

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}{ejp.ejpecp.org}
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}{ecp.ejpecp.org}
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*{%
35   \PackageWarning{ejpecp}{Unknown option \@CurrentOption}%
```

*.dtx ejpecp file v. v1.2 dated 2015/12/23.

```

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 \ifx\@PSTRICKS\undefined%
43 \RequirePackage[pdftex]{graphicx}
44 \DeclareGraphicsExtensions{.pdf,.PDF,.eps,.EPS,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
45 \else%
46 \RequirePackage{graphicx}
47 \RequirePackage[pdf]{pstricks}
48 \RequirePackage{auto-pst-pdf}
49 \fi
50 \RequirePackage{mathtools}
51 \RequirePackage{fixltx2e}
52 \RequirePackage{microtype}
53 \RequirePackage{lastpage}
54 \RequirePackage{latexsym}
55 \ifx\@NODS\undefined\RequirePackage{dsfont}\fi
56 \ifx\@NOAMS\undefined\RequirePackage{amsmath,amsfonts,amssymb,amsthm}\fi
57 \RequirePackage{geometry}
58 \geometry{a4paper,portrait,left=3.5cm,right=3.5cm,top=3.5cm,bottom=3.5cm}
59 %\RequirePackage{charter} % Ph. Carmona
60 \RequirePackage{bera} % beware that the logo is sensitive to default font change
61 %%\RequirePackage{expert}[lucbmath] % Y&Y's Lucida cf. doc/fonts/bera/bera.txt
62 %\def\DeclareLucidaFontShape#1#2#3#4#5#6{%
63 %\DeclareFontShape{#1}{#2}{#3}{#4}{<->s*[0.90]#5}{#6}}
64 \ifx\@PSTRICKS\undefined%
65 \RequirePackage[pdftex,pagebackref=false]{hyperref}
66 \else%
67 \RequirePackage[pagebackref=false]{hyperref}
68 \fi%
69 %\hypersetup{colorlinks=false} % useless with our zero borders
70 \hypersetup{pdfborder=0 0 0}
71 \hypersetup{pdfstartview={FitH}}
72 %% PDF level and compression % it is actually better to do it externally
73 %\pdfminorversion=5
74 %\pdfcompresslevel=9
75 %\pdfobjcompresslevel=3
76 %%% Macros et Environments
77 %% General macros
78 \newcommand{\@TITLE}{\FIXME!}
79 \newcommand{\@SHORTTITLE}{\FIXME!}
80 \newcommand{\@KEYWORDS}{\FIXME!}
81 \newcommand{\@AMSSUBJ}{\FIXME!}
82 \newcommand{\@ABSTRACT}{\FIXME!}
83 \newcommand{\@VOLUME}{0}
84 \newcommand{\@PAPERNUM}{0}
85 \newcommand{\@YEAR}{2012}
86 \newcommand{\@PAGESTART}{1}
87 \newcommand{\@PAGEEND}{\pageref{LastPage}} % using lastpage package
88 \newcommand{\@SUBMITTED}{\FIXME!}
89 \newcommand{\@ACCEPTED}{\FIXME!}
90 \newcommand{\@TITLE}[1]{\renewcommand{\@TITLE}{#1}}
91 \newcommand{\@SHORTTITLE}[1]{\renewcommand{\@SHORTTITLE}{#1}}
92 \newcommand{\@DEDICATORY}[1]{\gdef\@DEDICATORY{#1}}
93 \newcommand{\@AUTHORS}[1]{\author{#1}}
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}}

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99 \newcommand{\PAPERNUM}[1]{\renewcommand{\@PAPERNUM}{#1}}
100 \newcommand{\YEAR}[1]{\renewcommand{\@YEAR}{#1}}
101 \newcommand{\PAGESTART}[1]{\renewcommand{\@PAGESTART}{#1}} % unused
102 \newcommand{\PAGEEND}[1]{\renewcommand{\@PAGEEND}{#1}} % unused
103 \newcommand{\SUBMITTED}[1]{\renewcommand{\@SUBMITTED}{#1}}
104 \newcommand{\ACCEPTED}[1]{\renewcommand{\@ACCEPTED}{#1}}
105 \newcommand{\DOI}[1]{\gdef\@DOI{10.1214/\@JOURNAL.#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{\@EJPLOGO}{% 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 26.5 em\space %
117 \vrule height -0.4 pt depth 0.8 pt width 27.7 em\space %
118 \kern -26.5 em\space %
119 \kern -27.8 em\space %
120 \raise 0.03ex \hbox {\bf E}\space %
121 \raise 0.06ex \hbox {l}\space %
122 \raise .13ex \hbox {e}\space %
123 \raise .24ex \hbox {c}\space %
124 \raise .45ex \hbox {t}\space %
125 \raise .78ex \hbox {r}\space %
126 \raise 1.31ex \hbox {o}\space %
127 \raise 2.08ex \hbox {n}\space %
128 \raise 3.14ex \hbox {i}\space %
129 \raise 4.53ex \hbox {c}\space %
130 \kern 1em\space %
131 \raise 8.15ex \hbox {\bf J}\space %
132 \raise 10.15ex \hbox {o}\space %
133 \raise 12.04ex \hbox {u}\space %
134 \raise 13.60ex \hbox {r}\space %
135 \raise 14.64ex \hbox {n}\space %
136 \kern .3 em\space %
137 \vrule depth 0.8pt height 14.5ex \space % %BEST!
138 \kern -.3em\space %
139 \raise 15ex \hbox {a}\space %
140 \raise 14.64ex \hbox {l}\space %
141 \kern 1em\space %
142 \raise 12.04ex \hbox {o}\space %
143 \raise 10.15ex \hbox {f}\space %
144 \kern 1em\space %
145 \raise 6.23ex \hbox {\bf P}\space %
146 \raise 4.53ex \hbox {r}\space %
147 \raise 3.14ex \hbox {o}\space %
148 \raise 2.08ex \hbox {b}\space %
149 \raise 1.31ex \hbox {a}\space %
150 \raise .78ex \hbox {b}\space %
151 \raise .45ex \hbox {i}\space %
152 \raise .24ex \hbox {l}\space %
153 \raise .13ex \hbox {i}\space %
154 \raise .06ex \hbox {t}\space %
155 \raise .03ex \hbox {y}}%
156 }%
157 }%
158 }%EJPLOGO
159 \newcommand{\@ECPLOGO}{% designed when Ren\’e Carmona was in charge of ECP
160 \raisebox{0.3cm}{\parbox[t]{1.3in}{\noindent\rule{1.3in}{1.6pt}}\
161 \textbf{ ELECTRONIC}}\

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162      \textbf{ COMMUNICATIONS}\\
163      \textbf{ in PROBABILITY}\\
164      \rule[.08in]{1.3in}{1.6pt}}
165 }%ECPLGO
166 %% Macro handling the first page
167 \newcommand{\FIRSTPAGE}{%
168   \setcounter{page}{\@PAGESTART}%
169   \title{\small%
170     \ifx\@EJP\undefined\else%
171       \@EJPLOGO
172       \bigskip
173       \centerline{\@JOURNALA\ \textbf{\@VOLUME} (\@YEAR),\ %
174         no. \@PAPERNUM, \,\@PAGESTART--\@PAGEEND.} %
175       \centerline{ISSN:\ \texttt{\href{http://\@URL/}{\@ISSN}} %
176         \ifx\@DOI\undefined\else%
177           \ DOI: \texttt{\href{http://dx.doi.org/\@DOI}{\@DOI}}%
178         \fi} %
179       \bigskip
180       \bigskip
181       {\Large\bfseries\@TITLE}%
182       \fi}%EJP
183     \ifx\@ECP\undefined\else%
184       \parbox[t]{9cm}{%
185         \@JOURNALA\ \textbf{\@VOLUME} (\@YEAR), %
186         no. \@PAPERNUM, \@PAGESTART--\@PAGEEND.\,%
187         \ifx\@DOI\undefined\else%
188           \ DOI: \texttt{\href{http://dx.doi.org/\@DOI}{\@DOI}}%
189         \fi \,%
190         ISSN:\ \texttt{\href{http://\@URL/}{\@ISSN}}
191       }%
192       \hfill
193       \@ECPLGO\\
194       \bigskip
195       \bigskip
196       {\Large\@TITLE}%
197       \fi}%ECP
198   } % end title
199   \date{%
200     \ifx\@DEDICATORY\undefined%
201       \else%
202         \noindent%
203         \emph{\small\sffamily\@DEDICATORY}
204         \fi%
205   }%
206   \maketitle\thispagestyle{empty}%
207   \begin{abstract}%
208     \noindent%
209     \@ABSTRACT\\[1em]%
210     {\footnotesize%
211       \textbf{Keywords: } \@KEYWORDS.\par%
212       \noindent\textbf{AMS MSC 2010: }%
213       \ifx\@AMSSUBJSECONDARY\undefined%
214         \noindent%
215         \@AMSSUBJ.\par%
216       \else%
217         \noindent%
218         Primary \@AMSSUBJ, Secondary \@AMSSUBJSECONDARY.\par%
219       \fi%
220       \noindent%
221       Submitted to \@JOURNAL\ on \@SUBMITTED, %
222       final version accepted on \@ACCEPTED.\par%
223       \ifx\@ARXIVID\undefined\else%
224         \noindent%

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225     Supersedes %
226     \texttt{\href{http://arXiv.org/abs/\@ARXIVID}{arXiv:\@ARXIVID}}.%
227     \fi\par%
228     \ifx\@HALID\undefined\else%
229     \noindent%
230     Supersedes %
231     \texttt{\href{http://hal.archives-ouvertes.fr/\@HALID}{HAL:\@HALID}}.%
232     \fi\par%
233 }%footnotesize
234 \end{abstract}
235
236 \smallskip
237
238 }%END-FIRSTPAGE
239 %% Macro setting the PDF title
240 \newcommand{\PDFFIELDS}{%
241 \hypersetup{%
242 pdftitle={\@JOURNAL\ \@VOLUME\ (\@YEAR), no. \@PAPERNUM, DOI: \@DOI}}%
243 \hypersetup{pdfkeywords={\@KEYWORDS}}%
244 \hypersetup{pdfproducer={\@JOURNAL\ Managing Editor http://\@URL/}}%
245 \hypersetup{pdfcreator={LaTeX with ejpecp.cls v1.0}}%
246 \hypersetup{pdfsubject={Probability Theory}}%
247 \hypersetup{pdfauthor={Please see http://dx.doi.org/\@DOI}}%
248 }%END-PDFFIELDS
249
250 %% Bibliography
251 \def\@MRExtract#1 #2!{#1} % thanks, Martin!
252 \newcommand{\MR}[1]{% we need to strip the "(...)"
253 \xdef\@MRSTRIP{\@MRExtract#1 !}%
254 \href{http://www.ams.org/mathscinet-getitem?mr=\@MRSTRIP}{MR-\@MRSTRIP}}
255 \newcommand{\ARXIV}[1]{\href{http://arXiv.org/abs/#1}{arXiv:#1}}
256 \renewenvironment{thebibliography}[1]{%
257 \section*{\refname
258 \mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}}%
259 \phantomsection%
260 \addcontentsline{toc}{section}{\refname}%
261 \list{\@biblabel{\@arabic\c@enumiv}}%
262 {\settowidth\labelwidth{\@biblabel{#1}}%
263 \small%
264 \setlength{\labelsep}{0.4em}%
265 \setlength{\leftmargin}{\labelwidth}%
266 \addtolength{\leftmargin}{\labelsep}%
267 \setlength{\itemsep}{-.25em}%
268 \@openbib@code
269 \usecounter{enumiv}%
270 \let\p@enumiv\@empty
271 \renewcommand\theenumiv{\@arabic\c@enumiv}}%
272 \sloppy\clubpenalty4000\@clubpenalty\clubpenalty\widowpenalty4000%
273 \sfcode'\.\@m}%
274 \def\@noitemerr{%
275 \@latex@warning{Empty 'thebibliography' environment}}%
276 \endlist}
277 %% Theorem styles
278 \ifx\@NOAMS\undefined%
279 \newtheoremstyle{ejpecpbodyit}% name % cf. thmtest.tex of AMSLaTeX
280 {3pt}% Space above
281 {3pt}% Space below
282 {\itshape}% Body font
283 {}% Indent amount (empty = no indent,
284 % \parindent = para indent)
285 {\bfseries\sffamily}% Thm head font
286 {.% Punctuation after thm head
287 { }% Space after thm head: " " = normal interword space;

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288 % \newline = linebreak
289 {}%      Thm head spec (can be left empty, meaning 'normal')
290 \newtheoremstyle{ejpecpbodyrm}% name % cf. thmtest.tex of AMSLaTeX
291 {3pt}%    Space above
292 {3pt}%    Space below
293 {}%      Body font
294 {}%      Indent amount (empty = no indent,
295 % \parindent = para indent)
296 {\bfseries\sffamily}% Thm head font
297 {.%}%    Punctuation after thm head
298 { }%     Space after thm head: " " = normal interword space;
299 % \newline = linebreak
300 {}%      Thm head spec (can be left empty, meaning 'normal')
301 \fi
302 %%
303 \ifx\@NOAMS\undefined\theoremstyle{ejpecpbodyit}\fi%
304 \newtheorem{theorem}{Theorem}[section]%
305 \newtheorem{assumptions}[theorem]{Assumptions}%
306 \newtheorem{assumption}[theorem]{Assumption}%
307 \newtheorem{claim}[theorem]{Claim}%
308 \newtheorem{condition}[theorem]{Condition}%
309 \newtheorem{conjecture}[theorem]{Conjecture}%
310 \newtheorem{corollary}[theorem]{Corollary}%
311 \newtheorem{definitions}[theorem]{Definitions}%
312 \newtheorem{definition}[theorem]{Definition}%
313 \newtheorem{facts}[theorem]{Facts}%
314 \newtheorem{fact}[theorem]{Fact}%
315 \newtheorem{heuristics}[theorem]{Heuristics}%
316 \newtheorem{hypothesis}[theorem]{Hypothesis}%
317 \newtheorem{hypotheses}[theorem]{Hypotheses}%
318 \newtheorem{lemma}[theorem]{Lemma}%
319 \newtheorem{notations}[theorem]{Notations}%
320 \newtheorem{notation}[theorem]{Notation}%
321 \newtheorem{proposition}[theorem]{Proposition}%
322 \ifx\@NOAMS\undefined\theoremstyle{ejpecpbodyrm}\fi%
323 \newtheorem{example}[theorem]{Example}%
324 \newtheorem{exercise}[theorem]{Exercise}%
325 \newtheorem{problem}[theorem]{Problem}%
326 \newtheorem{question}[theorem]{Question}%
327 \newtheorem{remark}[theorem]{Remark}%
328 %%% Commands to be executed before \begin{document}
329 %% Numbering
330 \ifx\@NOAMS\undefined\numberwithin{equation}{section}\fi
331 %% Itemize and enumerate for bera
332 \newcommand{\@reduceitemsep}{\addtolength{\itemsep}{-0.5\baselineskip}}
333 \let\OLD@itemize\itemize
334 \renewcommand\itemize{\OLD@itemize\@reduceitemsep}
335 \let\OLD@enumerate\enumerate
336 \renewcommand\enumerate{\OLD@enumerate\@reduceitemsep}
337 %% Replace \mathbb by \mathds except if we require the contrary
338 \ifx\@NODS\undefined%
339 \let\realmathbb=\mathbb
340 \let\mathbb=\mathds
341 \else%
342 \fi
343 %% Headings
344 \newcommand{\@HLOB}{%
345   \href{http://dx.doi.org/\@DOI}%
346   {\@JOURNAL\ \textbf{\@VOLUME}\, (\@YEAR),\ paper \@PAPERNUM.}}%
347 \renewcommand{\@evenfoot}%
348 {\normalfont\footnotesize\@HLOB\hfil%
349 \small\raisebox{-1em}{Page \thepage/\@PAGEEND}\hfil%
350 \footnotesize\href{http://\@URL/}{\@URL}}

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```

351 \renewcommand{\@oddfoot}{\@evenfoot}
352 \renewcommand{\@evenhead}{\hfil\@SHORTTITLE\hfil}
353 \renewcommand{\@oddhead}{\@evenhead}
354 %% smaller sections titles
355 \renewcommand{\section}{\@startsection%
356   {section}%                % name
357   {1}%                      % level
358   {0em}%                    % indent
359   {\baselineskip}%          % before skip
360   {0.5\baselineskip}%       % after skip
361   {\normalfont\large\bfseries}}% % style
362 \renewcommand{\subsection}{\@startsection%
363   {subsection}%              % name
364   {2}%                      % level
365   {0em}%                    % indent
366   {\baselineskip}%          % before skip
367   {0.25\baselineskip}%      % after skip
368   {\normalfont\bfseries}}%  % style
369 }
370 %% Macros
371 %%% Commands to be executed just after \begin{document}
372 \AtBeginDocument{\FIRSTPAGE\PDFFIELDS}
373 %%% Commands to be executed just before \end{document}
374 \AtEndDocument{\vfill}

```