

# The ejpecp class\*

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## 1 Introduction

The *ejpecp* L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> 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<sub>l</sub>atex engine. See the sample file for its usage.

## 3 Implementation

```
1 %% We declare and handle our class options
2 \DeclareOption{EJP}{%
3   \makeatletter
4   \newcommand{\@EJP}{}
5   \newcommand{\@JOURNAL}{EJP}
6   \newcommand{\@JOURNALL}{Electronic Journal of Probability}
7   \newcommand{\@ISSN}{1083-6489}
8   \newcommand{\@URL}{ejp.ejpecp.org}
9   \makeatother
10 }
11 \DeclareOption{ECP}{%
12   \makeatletter
13   \newcommand{\@ECP}{}
14   \newcommand{\@JOURNAL}{ECP}
15   \newcommand{\@JOURNALL}{Electronic Communications in Probability}
16   \newcommand{\@ISSN}{1083-589X}
17   \newcommand{\@URL}{ecp.ejpecp.org}
18   \makeatother
19 }
20 \DeclareOption{NODS}{% asks to avoid renaming \mathbb into \mathds
21   \makeatletter
22   \newcommand{\@NODS}{}
23   \makeatother
24 }
25 \DeclareOption{draft}{%
26   \PassOptionsToClass{draft}{article}
27 }
28 \DeclareOption{final}{%
29   \PassOptionsToClass{final}{article}
30 }
31 \DeclareOption*{%
32   \PackageWarning{ejpecp}{Unknown option \CurrentOption}%
33 }
34 %\ExecuteOptions{EJP}
35 \ProcessOptions\relax
```

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\*.dtx ejpecp file v. v0.5772 dated 2011/12/24.

```

36 %% We use the standard article class
37 \LoadClass[a4paper,10pt,twoside]{article}
38 %% Packages and their options
39 \RequirePackage[pdftex]{graphicx}
40 \DeclareGraphicsExtensions{.pdf,.PDF,.eps,.EPS,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
41 \RequirePackage{lastpage}
42 \RequirePackage{amsmath,amsfonts,amssymb,amsthm,latexsym,dsfont}
43 \RequirePackage{geometry}
44 \geometry{a4paper,portrait,left=4.5cm,right=2.5cm,top=3.5cm,bottom=3.5cm}
45 %%\RequirePackage{charter} % Ph. Carmona
46 \RequirePackage{bera} % beware that the logo is sensitive to default font change
47 \RequirePackage[pdftex,pagebackref=false]{hyperref}
48 \hypersetup{colorlinks=false}
49 \hypersetup{pdfborder=0}
50 % Colored borders off due to ugly large rectangle in first page of ECP
51 % (this is due to the \pageref{LastPage} in headings which produces a link)
52 %\hypersetup{pdfborder=0 0 0.5}
53 %\hypersetup{linkbordercolor=0.0 0.9 0.9}
54 %\hypersetup{urlbordercolor=0.0 0.9 0.9}
55 %\hypersetup{citebordercolor=0.0 0.9 0.9}
56 \hypersetup{pdfcreator=pdflatex engine with ejpecp class}
57 \hypersetup{pdfstartview={FitH}}
58 %%% Macros et Environments
59 %% General macros
60 \makeatletter%
61 \newcommand{\@TITLE}{\FIXME!}
62 \newcommand{\@SHORTTITLE}{\FIXME!}
63 \newcommand{\@KEYWORDS}{\FIXME!}
64 \newcommand{\@AMSSUBJ}{\FIXME!}
65 \newcommand{\@ABSTRACT}{\FIXME!}
66 \newcommand{\@VOLUME}{0}
67 \newcommand{\@PAPERNUM}{0}
68 \newcommand{\@YEAR}{2012}
69 \newcommand{\@PAGESTART}{1}
70 \newcommand{\@PAGEEND}{\pageref{LastPage}} % using lastpage package
71 \newcommand{\@SUBMITTED}{\FIXME!}
72 \newcommand{\@ACCEPTED}{\FIXME!}
73 \newcommand{\@TITLE}[1]{\renewcommand{\@TITLE}{#1}}
74 %\newcommand{\@THANKS}[1]{\gdef\@THANKS{#1}}
75 \newcommand{\@SHORTTITLE}[1]{\renewcommand{\@SHORTTITLE}{#1}}
76 \newcommand{\@AUTHORS}[1]{\author{#1}}
77 \newcommand{\@KEYWORDS}[1]{\renewcommand{\@KEYWORDS}{#1}}
78 \newcommand{\@AMSSUBJ}[1]{\renewcommand{\@AMSSUBJ}{#1}}
79 \newcommand{\@AMSSUBJSECONDARY}[1]{\gdef\@AMSSUBJSECONDARY{#1}}
80 \newcommand{\@ABSTRACT}[1]{\renewcommand{\@ABSTRACT}{#1}}
81 \newcommand{\@VOLUME}[1]{\renewcommand{\@VOLUME}{#1}}
82 \newcommand{\@PAPERNUM}[1]{\renewcommand{\@PAPERNUM}{#1}}
83 \newcommand{\@YEAR}[1]{\renewcommand{\@YEAR}{#1}}
84 \newcommand{\@PAGESTART}[1]{\renewcommand{\@PAGESTART}{#1}} % unused
85 \newcommand{\@PAGEEND}[1]{\renewcommand{\@PAGEEND}{#1}} % unused
86 \newcommand{\@SUBMITTED}[1]{\renewcommand{\@SUBMITTED}{#1}}
87 \newcommand{\@ACCEPTED}[1]{\renewcommand{\@ACCEPTED}{#1}}
88 \newcommand{\@DOI}[1]{\gdef\@DOI{10.1214/\@JOURNAL.#1}}
89 \newcommand{\@ARXIVID}[1]{\gdef\@ARXIVID{#1}}
90 \newcommand{\@ACKNO}[1]{\noindent\textbf{Acknowledgments.} #1}
91 \makeatother
92 %% Logos
93 \makeatletter
94 \newcommand{\@EJPLGO}{% designed by KB.
95 % This version is for bera 10pt (depends on the font via "em" and "ex")
96 \centerline {%
97 \hbox {%
98 %\vrule height -0.4 pt depth 0.8 pt width 26.5 em\space %

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```

99      \vrule height -0.4 pt depth 0.8 pt width 27.7 em\space %
100     %\kern -26.5 em\space %
101     \kern -27.8 em\space %
102     \raise 0.03ex \hbox {\bf E}\space %
103     \raise 0.06ex \hbox {l}\space %
104     \raise .13ex \hbox {e}\space %
105     \raise .24ex \hbox {c}\space %
106     \raise .45ex \hbox {t}\space %
107     \raise .78ex \hbox {r}\space %
108     \raise 1.31ex \hbox {o}\space %
109     \raise 2.08ex \hbox {n}\space %
110     \raise 3.14ex \hbox {i}\space %
111     \raise 4.53ex \hbox {c}\space %
112     \kern 1em\space %
113     \raise 8.15ex \hbox {\bf J}\space %
114     \raise 10.15ex \hbox {o}\space %
115     \raise 12.04ex \hbox {u}\space %
116     \raise 13.60ex \hbox {r}\space %
117     \raise 14.64ex \hbox {n}\space %
118     \kern .3 em\space %
119     \vrule depth 0.8pt height 14.5ex \space % %BEST!
120     \kern -.3em\space %
121     \raise 15ex \hbox {a}\space %
122     \raise 14.64ex \hbox {l}\space %
123     \kern 1em\space %
124     \raise 12.04ex \hbox {o}\space %
125     \raise 10.15ex \hbox {f}\space %
126     \kern 1em\space %
127     \raise 6.23ex \hbox {\bf P}\space %
128     \raise 4.53ex \hbox {r}\space %
129     \raise 3.14ex \hbox {o}\space %
130     \raise 2.08ex \hbox {b}\space %
131     \raise 1.31ex \hbox {a}\space %
132     \raise .78ex \hbox {b}\space %
133     \raise .45ex \hbox {i}\space %
134     \raise .24ex \hbox {l}\space %
135     \raise .13ex \hbox {i}\space %
136     \raise .06ex \hbox {t}\space %
137     \raise .03ex \hbox {y}%
138   }%
139 }%
140 }%EJPLOGO
141 \newcommand{\@ECPLG0}{% designed when Ren\'e Carmona was in charge of ECP
142   \raisebox{0.3cm}{\parbox[t]{1.6in}{\noindent\rule{1.6in}{1.6pt}}\
143     \textbf{ ELECTRONIC}\
144     \textbf{ COMMUNICATIONS}\
145     \textbf{ in PROBABILITY}\
146     \rule{.08in}{1.6in}{2pt}}}
147 }%ECPLG0
148 \makeatother
149 %% Macro handling the first page
150 \makeatletter
151 \newcommand{\FIRSTPAGE}{%
152   \setcounter{page}{\@PAGESTART}%
153   \title{\small%
154     \ifx\@EJP\undefined\else%
155       \@EJPLOGO
156       \bigskip
157       \centerline{Vol.\,\@VOLUME\, (\@YEAR),\ %
158         Paper no. \@PAPERNUM, pages \,\@PAGESTART--\@PAGEEND.}
159       \bigskip
160       \bigskip
161       {\Large\bfseries\@TITLE}%\ifx\@THANKS\undefined\else\thanks{\@THANKS}\fi

```

```

162 \fi%EJP
163 \ifx\@ECP\undefined\else%
164 \emph{Elect. Comm. in Probab.}
165 \textbf{\@VOLUME} (\@YEAR), \@PAGESTART--\@PAGEEND
166 \hfill
167 \@ECPLOGO\
168 \bigskip
169 \bigskip
170 {\Large\@TITLE}%\ifx\@THANKS\undefined\else\thanks{\@THANKS}\fi
171 \fi%ECP
172 } % end title
173 \date{}%
174 \maketitle\thispagestyle{empty}%
175 \begin{abstract}%
176 \noindent%
177 \@ABSTRACT\ \ [1.5em]%
178 {\footnotesize\newlength{\@DH}\setlength{\@DH}{-.2em}%
179 \textbf{Key words: }%
180 \@KEYWORDS.\ \ [\@DH]%
181 \textbf{AMS 2010 Subject Classification: }%
182 \ifx\@AMSSUBJSECONDARY\undefined
183 \@AMSSUBJ.
184 \else
185 Primary \@AMSSUBJ, Secondary \@AMSSUBJSECONDARY.
186 \fi\
187 \@JOURNAL\ (\@JOURNAL),\ ISSN:\ \texttt{\href{http://\@URL/}{\@ISSN}}.\ \ [\@DH]%
188 Submitted to \@JOURNAL\ on \,\@SUBMITTED, %
189 final version accepted \,\@ACCEPTED.\ \ [\@DH]%
190 \ifx\@DOI\undefined\else%
191 Digital Object Identifier (DOI): %
192 \texttt{\href{http://dx.doi.org/\@DOI}{\@DOI}}\ \ [\@DH]%
193 \fi%
194 \ifx\@ARXIVID\undefined\else%
195 Supersedes %
196 \texttt{\href{http://arXiv.org/abs/\@ARXIVID}{arXiv:\@ARXIVID}}.%
197 \fi%
198 }%footnotesize
199 \end{abstract}
200
201 \smallskip
202
203 }%END-FIRSTPAGE
204 \makeatother
205 %% Bibliography
206 \makeatletter
207 \def\@MRExtract#1 #2!{#1} % thanks, Martin!
208 \newcommand{\MR}[1]{% we need to strip the "(...)"
209 \xdef\@MRSTRIP{\@MRExtract#1 !}%
210 \href{http://www.ams.org/mathscinet-getitem?mr=\@MRSTRIP}{MR-\@MRSTRIP}}
211 \makeatother
212 \newcommand{\ARXIV}[1]{\href{http://arXiv.org/abs/#1}{arXiv:#1}}
213 \makeatletter
214 \renewenvironment{thebibliography}[1]{%
215 \section*{\refname
216 \@mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}}%
217 \list{\@biblabel{\@arabic\c@enumiv}}{%
218 \small%
219 \setlength{\labelwidth}{0em}%
220 \setlength{\labelsep}{0.4em}%
221 \setlength{\leftmargin}{\labelwidth}%
222 \addtolength{\leftmargin}{\labelsep}%
223 \setlength{\itemsep}{-.25em}%
224 \@openbib@code

```

```

225 \usecounter{enumiv}%
226 \let\p@enumiv\@empty
227 \renewcommand\theenumiv{\@arabic\c@enumiv}}%
228 \sloppy
229 \clubpenalty4000
230 \@clubpenalty \clubpenalty
231 \widowpenalty4000%
232 \sfcode'\.\@m}{%
233 \def\@noitemerr{%
234 \latex@warning{Empty 'thebibliography' environment}}%
235 \endlist}
236 \makeatother
237 %% Theorem styles
238 \newtheoremstyle{ejpecpbodyit}% name % cf. thmtest.tex of AMSLaTeX
239 {3pt}% Space above
240 {3pt}% Space below
241 {\itshape}% Body font
242 {}% Indent amount (empty = no indent,
243 % \parindent = para indent)
244 {\bfseries\sffamily}% Thm head font
245 {.}% Punctuation after thm head
246 { }% Space after thm head: " " = normal interword space;
247 % \newline = linebreak
248 {}% Thm head spec (can be left empty, meaning 'normal')
249 \newtheoremstyle{ejpecpbodyrm}% name % cf. thmtest.tex of AMSLaTeX
250 {3pt}% Space above
251 {3pt}% Space below
252 {}% Body font
253 {}% Indent amount (empty = no indent,
254 % \parindent = para indent)
255 {\bfseries\sffamily}% Thm head font
256 {.}% Punctuation after thm head
257 { }% Space after thm head: " " = normal interword space;
258 % \newline = linebreak
259 {}% Thm head spec (can be left empty, meaning 'normal')
260 %%
261 \theoremstyle{ejpecpbodyit}
262 \newtheorem{theorem}[Theorem]{section}%
263 \newtheorem{corollary}[theorem]{Corollary}%
264 \newtheorem{proposition}[theorem]{Proposition}%
265 \newtheorem{lemma}[theorem]{Lemma}%
266 \newtheorem{definition}[theorem]{Definition}%
267 \newtheorem{hypothesis}[theorem]{Hypothesis}%
268 \newtheorem{heuristics}[theorem]{Heuristics}%
269 \newtheorem{conjecture}[theorem]{Conjecture}%
270 \theoremstyle{ejpecpbodyrm}%
271 \newtheorem{example}[theorem]{Example}%
272 \newtheorem{exercise}[theorem]{Exercise}%
273 \newtheorem{problem}[theorem]{Problem}%
274 \newtheorem{remark}[theorem]{Remark}%
275 %%% Commands to be executed before \begin{document}
276 %% Numbering
277 \numberwithin{equation}{section}
278 %% Itemize and enumerate for bera
279 \makeatletter
280 \newcommand{\@reduceitemsep}{\addtolength{\itemsep}{-0.5\baselineskip}}
281 \let\OLD@itemize\itemize
282 \renewcommand\itemize{\OLD@itemize\@reduceitemsep}
283 \let\OLD@enumerate\enumerate
284 \renewcommand\enumerate{\OLD@enumerate\@reduceitemsep}
285 \makeatother
286 %% Replace \mathbb by \mathds except if we require the contrary
287 \makeatletter

```

```

288 \ifx\@NODS\undefined%
289 \let\realmathbb=\mathbb
290 \let\mathbb=\mathds
291 \else%
292 \fi
293 \makeatother
294 %% Headings
295 \makeatletter
296 \renewcommand{\@evenfoot}
297 {\small\normalfont%
298 \newcommand{\@ARTICLEBLOB}{\@JOURNAL\normalfont\ Vol. \@VOLUME\, (\@YEAR),\ %
299 Paper no. \@PAPERNUM, pages \,\@PAGESTART--\@PAGEEND.}
300 \href{http://dx.doi.org/\@DOI}{\@ARTICLEBLOB}\ %
301 \hfil\href{http://\@URL}{\@URL}}
302 \renewcommand{\@oddfoot}{\@evenfoot}
303 \renewcommand{\@evenhead}
304 {\small\upshape {\thepage}\ \hfil\@SHORTTITLE\hfil}
305 \renewcommand{\@oddhead}
306 {\small\hfil\@SHORTTITLE\hfil \upshape\ \thepage}
307 \makeatother
308 %% smaller sections titles
309 \makeatletter
310 \renewcommand{\section}{\@startsection%
311 {section}% % name
312 {1}% % level
313 {0em}% % indent
314 {\baselineskip}% % before skip
315 {0.5\baselineskip}% % after skip
316 {\normalfont\large\bfseries}} % style
317 \renewcommand{\subsection}{\@startsection%
318 {subsection}% % name
319 {2}% % level
320 {0em}% % indent
321 {\baselineskip}% % before skip
322 {0.25\baselineskip}% % after skip
323 {\normalfont\bfseries}} % style
324 }
325 \makeatother
326 %% Macros
327 %%% Commands to be executed just after \begin{document}
328 \AtBeginDocument{%
329 \FIRSTPAGE%
330 }
331 %%% Commands to be executed just before \end{document}
332 \AtEndDocument{\vfill}

```