

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   \newcommand{\@FULLURL}{https://imstat.org/journals-and-publications/electronic-journal-of-probability/}
10 }
11 \DeclareOption{ECP}{%
12   \newcommand{\@ECP}{}
13   \newcommand{\@JOURNAL}{ECP}
14   \newcommand{\@JOURNALA}{Electron. Commun. Probab.}
15   \newcommand{\@JOURNALL}{Electronic Communications in Probability}
16   \newcommand{\@ISSN}{1083-589X}
17   \newcommand{\@URL}{www.imstat.org/ecp}
18   \newcommand{\@FULLURL}{https://imstat.org/journals-and-publications/electronic-communications-in-probability/}
19 }
20 \DeclareOption{NOAMS}{% prevents the load of AMS packages
21   \newcommand{\@NOAMS}{}
22 }
23 \DeclareOption{NODS}{% asks to avoid renaming \mathbb into \mathds
24   \newcommand{\@NODS}{}
25 }
26 \DeclareOption{PSTRICKS}{% pstricks and pspicture.
27   % File must be compiled with "latex --shell-escape", then use dvipdf
28   \newcommand{\@PSTRICKS}{}
29 }
30 \DeclareOption{draft}{%
31   \PassOptionsToClass{draft}{article}
32 }
33 \DeclareOption{final}{%
34   \PassOptionsToClass{final}{article}
```

^{*}class for EJP and ECP journals v1.9.0 dated 2020/10/21.

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

```

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

```

```

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

```

```

161      \textbf{ in PROBABILITY}\\
162      \rule[.08in]{1.3in}{1.6pt}}}%
163  }%ECPLOGO
164  \def\doi@prefix{https://doi.org/}
165  \def\printdoi{\texttt{\href{\doi@prefix\@DOI}{\doi@prefix\@DOI}}}
166  \def\msc@url{https://ams.org/mathscinet/msc/msc2020.html}
167  %% make title long
168  \renewcommand\title[1]{\gdef\@title{#1}}
169  %% Macro handling the first page
170  \def\papernum@name{no.}
171  \newcommand{\FIRSTPAGE}{%
172    \setcounter{page}{\@PAGESTART}%
173    \title{\small
174      \ifx\@EJP\undefined\else
175        \@EJPLOGO
176        \bigskip
177        \centerline{\@JOURNALA\ \textbf{\@VOLUME} (\@YEAR),\
178          \papernum@name\ \@PAPERNUM, \,\@PAGESTART--\@PAGEEND.}%
179        \centerline{ISSN:\ \texttt{\href{\@FULLURL}{\@ISSN}}} \%
180        \ifx\@DOI\undefined\else
181          \ \printdoi
182          \fi}%
183        \bigskip
184        \bigskip
185        {\Large\bfseries\@TITLE\par}%
186        \fi
187        \ifx\@ECP\undefined
188        \else
189          \parbox[t]{9cm}{%
190            \@JOURNALA\ \textbf{\@VOLUME} (\@YEAR),
191            \papernum@name\ \@PAPERNUM, \@PAGESTART--\@PAGEEND.\@
192            \ifx\@DOI\undefined
193              \else
194                \ \printdoi
195                \fi \\\
196            ISSN:\ \texttt{\href{\@FULLURL}{\@ISSN}}} \%
197            }%
198            \hfill
199            \@ECPLOGO\\
200            \bigskip
201            \bigskip
202            {\Large\@TITLE\par}%
203            \fi
204            }% end title
205  \date{%
206    \ifx\@DEDICATORY\undefined
207    \else
208      \noindent
209      \emph{\small\sffamily\@DEDICATORY}%
210      \fi}%
211  \maketitle\thispagestyle{empty}%
212  \begin{abstract}%
213    \noindent
214    \@ABSTRACT\par\vskip 1em\relax
215    {\footnotesize
216      \noindent\textbf{Keywords: } \@KEYWORDS.\par
217      \noindent\href\msc@url{\textbf{MSC2020 subject classifications: }}%
218      \ifx\@AMSSUBJSECONDARY\undefined
219        \noindent
220        \@AMSSUBJ.\par
221      \else
222        \noindent
223        Primary \@AMSSUBJ, Secondary \@AMSSUBJSECONDARY.\par

```

```

224 \fi
225 \noindent
226 Submitted to \@JOURNAL\ on \@SUBMITTED,
227 final version accepted on \@ACCEPTED.\par
228 \ifx\@ARXIVID\undefined
229 \else
230 \noindent
231 Supersedes
232 \texttt{\href{https://arXiv.org/abs/\@ARXIVID}{arXiv:\@ARXIVID}}.%
233 \fi\par
234 \ifx\@HALID\undefined
235 \else
236 \noindent
237 Supersedes
238 \texttt{\href{https://hal.archives-ouvertes.fr/\@HALID}{HAL:\@HALID}}.%
239 \fi\par
240 }%footnotesize
241 \end{abstract}
242
243 \smallskip
244
245 }%END-FIRSTPAGE
246 %% Macro setting the PDF title
247 \newcommand{\PDFFIELDS}{%
248 \hypersetup{%
249 pdftitle={\@JOURNAL\ \@VOLUME\ (\@YEAR), \paperum@name\ \@PAPERUM, \doiprefix\@DOI}}%
250 \hypersetup{pdfkeywords={\@KEYWORDS}}%
251 \hypersetup{pdfproducer={\@JOURNAL\ Managing Editor https://\@URL}}%
252 \hypersetup{pdfcreator={LaTeX with ejpecp.cls v1.8.2}}%
253 \hypersetup{pdfsubject={Probability Theory}}%
254 \hypersetup{pdfauthor={Please see \doiprefix\@DOI}}%
255 }%END-PDFFIELDS
256
257 %% Supplement
258 \def\supplement@name{Supplementary Material}
259 \def\stitle#1{\def\@stitle{#1}}
260 \def\stitle@fmt#1{\textbf{#1.}\ }
261 \def\sdescription#1{\def\@sdescription{#1}}
262 \def\supsection@fmt{\section*{\supplement@name}}
263 \long\def\supplement{\@ifnextchar[{\@supplement}{\@supplement []}}
264 \long\def\@supplement[#1]{%
265 \supsection@fmt
266 \global\let\supsection@fmt\smallskip
267 }
268 \def\endsupplement{%
269 \ifundefined{\@stitle}%
270 {}%
271 {\stitle@fmt{\@stitle}}%
272 %
273 \ifundefined{\@sdescription}{\@sdescription}%
274 \par
275 }
276
277 %% Bibliography
278 \def\@MRExtract#1 #2!{#1} % thanks, Martin!
279 \newcommand{\MR}[1]{% we need to strip the "(...)"
280 \xdef\@MRSTRIP{\@MRExtract#1 !}%
281 \href{https://mathscinet.ams.org/mathscinet-getitem?mr=\@MRSTRIP}{MR-\@MRSTRIP}}
282 \newcommand{\ARXIV}[1]{\href{https://arXiv.org/abs/#1}{arXiv:#1}}
283 \def\bibliography@size{\small}
284 \renewenvironment{thebibliography}[1]
285 {%
286 \section*{\refname

```

```

287 \mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}}%
288 \phantomsection
289 \addcontentsline{toc}{section}{\refname}%
290 \list{\@biblabel{\@arabic\c@enumiv}}%
291 {\settowidth\labelwidth{\@biblabel{#1}}%
292 \bibliography@size
293 \setlength{\labelsep}{0.4em}%
294 \setlength{\leftmargin}{\labelwidth}%
295 \addtolength{\leftmargin}{\labelsep}%
296 \setlength{\itemsep}{-.25em}%
297 \@openbib@code
298 \usecounter{enumiv}%
299 \let\p@enumiv\empty
300 \renewcommand\theenumiv{\@arabic\c@enumiv}}%
301 \sloppy\clubpenalty4000\@clubpenalty\clubpenalty\widowpenalty4000%
302 \sfcode'\.\@m
303 }{%
304 \def\@noitemerr{%
305 \@latex@warning{Empty 'thebibliography' environment}}%
306 \endlist
307 }
308 %% Theorem styles
309 \ifx\@NOAMS\undefined
310 \newtheoremstyle{ejpecpbodyit}% name % cf. thmtest.tex of AMSLaTeX
311 {3pt} % Space above
312 {3pt} % Space below
313 {\itshape} % Body font
314 {} % Indent amount (empty = no indent,
315 % \parindent = para indent)
316 {\bfseries\sffamily} % Thm head font
317 {.} % Punctuation after thm head
318 { } % Space after thm head: " " = normal interword space;
319 % \newline = linebreak
320 {} % Thm head spec (can be left empty, meaning 'normal')
321 \newtheoremstyle{ejpecpbodyrm}% name % cf. thmtest.tex of AMSLaTeX
322 {3pt} % Space above
323 {3pt} % Space below
324 {} % Body font
325 {} % Indent amount (empty = no indent,
326 % \parindent = para indent)
327 {\bfseries\sffamily} % Thm head font
328 {.} % Punctuation after thm head
329 { } % Space after thm head: " " = normal interword space;
330 % \newline = linebreak
331 {} % Thm head spec (can be left empty, meaning 'normal')
332 \fi
333 %%
334 \ifx\@NOAMS\undefined
335 \theoremstyle{ejpecpbodyit}
336 \fi
337 \newtheorem{theorem}{Theorem}[section]
338 \newtheorem{assumptions}[theorem]{Assumptions}
339 \newtheorem{assumption}[theorem]{Assumption}
340 \newtheorem{claim}[theorem]{Claim}
341 \newtheorem{condition}[theorem]{Condition}
342 \newtheorem{conjecture}[theorem]{Conjecture}
343 \newtheorem{corollary}[theorem]{Corollary}
344 \newtheorem{definitions}[theorem]{Definitions}
345 \newtheorem{definition}[theorem]{Definition}
346 \newtheorem{facts}[theorem]{Facts}
347 \newtheorem{fact}[theorem]{Fact}
348 \newtheorem{heuristics}[theorem]{Heuristics}
349 \newtheorem{hypothesis}[theorem]{Hypothesis}

```

```

350 \newtheorem{hypotheses}[theorem]{Hypotheses}
351 \newtheorem{lemma}[theorem]{Lemma}
352 \newtheorem{notations}[theorem]{Notations}
353 \newtheorem{notation}[theorem]{Notation}
354 \newtheorem{proposition}[theorem]{Proposition}
355 \ifx\@NOAMS\undefined
356   \theoremstyle{ejpecpbodyrm}
357 \fi
358 \newtheorem{example}[theorem]{Example}
359 \newtheorem{exercise}[theorem]{Exercise}
360 \newtheorem{problem}[theorem]{Problem}
361 \newtheorem{question}[theorem]{Question}
362 \newtheorem{remark}[theorem]{Remark}
363 %% Numbering
364 \ifx\@NOAMS\undefined
365   \numberwithin{equation}{section}
366 \fi
367 %% Itemize and enumerate for bera
368 \newcommand{\@reduceitemsep}{\addtolength{\itemsep}{-0.5\baselineskip}}
369 \let\OLD@itemize\itemize
370 \renewcommand\itemize{\OLD@itemize\@reduceitemsep}
371 \let\OLD@enumerate\enumerate
372 \renewcommand\enumerate{\OLD@enumerate\@reduceitemsep}
373 %% Replace \mathbb by \mathds except if we require the contrary
374 \ifx\@NODS\undefined
375   \let\realmathbb=\mathbb
376   \let\mathbb=\mathds
377 \fi
378 %% Headings
379 \newcommand{\@HLOB}{%
380   \href{\@doiprefix\@DOI}%
381     {\@JOURNAL\ \textbf{\@VOLUME}\, (\@YEAR),\ paper \@PAPERNUM.}}
382 \renewcommand{\@evenfoot}{%
383   \normalfont\footnotesize\@HLOB\hfil
384   \small\raisebox{-1em}{Page \thepage/\@PAGEEND}\hfil
385   \footnotesize\href{\@FULLURL}{https://\@URL}}
386 \renewcommand{\@oddfoot}{\@evenfoot}
387 \renewcommand{\@evenhead}{\hfil\@SHORTTITLE\hfil}
388 \renewcommand{\@oddhead}{\@evenhead}
389 %% smaller sections titles
390 \renewcommand{\section}{%
391   \@startsection
392     {section}
393     {1}
394     {0em}
395     {\baselineskip}
396     {0.5\baselineskip}
397     {\normalfont\large\bfseries}}
398 \renewcommand{\subsection}{%
399   \@startsection
400     {subsection}
401     {2}
402     {0em}
403     {\baselineskip}
404     {0.25\baselineskip}
405     {\normalfont\bfseries}}
406 \RequirePackage{afterpackage}
407 \AfterPackage{natbib}
408 {%
409   \def\bibcleanup{\vskip-\lastskip\vskip10\p@}%
410   \renewcommand{\bibfont}{\small}%
411   \newlength{\standard@parsep}%
412   \newlength{\standard@itemsep}%

```

```

413 \setlength{\standard@parsep}{4.0pt plus 2.0pt minus 1.0pt}%
414 \setlength{\standard@itemsep}{-2.02498pt}%
415 \setlength{\bibsep}{\standard@parsep}%
416 \addtolength{\bibsep}{\standard@itemsep}%
417 \renewcommand\NAT@bibsetnum[1]%
418 {%
419   \settowidth\labelwidth{\@biblabel{#1}}%
420   \setlength{\leftmargin}{\labelwidth}\addtolength{\leftmargin}{\labelsep}%
421   \setlength{\labelsep}{3pt}%
422   \setlength{\itemsep}{\bibsep}\setlength{\parsep}{\z@}%
423   \ifNAT@openbib
424     \addtolength{\leftmargin}{\bibindent}%
425     \setlength{\itemindent}{-\bibindent}%
426     \setlength{\listparindent}{\itemindent}%
427     \setlength{\parsep}{0pt}%
428   \fi
429 }%
430}%
431 \def\amp{&}%
432 \InputIfFileExists{ejpecp.cfg}
433 {}
434 {\def\papernum@name{article no.}}
435 %% Macros
436 \AtBeginDocument{\FIRSTPAGE\PDFFIELDS}
437 \AtEndDocument{\vfill}
438 \endinput
439 %%
440 %% End of file 'ejpecp.cls'.
441 %% Macros
442 \AtBeginDocument{\FIRSTPAGE\PDFFIELDS}
443 \AtEndDocument{\vfill}

```

Change History

v0.5	General: Initial version.	1	v1.3	General: Updated journal URLs and DOI output format	1
v0.57	General: Improvements, see the README file.	1	v1.4	General: Abstract baselineskip correction	1
v0.577	General: Improvements, see the README file.	1	v1.5	General: false configuration for hyperref package	1
v0.5772	General: Improvements, see the README file.	1	v1.6	General: full url doi, package maintaining and shorttitle info	1
v0.57721	General: Improvements, see the README file.	1	v1.7	General: merged with production version: fixltx2e removed, natbib setup with afterpackage, etc	1
v0.577215	General: Improvements, see the README file.	1	v1.8.2	General: no. prefix updated and msc2020	1
v1.0	General: First stable version, see the README file.	1	v1.8.3	General: Update URLs	1
v1.1	General: Corrected stable version, see the README file.	1	v1.9.0	General: Supplement envirnment	1
v1.2	General: Transition to EJMS/VTEX/ProjectEuclid.	1			

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Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

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