}{%
29   \PassOptionsToClass{draft}{article}
30 }
31 \DeclareOption{final}{%
32   \PassOptionsToClass{final}{article}
33 }
34 \DeclareOption*{%
```

^{*}class for EJP and ECP journals v1.8.2 dated 2020/07/30.

[†]Current maintainer of class file is VTeX, Lithuania. Please send all queries to latex-support@vtex.lt.

```

35 \PackageWarning{ejpecp}{Unknown option \CurrentOption}%
36 }
37 %\ExecuteOptions{EJP}
38 \ProcessOptions\relax
39 %% We use the standard article class
40 \LoadClass[a4paper,10pt,twoside]{article}
41 %% Packages and their options
42 \RequirePackage{graphicx}
43 \ifx\@PSTRICKS\undefined
44 \DeclareGraphicsExtensions{.pdf,.PDF,.eps,.EPS,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
45 \else
46 \RequirePackage[pdf]{pstricks}
47 \RequirePackage{auto-pst-pdf}
48 \fi
49 \RequirePackage{mathtools}
50 \RequirePackage{microtype}
51 \RequirePackage{lastpage}
52 \RequirePackage{latexsym}
53 \ifx\@NODS\undefined
54 \RequirePackage{dsfont}
55 \fi
56 \ifx\@NOAMS\undefined
57 \RequirePackage{amsmath,amsfonts,amssymb,amsthm}
58 \fi
59 \RequirePackage{geometry}
60 \geometry{a4paper,portrait,left=3.5cm,right=3.5cm,top=3.5cm,bottom=3.5cm}
61 %\RequirePackage{charter} % Ph. Carmona
62 \RequirePackage{bera} % beware that the logo is sensitive to default font change
63 \RequirePackage{hyperref}
64 \hypersetup{
65 pagebackref=false,
66 pdfborder={0 0 0},
67 pdfstartview={FitH},
68 hypertexnames=false,
69 breaklinks,
70 }
71 \def\UrlFont{}
72 %%% Macros et Environments
73 %% General macros
74 \newcommand{\@TITLE}{FIXME!}
75 \newcommand{\@SHORTTITLE}{FIXME!}
76 \newcommand{\@KEYWORDS}{FIXME!}
77 \newcommand{\@AMSSUBJ}{FIXME!}
78 \newcommand{\@ABSTRACT}{FIXME!}
79 \newcommand{\@VOLUME}{0}
80 \newcommand{\@PAPERNUM}{0}
81 \newcommand{\@YEAR}{2012}
82 \newcommand{\@PAGESTART}{1}
83 \newcommand{\@PAGEEND}{\pageref{LastPage}} % using lastpage package
84 \newcommand{\@SUBMITTED}{FIXME!}
85 \newcommand{\@ACCEPTED}{FIXME!}
86 \newcommand{\@TITLE}[1]{\renewcommand{\@TITLE}{#1}}
87 \newcommand{\@SHORTTITLE}[1]{\renewcommand{\@SHORTTITLE}{#1}}
88 \newcommand{\@DEDICATORY}[1]{\gdef\@DEDICATORY{#1}}
89 \newcommand{\@AUTHORS}[1]{\author{#1}}
90 \let\FIRSTNAMES\@firstofone
91 \let\SURNAME\@firstofone
92 \newcommand{\@KEYWORDS}[1]{\renewcommand{\@KEYWORDS}{#1}}
93 \newcommand{\@AMSSUBJ}[1]{\renewcommand{\@AMSSUBJ}{#1}}
94 \newcommand{\@AMSSUBJSECONDARY}[1]{\gdef\@AMSSUBJSECONDARY{#1}}
95 \newcommand{\@ABSTRACT}[1]{\renewcommand{\@ABSTRACT}{#1}}
96 \newcommand{\@VOLUME}[1]{\renewcommand{\@VOLUME}{#1}}
97 \newcommand{\@PAPERNUM}[1]{\renewcommand{\@PAPERNUM}{#1}}

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98 \newcommand{\YEAR}[1]{\renewcommand{\@YEAR}{#1}}
99 \newcommand{\PAGESTART}[1]{\renewcommand{\@PAGESTART}{#1}}
100 \newcommand{\PAGEEND}[1]{\renewcommand{\@PAGEEND}{#1}}
101 \newcommand{\SUBMITTED}[1]{\renewcommand{\@SUBMITTED}{#1}}
102 \newcommand{\ACCEPTED}[1]{\renewcommand{\@ACCEPTED}{#1}}
103 \newcommand{\DOI}[1]{\gdef\@DOI{#1}}
104 \newcommand{\ARXIVID}[1]{\gdef\@ARXIVID{#1}}
105 \newcommand{\HALID}[1]{\gdef\@HALID{#1}}
106 \newcommand{\ACKNO}[1]{\noindent\textbf{Acknowledgments.} #1}
107 \def\EMAIL#1{E-mail:~\texttt{\href{mailto:#1}{\nolinkurl{#1}}}}
108 \newcommand{\BEMAIL}[1]{\newline\hspace*{1.8em}\EMAIL{#1}} % useful in ftnotes
109 %% Logos
110 \newcommand{\@EJPLOGO}{% designed by KB.
111 % This version is for bera 10pt (depends on the font via "em" and "ex")
112 \centerline{%
113 \hbox{%
114 \vrule height -0.4 pt depth 0.8 pt width 27.7 em\space
115 \kern -27.8 em\space
116 \raise 0.03ex \hbox {\bf E}\space
117 \raise 0.06ex \hbox {l}\space
118 \raise .13ex \hbox {e}\space
119 \raise .24ex \hbox {c}\space
120 \raise .45ex \hbox {t}\space
121 \raise .78ex \hbox {r}\space
122 \raise 1.31ex \hbox {o}\space
123 \raise 2.08ex \hbox {n}\space
124 \raise 3.14ex \hbox {i}\space
125 \raise 4.53ex \hbox {c}\space
126 \kern 1em\space
127 \raise 8.15ex \hbox {\bf J}\space
128 \raise 10.15ex \hbox {o}\space
129 \raise 12.04ex \hbox {u}\space
130 \raise 13.60ex \hbox {r}\space
131 \raise 14.64ex \hbox {n}\space
132 \kern .3 em\space
133 \vrule depth 0.8pt height 14.5ex \space
134 \kern -.3em\space
135 \raise 15ex \hbox {a}\space
136 \raise 14.64ex \hbox {l}\space
137 \kern 1em\space
138 \raise 12.04ex \hbox {o}\space
139 \raise 10.15ex \hbox {f}\space
140 \kern 1em\space
141 \raise 6.23ex \hbox {\bf P}\space
142 \raise 4.53ex \hbox {r}\space
143 \raise 3.14ex \hbox {o}\space
144 \raise 2.08ex \hbox {b}\space
145 \raise 1.31ex \hbox {a}\space
146 \raise .78ex \hbox {b}\space
147 \raise .45ex \hbox {i}\space
148 \raise .24ex \hbox {l}\space
149 \raise .13ex \hbox {i}\space
150 \raise .06ex \hbox {t}\space
151 \raise .03ex \hbox {y}%
152 }%
153 }%
154 }%EJPLOGO
155 \newcommand{\@ECPLOGO}{% designed when Ren'e Carmona was in charge of ECP
156 \raisebox{0.3cm}{\parbox[t]{1.3in}{\noindent\rule{1.3in}{1.6pt}}\
157 \textbf{ ELECTRONIC}\
158 \textbf{ COMMUNICATIONS}\
159 \textbf{ in PROBABILITY}\
160 \rule{.08in}{1.3in}{1.6pt}}}%

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161 }%ECPLOGO
162 \def\@doiprefix{https://doi.org/}
163 \def\printdoi{\texttt{\href{\@doiprefix\@DOI}{\@doiprefix\@DOI}}}
164 \def\msc@url{https://ams.org/mathscinet/msc/msc2020.html}
165 %% make title long
166 \renewcommand\title[1]{\gdef\@title{#1}}
167 %% Macro handling the first page
168 \def\papernum@name{no.}
169 \newcommand{\FIRSTPAGE}{%
170   \setcounter{page}{\@PAGESTART}%
171   \title{\small
172     \ifx\@EJP\undefined\else
173       \@EJPLOGO
174       \bigskip
175       \centerline{\@JOURNALA\ \textbf{\@VOLUME} (\@YEAR),\
176         \papernum@name\ \@PAPERNUM, \,\@PAGESTART--\@PAGEEND.}%
177       \centerline{ISSN:\ \texttt{\href{http://\@URL/}{\@ISSN}}} \%
178       \ifx\@DOI\undefined\else
179         \ \printdoi
180         \fi}%
181       \bigskip
182       \bigskip
183       {\Large\bfseries\@TITLE\par}%
184     \fi
185     \ifx\@ECP\undefined
186     \else
187       \parbox[t]{9cm}{%
188         \@JOURNALA\ \textbf{\@VOLUME} (\@YEAR),
189         \papernum@name\ \@PAPERNUM, \@PAGESTART--\@PAGEEND.\@
190         \ifx\@DOI\undefined
191           \else
192             \ \printdoi
193             \fi \\\
194             ISSN:\ \texttt{\href{http://\@URL/}{\@ISSN}}} \%
195           }%
196         \hfill
197         \@ECPLOGO\\
198         \bigskip
199         \bigskip
200         {\Large\@TITLE\par}%
201       \fi
202     }% end title
203   \date{%
204     \ifx\@DEDICATORY\undefined
205     \else
206       \noindent
207       \emph{\small\sffamily\@DEDICATORY}%
208     \fi}%
209   \maketitle\thispagestyle{empty}%
210   \begin{abstract}%
211     \noindent
212     \@ABSTRACT\par\vskip 1em\relax
213     {\footnotesize
214       \noindent\textbf{Keywords: }\@KEYWORDS.\par
215       \noindent\href\msc@url{\textbf{MSC2020 subject classifications: }}%
216       \ifx\@AMSSUBJSECONDARY\undefined
217         \noindent
218         \@AMSSUBJ.\par
219       \else
220         \noindent
221         Primary \@AMSSUBJ, Secondary \@AMSSUBJSECONDARY.\par
222       \fi
223     \noindent

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224 Submitted to \@JOURNAL\ on \@SUBMITTED,
225 final version accepted on \@ACCEPTED.\par
226 \ifx\@ARXIVID\undefined
227 \else
228 \noindent
229 Supersedes
230 \texttt{\href{http://arXiv.org/abs/\@ARXIVID}{arXiv:\@ARXIVID}}.%
231 \fi\par
232 \ifx\@HALID\undefined
233 \else
234 \noindent
235 Supersedes
236 \texttt{\href{http://hal.archives-ouvertes.fr/\@HALID}{HAL:\@HALID}}.%
237 \fi\par
238 }%footnotesize
239 \end{abstract}
240
241 \smallskip
242
243 }%END-FIRSTPAGE
244 %% Macro setting the PDF title
245 \newcommand{\PDFFIELDS}{%
246 \hypersetup{%
247 pdftitle={\@JOURNAL\ \@VOLUME\ (\@YEAR), \papernum@name\ \@PAPERNUM, \doiprefix\@DOI}}%
248 \hypersetup{pdfkeywords={\@KEYWORDS}}%
249 \hypersetup{pdfproducer={\@JOURNAL\ Managing Editor http://\@URL/}}%
250 \hypersetup{pdfcreator={LaTeX with ejpecp.cls v1.8.2}}%
251 \hypersetup{pdfsubject={Probability Theory}}%
252 \hypersetup{pdfauthor={Please see \@doiprefix\@DOI}}%
253 }%END-PDFFIELDS
254
255 %% Bibliography
256 \def\@MRExtract#1 #2!{#1} % thanks, Martin!
257 \newcommand{\MR}[1]{% we need to strip the "(...)"
258 \xdef\@MRSTRIP{\@MRExtract#1 !}%
259 \href{http://www.ams.org/mathscinet-getitem?mr=\@MRSTRIP}{MR-\@MRSTRIP}}
260 \newcommand{\ARXIV}[1]{\href{http://arXiv.org/abs/#1}{arXiv:#1}}
261 \def\bibliography@size{\small}
262 \renewenvironment{thebibliography}[1]
263 {%
264 \section*{\refname
265 \@mkboth{MakeUppercase\refname}{\MakeUppercase\refname}}%
266 \phantomsection
267 \addcontentsline{toc}{section}{\refname}%
268 \list{\@biblabel{\@arabic\c@enumiv}}%
269 {\settowidth\labelwidth{\@biblabel{#1}}%
270 \bibliography@size
271 \setlength{\labelsep}{0.4em}%
272 \setlength{\leftmargin}{\labelwidth}%
273 \addtolength{\leftmargin}{\labelsep}%
274 \setlength{\itemsep}{-.25em}%
275 \@openbib@code
276 \usecounter{enumiv}%
277 \let\p@enumiv\empty
278 \renewcommand\theenumiv{\@arabic\c@enumiv}}%
279 \sloppy\clubpenalty4000\@clubpenalty\clubpenalty\widowpenalty4000%
280 \sfcode'\.\@m
281 }{%
282 \def\@noitemerr{%
283 \@latex@warning{Empty 'thebibliography' environment}}%
284 \endlist
285 }
286 %% Theorem styles

```

```

287 \ifx\@NOAMS\undefined
288   \newtheoremstyle{ejpecpbodyit}% name % cf. thmtest.tex of AMSLaTeX
289     {3pt} % Space above
290     {3pt} % Space below
291     {\itshape} % Body font
292     {} % Indent amount (empty = no indent,
293         % \parindent = para indent)
294     {\bfseries\sffamily} % Thm head font
295     {.} % Punctuation after thm head
296     { } % Space after thm head: " " = normal interword space;
297         % \newline = linebreak
298     {} % Thm head spec (can be left empty, meaning 'normal')
299   \newtheoremstyle{ejpecpbodyrm}% name % cf. thmtest.tex of AMSLaTeX
300     {3pt} % Space above
301     {3pt} % Space below
302     {} % Body font
303     {} % Indent amount (empty = no indent,
304         % \parindent = para indent)
305     {\bfseries\sffamily} % Thm head font
306     {.} % Punctuation after thm head
307     { } % Space after thm head: " " = normal interword space;
308         % \newline = linebreak
309     {} % Thm head spec (can be left empty, meaning 'normal')
310 \fi
311 %%
312 \ifx\@NOAMS\undefined
313   \theoremstyle{ejpecpbodyit}
314 \fi
315 \newtheorem{theorem}{Theorem}[section]
316 \newtheorem{assumptions}[theorem]{Assumptions}
317 \newtheorem{assumption}[theorem]{Assumption}
318 \newtheorem{claim}[theorem]{Claim}
319 \newtheorem{condition}[theorem]{Condition}
320 \newtheorem{conjecture}[theorem]{Conjecture}
321 \newtheorem{corollary}[theorem]{Corollary}
322 \newtheorem{definitions}[theorem]{Definitions}
323 \newtheorem{definition}[theorem]{Definition}
324 \newtheorem{facts}[theorem]{Facts}
325 \newtheorem{fact}[theorem]{Fact}
326 \newtheorem{heuristics}[theorem]{Heuristics}
327 \newtheorem{hypothesis}[theorem]{Hypothesis}
328 \newtheorem{hypotheses}[theorem]{Hypotheses}
329 \newtheorem{lemma}[theorem]{Lemma}
330 \newtheorem{notations}[theorem]{Notations}
331 \newtheorem{notation}[theorem]{Notation}
332 \newtheorem{proposition}[theorem]{Proposition}
333 \ifx\@NOAMS\undefined
334   \theoremstyle{ejpecpbodyrm}
335 \fi
336 \newtheorem{example}[theorem]{Example}
337 \newtheorem{exercise}[theorem]{Exercise}
338 \newtheorem{problem}[theorem]{Problem}
339 \newtheorem{question}[theorem]{Question}
340 \newtheorem{remark}[theorem]{Remark}
341 %% Numbering
342 \ifx\@NOAMS\undefined
343   \numberwithin{equation}{section}
344 \fi
345 %% Itemize and enumerate for bera
346 \newcommand{\@reduceitemsep}{\addtolength{\itemsep}{-0.5\baselineskip}}
347 \let\OLD@itemize\itemize
348 \renewcommand\itemize{\OLD@itemize\@reduceitemsep}
349 \let\OLD@enumerate\enumerate

```

```

350 \renewcommand\enumerate{\OLD@enumerate\@reduceitemsep}
351 %% Replace \mathbb by \mathds except if we require the contrary
352 \ifx\@NODS\undefined
353   \let\realmathbb=\mathbb
354   \let\mathbb=\mathds
355 \fi
356 %% Headings
357 \newcommand{\@HLOB}{%
358   \href{\@doiprefix\@DOI}%
359     {\@JOURNAL\ \textbf{\@VOLUME}\, (\@YEAR),\ paper \@PAPERNUM.}}
360 \renewcommand{\@evenfoot}{%
361   \normalfont\footnotesize\@HLOB\hfil
362   \small\raisebox{-1em}{Page \thepage/\@PAGEEND}\hfil
363   \footnotesize\href{http://\@URL/}{http://\@URL/}}
364 \renewcommand{\@oddfoot}{\@evenfoot}
365 \renewcommand{\@evenhead}{\hfil\@SHORTTITLE\hfil}
366 \renewcommand{\@oddhead}{\@evenhead}
367 %% smaller sections titles
368 \renewcommand{\section}{%
369   \@startsection
370     {section}
371     {1}
372     {0em}
373     {\baselineskip}
374     {0.5\baselineskip}
375     {\normalfont\large\bfseries}}
376 \renewcommand{\subsection}{%
377   \@startsection
378     {subsection}
379     {2}
380     {0em}
381     {\baselineskip}
382     {0.25\baselineskip}
383     {\normalfont\bfseries}}
384 \RequirePackage{afterpackage}
385 \AfterPackage{natbib}
386 {%
387   \def\bibcleanup{\vskip-\lastskip\vskip10\p@}%
388   \renewcommand{\bibfont}{\small}%
389   \newlength{\standard@parsep}%
390   \newlength{\standard@itemsep}%
391   \setlength{\standard@parsep}{4.0pt plus 2.0pt minus 1.0pt}%
392   \setlength{\standard@itemsep}{-2.02498pt}%
393   \setlength{\bibsep}{\standard@parsep}%
394   \addtolength{\bibsep}{\standard@itemsep}%
395   \renewcommand\NAT@bibsetnum[1]%
396     {%
397       \settowidth\labelwidth{\@biblabel{#1}}%
398       \setlength{\leftmargin}{\labelwidth}\addtolength{\leftmargin}{\labelsep}%
399       \setlength{\labelsep}{3pt}%
400       \setlength{\itemsep}{\bibsep}\setlength{\parsep}{\z@}%
401       \ifNAT@openbib
402         \addtolength{\leftmargin}{\bibindent}%
403         \setlength{\itemindent}{-\bibindent}%
404         \setlength{\listparindent}{\itemindent}%
405         \setlength{\parsep}{0pt}%
406       \fi
407     }%
408 }%
409 \def\amp{&}%
410 \InputIfFileExists{ejpecp.cfg}
411 {}
412 {\def\papernum@name{article no.}}

```

```
413 %% Macros
414 \AtBeginDocument{\FIRSTPAGE\PDFFIELDS}
415 \AtEndDocument{\vfill}
416 \endinput
417 %%
418 %% End of file 'ejpecp.cls'.
419 %% Macros
420 \AtBeginDocument{\FIRSTPAGE\PDFFIELDS}
421 \AtEndDocument{\vfill}
```