LaTeX Class for The *Annals of Mathematics*[*]

Boris Veytsman[†]

2025/03/06, v1.33

Abstract

This package provides a class for typesetting articles for The *Annals of Mathematics*

Contents

1 Introduction **3**

2 User's Guide **3**
2.1 Installation . . . 3
2.2 Invocation . . . 4
2.3 Top Matter . . . 5
2.3.1 Commands for Authors . . . 5
2.3.2 Commands for Editors . . . 6
2.4 Additional Macros . . . 9
2.5 Theorems . . . 10
2.6 Illustrations and color . . . 11
2.7 Funding . . . 11
2.8 Bibliography . . . 11
2.9 Papers in languages other than English . . . 12

3 Implementation **14**
3.1 Identification . . . 14
3.2 Options . . . 14
3.3 Loading Class and Packages . . . 15
3.4 Internationalization . . . 16
3.5 Fonts . . . 17
3.6 Page Dimensions and Paragraphing . . . 18
3.7 Headers . . . 19
3.8 Top Matter Macros . . . 20
3.9 Typesetting Top Matter . . . 26
3.10 Typesetting End Matter . . . 29
3.11 Sectioning . . . 30
3.12 Figures and Tables . . . 31
3.13 Theorems . . . 31

[*]©2010–2025, Princeton University (Mathematics Department)

[†]borisv@lk.net, boris@varphi.com

3.14 Bibliography Macros 32
3.15 Additional Macros 33
3.16 End of Class 35

1 Introduction

The *Annals of Mathematics* is published bimonthly with the cooperation of Princeton University and the Institute for Advanced Study. Founded in 1884 by Ormond Stone of the University of Virginia, the journal was transferred in 1899 to Harvard University, and in 1911 to Princeton University. Since 1933, the Annals has been edited jointly by Princeton University and the Institute for Advanced Study (see `http://annals.princeton.edu/annals/about/journal/about.html`).

This class presents a complete redesign of the journal style—with new fonts and new interface.

An author well acquainted with AMSLaTeX should find this package easy to use and configurable. The User Manual below illustrates the basic use of the class and discusses the differences with amsart. For an in-depth tutorial of AMSLaTeX I could recommend the excellent book [1].

2 User's Guide

2.1 Installation

The installation of the class follows the usual practice [2] for LaTeX packages:

1. Run latex on `aomart.ins`. This will produce the file `aomart.cls`.
2. Put the file `aomart.cls` to the place where LaTeX can find them (see [2] or the documentation for your TeX system).
3. Update the database of file names. Again, see [2] or the documentation for your TeX system for the system-specific details.
4. The file `aomart.pdf` provides the documentation for the package (this is the file you are probably reading now).

As an alternative to items 2 and 3 you can just put the files in the working directory where your `.tex` file is.

The class uses some other LaTeX classes or packages. Most probably, they are already installed on your system. If not (or if their versions are very old), you need to download and install them. Here is the list:

1. amsart class and related packages [3],
2. Package hyperref [4],
3. ifpdf package [5],
4. fancyhdr package [6],
5. cmtiup package [7] for "special italics" with uprgiht digits and punctuation. Note that since many distributions do not include this package, you may need to install it yourself. Just download the file `http://mirrors.ctan.org/fonts/cm/cmtiup.zip`, unzip it in your `TEXMF` directory and rebuild the file names database with the command like `mktexlsr`,
6. yhmath package [8].

2.2 Invocation

To use the class, put in the preamble of your document

```
\documentclass[⟨options⟩]{aomart}
```

The class internally loads amsart, so all facilities of amsart [1, 9] can be used in the source.

The class should work with the Babel [10] package. At present, English, French and German languages are fully supported. See also Section 2.9.

options `draft` `final`

The options `draft` and `final` work in the same way as for amsart and standard LaTeX. If the option `draft` is chosen, the overfull lines are marked by black boxes on the margins *and* the `\includegraphics` prints blank placeholders for the images. The option `final` (default) switches off the marking of overfull lines and restores the behavior of `\includegraphics`. To switch on just the overfull marks, without changing the behavior of `\includegraphics`, one can either explicitly pass the option final to graphics package:

```
\documentclass[draft]{aomart}
\usepackage[final]{graphics}
```

or add in the beginning of the document

```
\overfullrule=5pt
```

option `manuscript`

The option `manuscript` is intended to faciliate the communications between the editor and the author. It enables two things:

1. Numbering of lines in the manuscript is switched off in the normal mode, but is on in the manuscript mode.
2. Command `\EditorialComment` is no-op in normal mode, but produces mariginal commentaries in the manuscript
3. Hyperlinks are black in normal mode, but blue in manuscript mode.

option `screen`

The option `screen` is intended for the onscreen version of the acticle. If this option is selected, the links are blue colored, and the margins are reduced.

option `olddoi`

Starting from version 1.9 (2011) the formatting of DOI numbers changed according to the new recommendations from CrossRef. The option `olddoi` switches on the "old" formatting. It is used for compatibility reasons.

option `doi2016`

Starting from version 1.5 (2016) the formatting of DOI numbers changed again according to Crossref recommendations. The option `doi2016` switches to the version existed between 2011 and 2016.

option `oldkeywords`

Since June 2017 keywords and AMS Mathematical Subjects classification numbers are printed on the title page. The option `oldkeywords` suppresses this.

options `8pt` `9pt` `10pt` `11pt` `12pt`

The size-changing options of amsart class (`8pt`, `9pt`, ..., `12pt`) have no effect other than producing a warning in the log since the journal is designed for only one type size (roughly corresponding to `11pt` of amsart).

option `printscheme`

Normally the scheme for MSC numbers is not printed. If the option `printscheme` is chosen, however, it is printed explicitly.

2.3 Top Matter

There are two kinds of top matter commands: the ones used primarily for authors and the ones used primarily for editors. We describe them separately.

The macros descibed below must be issued in the preamble of the document, i.e. before `\begin{document}`. They produce fatal error otherwise. This behavior is required by the way non-TEX scripts process the files to produce metadata.

The only exception is abstract, which should be placed after `\begin{document}`.

2.3.1 Commands for Authors

`\title` The command `\title`, as in amsart class, has two arguments: one optional, and one mandatory:

`\title[`⟨*ShortTitle*⟩`]{`⟨*FullTitle*⟩`}`

The mandatory argument is the full title of the article. The optional argument, if present, defines the shorter version of the title for running heads. If the optional argument is absent, the full title is used instead.

The optional argument should be used in two cases: when the full title is too long to fit in the running head, *and* when the author wants to add a footnote or linebreaks to the title.

`\author` `\email` `\address` `\curraddr` `\urladdr` `\orcid` The interface for specifying the authors and their affiliations is close the the one of amsart [11] (and different from the standard LATEX). For each author a separate command `\author` should be used, followed by `\address` and (optionally) `\curraddr`, `\email`, `\urladdr` and `\orcid`. Note that the house style of the *Annals of Mathematics* requires writing `\address` in the form *Institution, City, State* (or *Institution, City, Country* for non-US locations). Like the newer versions of amsart, aomart does *not* require the doubling of the `@` symbols in the e-mail addresses. The macro `\author` has two arguments, similarly to `\title`:

`\author[`⟨*AbbrevName*⟩`]{`⟨*FullName*⟩`}`

The optional argument defines the shorter form of the author's name to be included in the running head.

`\givenname` `\surname` The papers published in the *Annals of Mathematics* are included in various databases. For the indexing purposes it is important to correctly separate the authors' names into "First Name/Surname" parts. This operation is not easy for the computers. Therefore we decided that the authors should know best how to deal with their names. The macros `\givenname` and `\surname` are used to indicate how to split the name into the parts.

`\fulladdress` Another command which does not affect the typesetting is `\fulladdress`. It is used to store the full mailing address of the author for the online version of the journal and various databases.

`\contrib` Sometimes there are contributors to a paper, who are not full authors: the person may write an appendix or other part of the paper. You can use the command `\contrib[`⟨*role*⟩`]{`⟨*name*⟩`}` for indicating these persons. Note that `[`⟨*role*⟩`]` argument has a special meaning, indicating that the role of this person is the same as for the previous contributor, for example,

```
\contrib[with Appendix~A by]{A. U. Thor}
\givenname{Alexandra}\surname{Thor}
\contrib{A. N. Other}
```

```
\givenname{Antony N.}\surname{Other}
\contrib[with Appendix~B by]{Y. Etanother}
\givenname{Yakov}\surname{Etanother}
```

In this example Appendix A is written by A. U. Thor and A. N. Another, and Appendix B is written by Y. Etanother. Commands `\orcid`, `\email`, `\address`, `\fulladdress`, `\givenname` and `\surname` can be used for contributors in the same way they are used for authors.

`\shortauthors` In some cases the authors list may be too long for the running head, even if the abbreviated forms are used for each author. In this case it is possible to change the running head by a *redefinition* of the command `\shortauthors`. This redefinition must be done after all `\author` commands, but before `\maketitle`:

```
\renewcommand{\shortauthors}{A.~Smith et al}
```

`\thanks` Like amsart (and unlike standard LaTeX), aomart allows `\thanks` only *outside* of commands `\title` and `\author`.

`\copyrightnote` Normally each paper is copyrighted by Department of Mathematics, Princeton University. This is reflected in the footnote on the first page of the article. However, by arrangement with the editors, certain papers may have different copyright. The command `\copyrightnote{`⟨*copyright statement*⟩`}`, if issued, changes the footnote to the corresponding text, for example:

```
\copyrightnote{\textcopyright~2012 by the authors.  This paper may
be reproduced, in its entirety, for noncommercial purposes.}
```

Note that if you issue this command, you should explicitly include both the copyright sign and the year unless the paper does not have a copyright, for example:

```
\copyrightnote{This paper is in the public domain}
```

`abstract` (*env.*) The abstract of the paper must be put between `\begin{abstract}` and `\end{abstract}`. Unlike the situation in amsart class, abstract may be put *after* `\maketitle`.

A paper may have several abstracts in different languages. This sitation is discussed in Section 2.9.

`\maketitle` The macro `\maketitle` typesets the top matter. All top matter information should be specified before this command.

2.3.2 Commands for Editors

The commands described in this section should be used by the editors to insert the information about the published paper. They must be put before the `\maketitle` command.

`\keyword` The command `\keyword` adds a keyword to the list of keywords. This command may be repeated, for example

```
\keyword{Embedding theorem}
\keyword{Relatively hyperbolic group}
```

\subject The command \subject has three parameters: whether the subject is primary or secondary, the classification scheme and the subject itself, for example

```
\subject{primary}{msc2000}{20E45}
\subject{secondary}{msc2000}{20F65}
```

\formatdate The macro \formatdate is used to format the dates in the commands. Its argument is the date in the format YYYY-MM-DD, for example

```
\formatdate{2010-08-13}
```

\received \revised \accepted \published \publishedonline The commands \received, \revised, \accepted, \published, \publishedonline accept as a parameter a date in the form \formatdate{⟨*YYYY-MM-DD*⟩}, for example

```
\received{\formatdate{2004-12-24}}
\revised{\formatdate{2006-04-12}}
\accepted{\formatdate{2007-10-02}}
```

\proposed \seconded \corresponding \editor \version The macros \proposed, \seconded, \corresponding, \editor, \version are used to set the corresponding metadata for the editorial process, for example

```
\proposed{E. D. Itor}
\seconded{A. S. Sociate}
\corresponding{A. U. Thor}
\version{2.1}
```

\volumenumber \issuenumber \publicationyear \papernumber \startpage \endpage The macros \volumenumber, \issuenumber, \publicationyear, \papernumber, \startpage, \endpage set up the corresponding data for the paper, for example:

```
\volumenumber{172}
\issuenumber{1}
\publicationyear{2010}
\papernumber{1}
\startpage{1}
\endpage{39}
```

Note that if the argument of \endpage is empty, LaTeX tries to calculate the last page number as best as it can.

\copyrightyear In the standard copyright statement the copyright year is assumed to be the same as the \publicationyear. However, for special cases one can set the copyright year explicitly, for example,

```
\publicationyear{2012}
\copyrightyear{2011}
```

Note that if you use your own copyright statement instead of the canned one (with the command \copyrightnote), you need to put there the copyright year explicitly instead of using this command.

\doinumber \mrnumber \zblnumber \arxivnumber The macros \doinumber, \mrnumber and \zblnumber set the information

about paper in four major reference databases: DOI (`http://www.doi.org/`), MathSciNet (`http://www.ams.org/mathscinet/`, Zentralblatt MATH (`http://www.zentralblatt-math.org/zmath/`) and arXiv (`https://www.arxiv.org`). The use of these macros should be obvious:

```
\doinumber{10.1215/S0012-7094-92-06520-3}
\mrnumber{1154181}
\zblnumber{0774.14039}
\arxivnumber{1234.567890}
```

Note the difference between these commands and the bibliography commands discussed in Section 2.8. Commands in this Section set up the data for the *current article.* Commands in Section 2.8 set up the data for the articles in the bibliography list.

Normally you should *not* use `\doinumber` command, since the class will construct the standard DOI for the paper from the volume, issue and paper information. Use it *only* if the result is by any reason wrong.

`\oldsubsections` Starting with version 1.2 we decreased the vertical spacing before `\subsection`. The command `\oldsubsections` restores the "old" values.

The class has a system of editorial comments and highlighting for communication between copy editors, production editors, journal editors and authors. All these comments are visible only in the `maniscript` mode. In production environment they are not displayed.

The important feature of these commands is the notion of `audience`. Each comment or highlighting has an audience in mind, which is the optional argument of the comments and highlights. One can selectively enable the comments for the given audience. There is a special audience called `default`, which is enabled, well, by default. All other audiences must be enabled explicitly.

`\EditorialComment` The macro `\EditorialComment[`⟨*audience*⟩`]{`⟨*comments*⟩`}` typesets the comments on the margins in the `manuscript` mode for the selected audience, for example,

```
Erd\"os proved the following theorem.\EditorialComment{A citation is
needed}

Erd\"os proved the following
theorem~\cite{Erd01}.\EditorialComment[Editor]{Please check the
citation}
```

`\Highlight` The macro `\Highlight[`⟨*audience*⟩`]{`⟨*text*⟩`}` highlights the `text` for the selected `audience`. The highlighting is done using the color selected for the given audience, for example

```
This is described by the following
theorem\Highlight{:}\EditorialComment{Added ``:''}

This is described by the following
theorem\Highlight[Editor]{:}\EditorialComment[Editor]{Do we need
``:'' here?}
```

Code	Example
`\widetilde{AB}`	$\widetilde{AB}$
`\widehat{AB}`	$\widehat{AB}$
`\widetriangle{AB}`	$\widehat{\widehat{AB}}$
`\wideparen{AB}`	$\overparen{AB}$
`\widering{AB}`	$\mathring{AB}$
`\widebar{AB}`	$\overline{AB}$

Table 1: Wide Mathematical Accents

`\ECSelect` The audiences to be displayed are selected by the command `\ECSelect{`⟨*audiences*⟩`}` with the comma separated list of audiences, for example,

```
\ECSelect{Editor,Author}
```

The audience "default" is selected by default.

`\HSelect` The command `\Hselect[`⟨*color*⟩`]{`⟨*audience*⟩`}` selects the audience for which the highlght is intended. The optinal argument "color" is used for highlighting, for example,

```
\HSelect[green]{Editor}
```

The audience "default" is selected by default.

2.4 Additional Macros

`eqnarray` (*env.*) `eqnarray*` (*env.*) Thee class aomart loads the class amsart. Therefore all familiar amsmath commands [9] are available. In particular, there are many commands for writing multiline equations (`split`, `align`, `gather`, `multline`, ...). The environments `eqnarray` and `eqnarray*`, while still avilable, are *not* recommended and should be avoided if possible.

`\widetilde` `\widehat` `\widetriangle` `\wideparen` `\widering` `\widebar` A number of "wide" mathematical accents is available due to the (internally loaded) package yhmath [8]: `\widetilde`, `\widehat`, `\widetriangle`, `\wideparen`, `\widering`, `\widebar`. See Table 1 for the example of the usage.

`\fullref` `\pfullref` `\bfullref` `\eqfullref` `\fullpageref` A set of macros is used to make more convenient clickable references in the online versions of papers. The package hyperref [4] makes clickable reference numbers in the phrases like

```
...in theorem~\ref{thm:Noeter}...
...see equation~\eqref{eq:alpha}...
```

However, it is more convenient for the readers if both the number *and* the word "theorem" or "equation" were clickable. The macros `\*fullref` solve this problem. Each macro has two arguments: the word and the reference, for example

```
...in \fullref{theorem}{thm:Noeter}...
```

The command \pfullref typesets the reference in parentheses. The command \bfullref typesets it in brackets, and the command \eqfullref uses the \eqref command, for example,

```
...see \eqfullref{equation}{eq:alpha}...
```

The similar command \fullpageref is used to make the word "page" clickable, for example,

```
...see \eqfullref{equation}{eq:alpha} on
\fullpageref{eq:alpha}...
```

By default the command adds the word "page" to the text. You can override this choice using the optiomal parameter, e.g.

```
\fullpageref[The page]{eq:alpha} starts the discussion of...
```

The Perl script fullref.pl can be used to convert change all references to the \fullref commands. It works in the following way:

```
perl fullref.pl original.pl > result.pl
```

The script converts all instances of combinations "word \ref{reference}", "word~\ref{reference}" and "word~\pageref{reference}" to "\fullref{word}{reference}", and similarly for parenthesized references, \eqref commands, and page references. To prevent the converting, just put \ref{reference} or \eqref{reference} inside braces. The "word" here must not start with a backslash (i.e. must not be a macro itself). This prevents disastrous results for phrases like "see~\ref{a}, \ref{b}".

The distribution includes two sample files, aomsample.tex and aomsample1.tex, the latter being obtained from the former by the script fullref.pl.

Note that \autoref command of hyperref provides for another mechanism that achieves the same goal. Unlike \fullref command, the command \autoref tries to figure out the name of the reference from the context. See the manual [4] for more information.

2.5 Theorems

\newtheorem You can use the commands of amsthm package [12] like \newtheorem{lem}{Lemma} for numbered theorems, or \newtheorem*{KL}{Klein's Lemma} for unnumbered theorems, or tune the numbering using the optional arguments of these commands.

To provide backward compatibility with some other classes used internally by the *Annals of Mathematics,* the class provides yet another optional argument for the command \newtheorem, allowing constructions like \newtheorem[\it]{lem}{Lemma}. This optional parameter is not used in our typesetting.

The class provides two theorem styles:

plain: This is the default theorem style. It is used for Theorem, Lemma, Proposition, Conjecture, Corollary and Claim.

definition: This style is used for Definition, Remark, Notation, Condition, Example etc.

Note that AMS classes define the third theorem style, **remark.** In our class remarks are typeset in the **definition** style. To make the authors' lives easier we define the theorem style **remark,** which is identical to the theorem style **definition.**

2.6 Illustrations and color

The authors can use the graphics, graphicx, PSTricks, pgf/tikz, Metapost or other tools to include illustrations (see [13] for a comprehensive discussion of LaTeX graphics possibilities).

`\includecolorgraphics` The printed edition of the journal cannot use color illustrations. The online version can, although we recommend against the reliance of color since it might not be accessible for people with color perception problems. If you want to use color illustrations for the online version, you need to prepare two versions, a color one, and a BW (or grayscale one) with *identical sizes and contents.* The command `\includecolorgraphics[`⟨*options*⟩`]{`⟨*color_file*⟩`}{`⟨*bw_file*⟩`}` can be used to select the proper illustration: in the screen mode the color one is chosen, and otherwise the bw one is chosen.

2.7 Funding

`\funding` There is a special command for showing the support for the paper, `\funding[`⟨*text*⟩`]{`⟨*sponsor*⟩`}{`⟨*grantid*⟩`}`. Normally it prints the name of the sponsor and in parentheses the id of the grant, if it is not empty. However, you can override this using the optional argument of the command. For example, the following text

```
AB is grateful to \funding{NASA}{123GH456}, while MJ was supported
by \funding{NIH}{}.  Both authors acknowledge \funding[the generous
help of other agencies]{Department of Defense}{Special project
grant}.
```

will expand to

```
% AB is grateful to NASA (123GH456), while MJ was supported
by NIH.  Both authors acknowledge the generous
help of other agencies.
```

The command will save the information about the grants in the form suitable for automatic processing.

2.8 Bibliography

The authors are encouraged to use BibTeX for uniform style of bibliography. The distribution includes the BST files `aomplain.bst` and `aomalpha.bst`. These files have several additional non-standard fields:

mrnumber: MathSciNet number for the article.

zblnumber: Zentralblatt number for the article.

doi: DOI number for the article.

jfmnumber: JFM number for the article.

arxiv: ArXiv reference for the ArXiv manuscript.

url: If the reference is available online, the corresponding url.

venue: (for `conference` entries) The place where the conference took place.

sortyear: Some entries do not have a year set up (e.g. some `unpublished` entries. If you have several entries from the same author, some with a year, and some without, you may want to put them in a certain order. The field `sortyear` overrides `year` for the sorting purposes.

titlenote: this field is like `note`, but is typeset immediately after a title. It should be used for additional information, for example,

```
@Book{Knuth94:TheTeXbook,
 author =  {Knuth, Donald Ervin},
 title =   {The \TeX book},
 publisher =   {Addison-Wesley Publishing Company},
 year =   1994,
 series =  {Computers \& Typesetting A},
 address =  {Reading, MA},
 titlenote  =  {with illustrations by Duane Bibby}
}
```

totalpages: some articles (especially published in an electronic format) do not have start and end page numbers; instead you may put the total number of pages. If both `pages` and `totalpages` are present, `pages` take precedence.

`\doi` `\mr` `\zbl` `\jfm` `\arxiv`

There are several databases routinely used in the science and mathematics communities. Among them are DOI, MathSciNet, Zentralblatt, Jahrbuch Database, ArXiv. Many bibliographies include references to these databases. The commands `\doi`, `\mr`, `\zbl`, `\jfm`, `\arxiv` are used to typeset these references. If you use BibTEX, these commands are automatically used for the corresponding fields in your database entries.

2.9 Papers in languages other than English

The recommmended way to typeset papers in languages other than English is *babel* package [10]. For example, to typeset a paper in French (with an English abstract, see below), one puts in the preamble

```
\usepackage[utf8]{inputenx}
\usepackage[english,frenchb]{babel}
```

Such papers often contain several abstracts: for example, in the language the paper is written *and* in English. Accordingly, *aomart* allows several abstracts. Each abstract must be put inside a group with the corresponding language selected using `\selectanguage` command, for example

```
{\selectlanguage{french}%
```

```
  \begin{abstract}
    French abstract
  \end{abstract}}

{\selectlanguage{english}%
  \begin{abstract}
    English abstract
  \end{abstract}}
```

3 Implementation

3.1 Identification

We start with the declaration who we are. Most `.dtx` files put driver code in a separate driver file `.drv`. We roll this code into the main file, and use the pseudo-guard `<gobble>` for it.

```
⟨class⟩\NeedsTeXFormat{LaTeX2e}
⟨*gobble⟩
\ProvidesFile{aomart.dtx}
⟨/gobble⟩
⟨class⟩\ProvidesClass{aomart}
[2025/03/06 v1.33 Typesetting articles for the Annals of Mathematics]
```

And the driver code:

```
⟨*gobble⟩
\documentclass{ltxdoc}
\usepackage{array,booktabs,amsmath,graphics}
\let\widebar\overline
\usepackage{url}
\usepackage{amsfonts,yhmath}
\usepackage[breaklinks,colorlinks,linkcolor=black,citecolor=black,
            pagecolor=black,urlcolor=black,hyperindex=false]{hyperref}
\PageIndex
\CodelineIndex
\RecordChanges
\EnableCrossrefs
\begin{document}
  \DocInput{aomart.dtx}
\end{document}
⟨/gobble⟩
⟨*class⟩
```

3.2 Options

The size-changing options produce a warning:

```
\long\def\aom@size@warning#1{%
  \ClassWarning{aomart}{Size-changing option #1 will not be
    honored}}%
\DeclareOption{8pt}{\aom@size@warning{\CurrentOption}}%
\DeclareOption{9pt}{\aom@size@warning{\CurrentOption}}%
\DeclareOption{10pt}{\aom@size@warning{\CurrentOption}}%
\DeclareOption{11pt}{\aom@size@warning{\CurrentOption}}%
\DeclareOption{12pt}{\aom@size@warning{\CurrentOption}}%
```

`\if@aom@manuscript@mode` Check whether we are in the manuscript mode

```
\newif\if@aom@manuscript@mode
\@aom@manuscript@modefalse
\DeclareOption{manuscript}{\@aom@manuscript@modetrue}
```

`\if@aom@screen@mode` Check whether we are in the screen mode

```
\newif\if@aom@screen@mode
\@aom@screen@modefalse
\DeclareOption{screen}{\@aom@screen@modetrue}
```

`\if@aom@olddoi` DOI processing is different in the "old" and new mode.

```
\newif\if@aom@olddoi
\@aom@olddoifalse
\DeclareOption{olddoi}{\@aom@olddoitrue}
```

`\if@aom@doiMMXVI` DOI processing is different in the 2016 and new mode

```
\newif\if@aom@doiMMXVI
\@aom@doiMMXVIfalse
\DeclareOption{doi2016}{\@aom@doiMMXVItrue}
```

`\if@aom@oldkeywords` Keywords processing is different in the "old" and new mode.

```
\newif\if@aom@oldkeywords
\@aom@oldkeywordsfalse
\DeclareOption{oldkeywords}{\@aom@oldkeywordstrue}
```

`\if@aom@printscheme`

```
\newif\if@aom@printscheme
\@aom@printschemefalse
\DeclareOption{printscheme}{\@aom@printschemetrue}
```

All other options are passed to amsart:

```
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{amsart}}
```

Now we read the configuration file

```
\InputIfFileExists{aomart.cfg}{%
  \ClassInfo{aomart}{%
    Loading configuration file aomart.cfg}}{%
  \ClassInfo{aomart}{%
    Configuration file aomart.cfg is not found}}
```

And process the options:

```
\ProcessOptions\relax
```

3.3 Loading Class and Packages

`\@makefnmark@kernel` AMS redefines `\@makefnmark`. Here we return to the kernel version

```
\let\@makefnmark@kernel\@makefnmark
```

We start with the base class

```
\LoadClass[11pt]{amsart}
```

`\@makefnmar` Restoring the kernel version

```
\let\@makefnmark\@makefnmark@kernel
```

`\@citex` We redeine this macro early in case some package wants to patch it. Basically house style for repeated citations is not [1, 2, 3], but [1], [2], and [3].

Note that we do not want to use `\andify` since it requires fine control of expansion. Rather, we just count the number of commas. Below `\@tempcnta` is the total number of cites, and `\@tempcntb` is the current cite.

```
\def\@citex[#1]#2{\leavevmode
  \@tempcnta=0
  \@for\@citeb:=#2\do{\advance\@tempcnta by 1}%
  \@tempcntb=1
```

```
\let\@citea\@empty
\@cite{\@for\@citeb:=#2\do
  {\@citea\def\@citea{], []%
   \advance\@tempcntb by 1
   \ifnum\@tempcnta=\@tempcntb\relax
      \ifnum\@tempcnta=2\relax
         \def\@citea{] and~[]%
      \else
         \def\@citea{], and~[]%
       \fi
   \fi
   \edef\@citeb{\expandafter\@firstofone\@citeb\@empty}%
   \if@filesw\immediate\write\@auxout{\string\citation{\@citeb}}\fi
   \@ifundefined{b@\@citeb}{\hbox{\reset@font\bfseries ?}%
     \G@refundefinedtrue
     \@latex@warning
       {Citation `\@citeb' on page \thepage \space undefined}}%
     {\@cite@ofmt{\csname b@\@citeb\endcsname}}}}{#1}}
```

A bunch of packages:

```
\RequirePackage{fancyhdr, lastpage, ifpdf, graphicx}
\RequirePackage[breaklinks,colorlinks]{hyperref}
\if@aom@screen@mode
\hypersetup{linkcolor=blue,citecolor=blue,
  urlcolor=blue}%
\else\if@aom@manuscript@mode
\hypersetup{linkcolor=blue,citecolor=blue,
  urlcolor=blue}%
\else
\hypersetup{linkcolor=black,citecolor=black,
  urlcolor=black}%
\fi\fi
\urlstyle{rm}
```

Amsart has `\collect@body` macro. However, we want the `\long` version, so we use *environ*

```
\RequirePackage{environ}
```

3.4 Internationalization

There are some papers published in languages other than English. The Babel is expected to be used for them. Here we add some macros extending captions for these languages.

First, let us define English defaults:

`\@aom@by` This is just "By" in English:

```
\def\@aom@by{By}
```

`\@aom@and` This is "and" in English:

```
\def\@aom@and{and}
```

Now we can define internationalization:

```
\AtBeginDocument{\@ifpackageloaded{babel}{%
```

```
  \addto\captionsfrench{\def\@aom@by{Par}\def\@aom@and{et}}%
  \addto\captionsgerman{\def\@aom@by{Von}\def\@aom@and{und}}%
  \addto\captionsenglish{\def\@aom@by{By}\def\@aom@and{and}}}{}}
```

3.5 Fonts

We use yhmath for large symbols:

```
\RequirePackage{yhmath}
```

Since version 1.2 ymath no longer makes its large symbols default. We override this

```
\DeclareSymbolFont{largesymbols}{OMX}{yhex}{m}{n}
```

`\widehat` `\widetilde` The way `\widehat` and `\widetilde` are implemented in ymath is buggy, see https://www.reddit.com/r/LaTeX/comments/2j7mtn/usepackageamsmath_vs_usepackageyhmath_and_the/. We use AMS definitions instead

```
\xdef\widehat#1{\noexpand\@mathmeasure\z@\textstyle{#1}%
  \noexpand\ifdim\noexpand\wd\z@>\tw@ em%
  \mathaccent"0\hexnumber@\symAMSb 5B{#1}%
  \noexpand\else\mathaccent"0362{#1}\noexpand\fi}
\xdef\widetilde#1{\noexpand\@mathmeasure\z@\textstyle{#1}%
  \noexpand\ifdim\noexpand\wd\z@>\tw@ em%
  \mathaccent"0\hexnumber@\symAMSb 5D{#1}%
  \noexpand\else\mathaccent"0365{#1}\noexpand\fi}
```

We need cmtiup package, but we may find out it is not installed.

```
\IfFileExists{cmtiup.sty}{%
  \RequirePackage{cmtiup}}{%
  \ClassWarning{aomart}{The package mdputu is not found.\MessageBreak
    You need this package to get italics with upright digits!}}
```

`\specialdigits` A legacy macro. We do not need it anymore.

```
\def\specialdigits{}%
\let\sishape=\itshape
\let\textsi=\textit
```

The amsart class defines several options for different font sizes (10pt, 11pt, etc). We have just one design size for the articles.

`\@typesizes` The font information in amsart is stored in `\@typesizes` macro. It has 11 typesizes: 5 below and 5 above `\normalsize` .

```
\def\@typesizes{%
  \or{\@vipt}{9}\or{\@viipt}{9}\or{\@viiipt}{9}\or{\@ixpt}{12}%
  \or{\@xpt}{13}%
  \or{\@xipt}{14}% normalsize
  \or{\@xiipt}{15}\or{13}{17}\or{\@xviipt}{20}%
  \or{19}{23.2}\or{22}{27.8}}%
\normalsize \linespacing=\baselineskip
```

`\widebar` The functionality of `\widebar` coincides with that of amsmath `\overline`:

```
\let\widebar\overline
```

3.6 Page Dimensions and Paragraphing

\textwidth
\textheight

These are from the old aomamlt2e:

```
\setlength{\textwidth}{31pc}
\setlength{\textheight}{48pc}
```

\evensidemargin
\oddsidemargin

The margins:

```
\oddsidemargin=.65in
\evensidemargin=.65in
```

\footins
\topskip
\abovedisplayskip
\belowdisplayskip

Some skips from aomamlt2e:

```
\setlength{\topskip}{12pt}
\setlength{\abovedisplayskip}{6.95pt plus3.5pt minus 3pt}
\setlength{\belowdisplayskip}{6.95pt plus4.5pt minus 3pt}
\setlength{\skip\footins}{20pt}
\setlength{\dimen\footins}{3in}
```

\footskip

Some space for footnotes:

```
\setlength\footskip{30pt}
```

\parskip
\parindent

Paragraph shape:

```
\setlength{\parindent}{22pt}
\setlength{\parskip}{\z@}
```

\widowpenalty
\clubpenalty

We suppress widows and clubs:

```
\widowpenalty=10000
\clubpenalty=10000
```

AMS defines the margins for lists \AtBeginDocument. Our lists are tighter

```
\AtBeginDocument{%
  \labelsep=5pt\relax
  \settowidth\leftmargini{\labelenumi\hskip\labelsep}%
  \leftmargin=\leftmargini
  \labelwidth=\leftmargini \advance\labelwidth-\labelsep
  \@listi}
```

\itemize

```
\renewenvironment{itemize}{%
  \ifnum\@itemdepth>3 \@toodeep
  \else \advance\@itemdepth\@ne
    \edef\@itemitem{labelitem\romannumeral\the\@itemdepth}%
    \list{\csname\@itemitem\endcsname}%
    {\settowidth\leftmargin{\labelitemi\hskip\labelsep}%
      \def\makelabel##1{\hss\llap{\upshape##1}}}%
  \fi
}{%
  \endlist
}
```

3.7 Headers

`\headsep` Separation between the header and the body

```
\setlength{\headsep}{14pt}
```

`\headheight` Slightly increasing head height

```
\setlength{\headheight}{18.0pt}
```

`\headrulewidth` `\footrulewidth` We do not want decorative rules in the journal:

```
\renewcommand{\headrulewidth}{0pt}
\renewcommand{\footrulewidth}{0pt}
```

`\@aom@linecount` This is the box displayed in the manuscript mode

```
\if@aom@manuscript@mode
  \newsavebox{\@aom@linecount}
  \savebox{\@aom@linecount}[4em][t]{\parbox[t]{4em}{%
      \@tempcnta\@ne\relax
      \loop{\underline{\scriptsize\the\@tempcnta}}\\
      \advance\@tempcnta by \@ne\ifnum\@tempcnta<43\repeat}}
\fi
```

It is easy to set up headers with fancyhdr:

```
\pagestyle{fancy}
\fancyhead{}
\fancyfoot{}
\fancyhead[CO]{\scriptsize\shorttitle}
\fancyhead[RO,LE]{\footnotesize\thepage}
\if@aom@manuscript@mode
  \fancyhead[LE]{\footnotesize\thepage\begin{picture}(0,0)%
      \put(-26,-25){\usebox{\@aom@linecount}}%
    \end{picture}}
  \fancyhead[LO]{\begin{picture}(0,0)%
      \put(-21,-25){\usebox{\@aom@linecount}}%
    \end{picture}}
  \fancyfoot[C]{\scriptsize Proof: page numbers may be temporary}
\fi
\fancyhead[CE]{\scriptsize\MakeUppercase\shortauthors}
```

The first page has the special headers. The style `firstpage` is invoked by amsart; here we just redefine it.

```
\fancypagestyle{firstpage}{%
  \fancyhf{}%
  \if@aom@manuscript@mode
    \lhead{\begin{picture}(0,0)%
        \put(-21,-25){\usebox{\@aom@linecount}}%
      \end{picture}}
  \fi
  \chead{\scriptsize%
    \href{\@annalsurl}{Annals of Mathematics} \textbf{\currentvolume}
    (\currentyear),
```

We always print the starting page. However, we print the last page only if it does not coincide with the first page. There are two cases here: first, the last page may still be `\pageref{LastPage}`. In this case we need to extract the numerical value

of the counter—note that hyperref is in action! Second, we could redefine the last page, and it is no longer `\pageref{LastPage}`. In this case we need to compare the value with the first page.

```
    \start@page%
    \def\tempa{\pageref{LastPage}}%
    \edef\tempb{\start@page}%
    \ifx\tempa\end@page
      \edef\tempa{\HyPsd@@@pageref{LastPage}}%
    \else
       \edef\tempa{\end@page}%
    \fi
    \ifx\tempa\tempb\else--\end@page\fi\\
  \ifx\@doinumber\@empty\else
  \edef\@doinumber{\@doinumber}%
  \expandafter\doi\expandafter{\@doinumber}\fi}%
   \cfoot{\footnotesize\thepage}}%
```

`\annalsurl` The command to set up the URL of the journal

```
\def\annalsurl#1{\gdef\@annalsurl{#1}}
\annalsurl{http://annals.math.princeton.edu/about}
```

3.8 Top Matter Macros

We make these macros allowed only in the preamble:

```
\@onlypreamble{\title}
\@onlypreamble{\author}
\@onlypreamble{\contrib}
\@onlypreamble{\email}
\@onlypreamble{\address}
\@onlypreamble{\curraddr}
\@onlypreamble{\urladdr}
\@onlypreamble{\orcid}
\@onlypreamble{\givenname}
\@onlypreamble{\fulladdress}
\@onlypreamble{\surname}
\@onlypreamble{\thanks}
\@onlypreamble{\keyword}
\@onlypreamble{\subject}
\@onlypreamble{\received}
\@onlypreamble{\revised}
\@onlypreamble{\accepted}
\@onlypreamble{\published}
\@onlypreamble{\publishedonline}
\@onlypreamble{\proposed}
\@onlypreamble{\seconded}
\@onlypreamble{\corresponding}
\@onlypreamble{\editor}
\@onlypreamble{\version}
\@onlypreamble{\volumenumber}
\@onlypreamble{\issuenumber}
\@onlypreamble{\publicationyear}
\@onlypreamble{\copyrightnote}
\@onlypreamble{\copyrighyear}
```

```
\@onlypreamble{\papernumber}
\@onlypreamble{\startpage}
\@onlypreamble{\endpage}
\@onlypreamble{\doinumber}
\@onlypreamble{\mrnumber}
\@onlypreamble{\zblnumber}
\@onlypreamble{\arxivnumber}
```

Most top matter macros are defined in amsart. Here we just add some new macros and redefine some.

`\fulladdress` `\givenname` `\surname` We store the information to output it later in the rpi file

```
\def\@names{}
\def\givenname#1{\g@addto@macro\@names{givenname=#1;}}
\def\surname#1{\g@addto@macro\@names{surname=#1;}}
\def\fulladdress#1{\g@addto@macro\@names{fulladdress=#1;}}
```

`\author` We add mangling of `\@names` to the amsart macro

```
\renewcommand{\author}[2][]{%
  \ifx\@empty\authors
    \gdef\authors{#2}%
    \g@addto@macro\@names{author=#2;}%
  \else
    \g@addto@macro\authors{\and#2}%
    \g@addto@macro\@names{\and author=#2;}%
  \fi
  \gdef\aom@current@orcid@target{\authors}%
  \@ifnotempty{#1}{%
    \ifx\@empty\shortauthors
      \gdef\shortauthors{#1}%
    \else
      \g@addto@macro\shortauthors{\and#1}%
    \fi
  }%
  \g@addto@macro\addresses{\author{#2}}%
}
\edef\author{\@nx\@dblarg
  \@xp\@nx\csname\string\author\endcsname}
```

`\@currentcontribution` The current contribution

```
\def\@currentcontribution{}
```

`\@currentcontributors` The current contributors with the same contribution

```
\def\@currentcontributors{}
```

`\contribs` All contributors to the paper

```
\def\contribs{}
```

`\if@startcontribgroup` A switch whether the new group is started

```
\newif\if@startcontribgroup
\@startcontribgroupfalse
```

\@processcurrentcontribgroup Add current contributors to \contributors

```
\def\@processcurrentcontribgroup{%
  \ifx\@currentcontributors\@empty\else
    \def\@@and{{\upshape \@aom@and}}%
    \author@andify\@currentcontributors
    \ifx\contribs\@empty\else
      \g@addto@macro\contribs{\and}%
    \fi
    \expandafter\g@addto@macro\expandafter\contribs
    \expandafter{\@currentcontribution}%
    \g@addto@macro\contribs{\space}%
    \expandafter\g@addto@macro\expandafter\contribs
    \expandafter{\@currentcontributors}%
  \fi
}
```

\contrib The processing of contributors. Contributors are separated into groups with the same contribution. Within the group one can omit the contribution.

```
\renewcommand{\contrib}[2][]{%
  \def\@tempa{#1}%
  \gdef\aom@current@orcid@target{\@currentcontributors}%
  \@startcontribgrouptrue
  \ifx\@tempa\@empty\relax
    \ifx\@currentcontribution\@empty\relax
      \ClassError{aomart}{You must define contribution for
        contributors}{The first \contrib command must have the
        optional argument indicating the contribution}%
    \else
      \@startcontribgroupfalse
    \fi
  \fi
  \ifx\@currentcontribution\@tempa\relax
    \@startcontribgroupfalse
  \fi
  \if@startcontribgroup
     \@processcurrentcontribgroup
     \gdef\@currentcontribution{#1}%
     \gdef\@currentcontributors{#2}%
  \else
    \g@addto@macro\@currentcontributors{\and#2}%
  \fi
  \g@addto@macro\@names{\and contributor=#2;}%
  \g@addto@macro\@names{role=}%
  \expandafter\g@addto@macro\expandafter%
  \@names\expandafter{\@currentcontribution}%
  \g@addto@macro\@names{;}%
  \g@addto@macro\addresses{\author{#2}}%
}
```

\email We change amsart macro to output metadata

```
\renewcommand{\email}[2][]{%
  \g@addto@macro\addresses{\email{#1}{#2}}%
  \g@addto@macro\@names{email=#2;}%
}
```

`\urladdr` We change amsart macro to output metadata

```
\renewcommand{\urladdr}[2][]{%
  \g@addto@macro\addresses{\urladdr{#1}{#2}}%
  \g@addto@macro\@names{urladdr=#2;}%
}
```

`\aom@current@orcid@target` Each new orcid can be added either to the authors or to the contributors. This macro defines where it goes

```
\def\aom@current@orcid@target{\authors}
```

`\orcid` Orcid also outputs metadata

```
\newcommand{\orcid}[1]{%
  \g@addto@macro\addresses{\orcid{#1}}%
  \g@addto@macro\@names{orcid=#1;}%
  \expandafter\g@addto@macro\aom@current@orcid@target{\aom@orcidlink{#1}}%
}
```

`\aom@orcidlink` The package orcidlink [14] requires TikZ, so here we reproduce its functionality using our own version of orcid logo. Note that the original logo is licenses under CC0, see `https://orcid.figshare.com/articles/figure/ORCID_iD_icon_graphics/5008697`

```
\newcommand\aom@orcidlink[1]{\kern0.2ex\href{https://orcid.org/#1}{\includecolorgraphics[heig
```

`\keyword` Actually amsart has `\kewords` macro. It redefines `\@keywords`. Our macro adds to the stack instead.

```
\def\keyword#1{\ifx\@keywords\@empty\gdef\@keywords{#1}\else
  \g@addto@macro\@keywords{, #1}\fi}
```

`\subject` Subjects.

```
\let\@primarysubjects\@empty
\let\@secondarysubjects\@empty
\let\@primaryscheme\@empty
\let\@secondaryschme\@empty
\def\subject#1#2#3{%
  \expandafter\ifx\csname @#1subjects\endcsname\@empty\relax
     \expandafter\gdef\csname @#1subjects\endcsname{#3}%
  \else
     \expandafter\g@addto@macro\csname @#1subjects\endcsname{, #3}%
  \fi
  \if@aom@printscheme
  \expandafter\g@addto@macro\csname @#1subjects\endcsname{%
    ~(#2)}%
  \fi}
```

`\formatdate` This just sends the date to the special macro `\@formatdate`

```
\def\formatdate#1{\@formatdate#1\@endformatdate}
```

`\@formatdate` This macro takes date in the form YYYY-MM-DD and properly formats it. Note how we delete the leading zero in dates like April 02.

```
\def\@formatdate#1-#2-#3\@endformatdate{%
  \@tempcnta=#3\relax
  \ifcase#2\or
```

```
  January\or February\or March\or April\or May\or June\or
  July\or August\or September\or October\or November\or December\fi
  \space\the\@tempcnta,\space#1}
```

\received
\revised
\accepted
\published
\publishedonline

The following macros add stuff to the footnotes material:

```
\def\received#1{\def\@received{#1}}
\let\@received\@empty
\def\revised#1{\def\@revised{#1}}
\let\@revised\@empty
\def\accepted#1{\def\@accepted{#1}}
\let\@accepted\@empty
\def\published#1{\def\@published{#1}}
\let\@published\@empty
\def\publishedonline#1{\def\@publishedonline{#1}}
\let\@publishedonline\@empty
```

The next macros mimic the functionality of amsart `\issueinfo` command. Note that `\issueinfo` still works.

\volumenumber

This sets the volume of the paper

```
\def\volumenumber#1{\def\currentvolume{#1}}
```

\issuenumber

This sets the issue of the paper:

```
\def\issuenumber#1{\def\currentissue{#1}}
```

\publicationyear

This sets the year of the paper

```
\def\publicationyear#1{\def\currentyear{#1}}
```

\papernumber

This is absent from the `\issueinfo`.

```
\def\papernumber#1{\def\currentpaper{#1}}
\papernumber{0000}
```

\startpage

This defines the starting page of the paper. We have some nice features to set up roman page numbers for editorial stuff—probably not needed for this journal at this time...

```
\def\startpage#1{\pagenumbering{arabic}\setcounter{page}{#1}%
  \def\start@page{#1}%
  \ifnum\c@page<\z@ \pagenumbering{roman}\setcounter{page}{-#1}%
    \def\start@page{\romannumeral#1}%
  \fi}
```

\endpage

This macro again has a twist in it: if the argument is not set, it calculates the last page number itself.

```
\def\endpage#1{\def\@tempa{#1}%
  \ifx\@tempa\@empty\def\end@page{\pageref{LastPage}}%
  \else\def\end@page{#1}\fi}
```

\pagespan

This macro is different from the one provided by amsart because we want to have the option of automatic calculation of the last page number.

```
\def\pagespan#1#2{\startpage{#1}\endpage{#2}}
\pagespan{1}{}
```

\g@addto@abstract Syntactic sugar around \g@addto@macro

```
\def\g@addto@abstract#1{\g@addto@macro{\@aom@abstract}{#1}}
```

\@getabstract Amsart typesets the abstract in a box. We preserve this peculuarity, but we need to put abstract in a macro to output in the rpi file.

```
\long\def\@aom@abstract{}
\long\def\@getabstract#1{%
  \bgroup
    \ifx\languagename\undefined
      \def\languagename{english}%
    \fi
    \g@addto@abstract{<begin abstract }%
    \expandafter\g@addto@abstract\expandafter{\languagename>}%
    \g@addto@macro\@aom@abstract{#1}%
    \g@addto@abstract{<end abstract }%
    \expandafter\g@addto@abstract\expandafter{\languagename>}%
  \egroup
  \ifx\maketitle\relax
    \ClassWarning{aomart}{Abstract should precede
      \protect\maketitle\space in AMS derived classes}%
  \fi
  \global\setbox\abstractbox=\vtop\bgroup%
    \box\abstractbox
    \vglue1pc%
    {\centering\normalfont\normalsize\bfseries\abstractname\par\vglue1pc}%
    \list{}{\labelwidth\z@%
      \leftmargin3pc \rightmargin\leftmargin%
      \listparindent\normalparindent \itemindent\normalparindent%
      \parsep\z@ \@plus\p@%
      \let\fullwidthdisplay\relax%
    }%
    \item[]\normalfont\Small#1
  \endlist\egroup}
```

abstract This puts abstract in a box *and* in a macro. Wasteful, but backword compatible

```
\renewenvironment{abstract}{\Collect@Body\@getabstract}{%
  \ifx\@setabstract\relax\@setabstracta\fi}
```

\proposed We do not typeset the name of the proposer

```
\let\proposed\@gobble
```

\seconded Or the seconder

```
\let\seconded\@gobble
```

\corresponding This is the corresponding author—again not typeset

```
\let\corresponding\@gobble
```

\version We do not typeset the current version of the manuscript either...

```
\let\version\@gobble
```

\doinumber Now databases' numbers of the article:
\mrnumber
\zblnumber
\arxivnumber

```
\def\doinumber#1{\gdef\@doinumber{#1}}
\doinumber{10.4007/annals.\currentyear.\currentvolume.\currentissue.\currentpaper}
```

```
\def\mrnumber#1{\gdef\@mrnumber{#1}}
\mrnumber{}
\def\zblnumber#1{\gdef\@zblnumber{#1}}
\zblnumber{}
\def\arxivnumber#1{\gdef\@arxivnumber{#1}}
\arxivnumber{}
```

`\copyrightyear` This is the copyright year in case it does not coincide with the publication year:

```
\def\copyrightyear#1{\def\@copyrightyear{#1}}
\copyrightyear{}
```

`\copyrightnote` This is the copyrightnote. The default has some trickery with the year:

```
\def\copyrightnote#1{\def\@copyrightnote{#1}}
\copyrightnote{\textcopyright~%
  \ifx\@empty\@copyrightyear\currentyear\else\@copyrightyear\fi~%
  Department of Mathematics, Princeton University}
```

3.9 Typesetting Top Matter

`\@mainrpi` We write the information about the paper into file.rpi (the The stream for the rpi file:

```
\newwrite\@mainrpi
```

`\aom@write@paper@info` This writes the information about the paper into the file `jobname.rpi`. Note that hyperref makes our life a little bit more complex

```
\def\aom@write@paper@info{%
  \bgroup
  \if@filesw
    \openout\@mainrpi\jobname.rpi%
    \def\and{\string\and\space}%
    \ifx\r@LastPage\@undefined
       \edef\@tempa{\start@page}%
    \else
       \def\@tempc##1##2##3##4##5{##2}%
       \edef\@tempa{\expandafter\@tempc\r@LastPage}%
  \fi
  \ifx\languagename\undefined
    \def\languagename{english}%
  \fi
  \protected@write\@mainrpi{}%
   {\@percentchar authors=\authors}%
  \protected@write\@mainrpi{}%
   {\@percentchar authors.information={\@names}}%
  \protected@write\@mainrpi{}%
   {\@percentchar title=\@title}%
  \protected@write\@mainrpi{}%
   {\@percentchar year=\currentyear}%
  \protected@write\@mainrpi{}%
   {\@percentchar volume=\currentvolume}%
  \protected@write\@mainrpi{}%
   {\@percentchar issue=\currentissue}%
  \protected@write\@mainrpi{}%
   {\@percentchar paper=\currentpaper}%
```

```
   \protected@write\@mainrpi{}%
    {\@percentchar startpage=\start@page}%
   \protected@write\@mainrpi{}%
    {\@percentchar endpage=\@tempa}%
   \protected@write\@mainrpi{}%
    {\@percentchar doi=\@doinumber}%
   \ifx\@zblnumber\@empty\else
   \protected@write\@mainrpi{}%
    {\@percentchar zbl=\@zblnumber}%
   \fi
   \ifx\@mrnumber\@empty\else
   \protected@write\@mainrpi{}%
    {\@percentchar mr=\@mrnumber}%
   \fi
   \ifx\@arxivnumber\@empty\else
   \protected@write\@mainrpi{}%
    {\@percentchar arxiv=\@arxivnumber}%
   \fi
   \protected@write\@mainrpi{}%
    {\@percentchar subjects=Primary \@primarysubjects; Secondary:
      \@secondarysubjects}%
   \protected@write\@mainrpi{}%
    {\@percentchar keywords=\@keywords}%
   \protected@write\@mainrpi{}%
    {\@percentchar abstract=\@aom@abstract}%
   \protected@write\@mainrpi{}%
    {\@percentchar articlelanguage=\languagename}%
    \AtEndDocument{\closeout\@mainrpi}%
    \fi
\egroup}
```

`\@maketitle@hook` We add writing the information to the hook:

```
\def\@maketitle@hook{\aom@write@paper@info\global\let\@maketitle@hook\@empty}
```

`\@settitle` We do not uppercase title. Also, we use this occasion to set PDF information:

```
\def\@settitle{\begin{center}%
  \baselineskip20\p@\relax
    \bfseries\LARGE
  \@title
  \ifpdf
    \hypersetup{pdftitle=\@title}%
  \fi
  \end{center}%
}
```

`\@setauthors` Now we typeset authors according to our specs. Again, we use this occasion to set some PDF information:

```
\def\@setauthors{%
  \ifx\authors\@empty\relax\else
    \begingroup
    \def\thanks{\protect\thanks@warning}%
    \trivlist
    \centering\footnotesize \@topsep30\p@\relax
    \advance\@topsep by -\baselineskip
```

```
    \item\relax
    \def\@@and{{\upshape \@aom@and}}%
    \author@andify\authors
    \ifpdf
      \bgroup
         \def\aom@orcidlink##1{}%
         \xdef\@tempa{\authors}%
      \egroup
      \hypersetup{pdfauthor=\@tempa}%
    \fi
    \def\\{\protect\linebreak}%
    \small \@aom@by{} \scshape\authors%
    \@processcurrentcontribgroup
    \ifx\@empty\contribs
    \else
      ,\penalty-3 \space \@setcontribs
    \fi
    \endtrivlist
    \endgroup
    \fi}
```

`\@setcontribs` Contributors are set up in the same way as authors:

```
\def\@setcontribs{%
    \def\@@and{{\upshape \@aom@and}}%
    \author@andify\contribs
    \contribs
}
```

`\@adminfootnotes` We do not typeset keywords, so we change the definition:

```
\def\@adminfootnotes{%
  \let\@makefnmark\relax  \let\@thefnmark\relax
  \ifx\@empty\@date\else \@footnotetext{\@setdate}\fi
  \ifx\@empty\@subjclass\else \@footnotetext{\@setsubjclass}\fi
  \ifx\@empty\@keywords\else\@setkeywords\fi
  \ifx\@empty\@primarysubjects
     \ifx\@empty\@secondarysubjects
     \else\@setsubjects\fi
  \else\@setsubjects\fi
  \ifx\@empty\thankses\else \@footnotetext{%
    \def\par{\let\par\@par}\@setthanks}%
  \fi
  \ifx\@empty\@copyrightnote\else \@footnotetext{%
    \def\par{\let\par\@par}\@copyrightnote\@addpunct.}%
  \fi
}
```

`\@setkeywords` Typesetting keywords

```
\def\@setkeywords{%
    \ifpdf
      \hypersetup{pdfkeywords=\@keywords}%
    \fi
    \if@aom@oldkeywords\else
    \@footnotetext{Keywords: \@keywords}%
    \fi
```

```
}
```

`\@setsubjects` Setting subjects

```
\def\@setsubjects{%
  \let\@subjects\@empty
   \ifx\@primarysubjects\@empty\else
     \edef\@subjects{Primary:~\@primarysubjects}%
    \fi
   \ifx\@secondarysubjects\@empty\else
     \ifx\@primarysubjects\@empty
       \edef\@subjects{Secondary:~\@secondarysubjects}%
     \else
       \edef\@subjects{\@subjects; Secondary:~\@secondarysubjects}%
     \fi
    \fi
    \ifpdf
      \hypersetup{pdfsubject=\@subjects}%
    \fi
    \if@aom@oldkeywords\else
    \@footnotetext{AMS Classification:~\@subjects.}%
    \fi
}
```

`\@@and` We want "and" in the footers to be lowercase. Since there is some uppercase involved, we protect it:

```
\def\@@and{\MakeLowercase{\@aom@and}}
```

3.10 Typesetting End Matter

End matter is typeset at the end of the paper.

`\enddoc@text` This is the main macro for typesetting endmatter.

```
\def\enddoc@text{%
  \ifx\@empty\@translators \else\@settranslators\fi
  \ifx\@empty\@received \else\@setreceived\fi
  \ifx\@empty\@revised \else\@setrevised\fi
  \ifx\@empty\addresses \else\@setaddresses\fi}
```

`\@setreceived` `\@setrevised` `\@setaccepted` `\@setpublished` `\@setpublishedonline` A bunch of macros for setting centered dates

```
\def\@setreceived{{\centering(Received: \@received)\par}}
\def\@setrevised{{\centering(Revised: \@revised)\par}}
\def\@setaccepted{{\centering(Accepted: \@accepted)\par}}
\def\@setpublished{{\centering(Published: \@published)\par}}
\def\@setpublishedonline{{\centering(Published online: \@publishedonline)\par}}
```

`\emailaddrname` We do not want the word "address" here:

```
\def\emailaddrname{{\itshape E-mail}}
```

`\@setaddresses` The difference between our definition and the one in amsart is that we want the e-mail and URL to be clickable

```
\def\@setaddresses{\par
  \nobreak \begingroup
\footnotesize
```

```
  \def\author##1{\goodbreak\addvspace\bigskipamount{\scshape##1\par\nobreak}}%
  \def\\{\unskip, \ignorespaces}%
  \interlinepenalty\@M
  \def\address##1##2{\begingroup\nobreak
    \par\hangindent=22pt\hangafter=0\parindent=0pt
    \@ifnotempty{##1}{(\ignorespaces##1\unskip) }%
    {\ignorespaces##2}\par\endgroup}%
  \def\curraddr##1##2{\begingroup
    \@ifnotempty{##2}{\nobreak\indent\curraddrname
      \@ifnotempty{##1}{, \ignorespaces\scshape##1\unskip}\hskip0.2em:\space
      ##2\par}\endgroup}%
  \def\email##1##2{\begingroup
    \@ifnotempty{##2}{\nobreak\indent\emailaddrname
      \@ifnotempty{##1}{, \ignorespaces##1\unskip}\hskip0.2em:\space
      \href{mailto:##2}{\nolinkurl{##2}}\par\nobreak}\endgroup}%
  \def\urladdr##1##2{\begingroup
    \@ifnotempty{##2}{\nobreak\indent
      \@ifnotempty{##1}{, \ignorespaces##1\unskip}%
      \url{##2}\par\nobreak}\endgroup}%
  \def\orcid##1{\begingroup
    \@ifnotempty{##1}{\nobreak\indent
      \url{https://orcid.org/##1}\par\nobreak}\endgroup}%
  \addresses
  \endgroup
}
```

3.11 Sectioning

`\contentsnamefont` This is the font for the word "Contents":

```
\renewcommand\contentsnamefont{\bfseries}
```

`\section` We want our sections to be centered and bold:

```
\def\section{\@startsection{section}{1}%
  \z@{.7\linespacing\@plus\linespacing}{.5\linespacing}%
  {\normalfont\bfseries\centering}}
```

`\subsection` We want our subsections to be indented and italic:

```
\def\subsection{\@startsection{subsection}{2}%
  {\parindent}{.5\linespacing}{-.5em}%
  {\normalfont\itshape}}
```

`\oldsubsections` This macro restores the values for `\subsection` spacing prior to v1.1.

```
\def\oldsubsections{%
\gdef\subsection{\@startsection{subsection}{2}%
  {\parindent}{.5\linespacing\@plus.7\linespacing}{-.5em}%
  {\normalfont\itshape}}}
```

`\subsubsection` Subsubsections are formatted exactly like subsections:

```
\def\subsubsection{\@startsection{subsubsection}{3}%
  {\parindent}{.5\linespacing}{-.5em}%
  {\normalfont\itshape}}
```

\Hy@AlphNoErr The newer (circa 2012) hyperref defines this command. However, older versions do not. Here we provide it:

```
\providecommand\Hy@AlphNoErr[1]{%
  \ifnum\value{#1}>26 %
    Alph\number\value{#1}%
  \else
    \ifnum\value{#1}<1 %
      Alph\number\value{#1}%
    \else
      \Alph{#1}%
    \fi
  \fi
}%
```

\appendix We redefine appendix to ensure the letter in section number is always upright:

```
\def\appendix{\par\c@section\z@ \c@subsection\z@
  \gdef\theHsection{\Hy@AlphNoErr{section}}%
   \let\sectionname\appendixname
   \def\thesection{{\upshape\@Alph\c@section}}}
```

3.12 Figures and Tables

\@captionheadfont This is the font for the words "Figure" or "Table" in captions. Unlike amsmath with is small caps, we want just plain Roman font:

```
\def\@captionheadfont{\normalfont}
```

3.13 Theorems

Here we redefine three main style of amsart. Here are the arguments of \newtheoremstyle from [3]:

```
                  #1
\newtheoremstyle{NAME}%
    #2          #3          #4
  {ABOVESPACE}{BELOWSPACE}{BODYFONT}%
    #5      #6        #7         #8
  {INDENT}{HEADFONT}{HEADPUNCT}{HEADSPACE}%
    #9
  {CUSTOM-HEAD-SPEC}
```

In the plain style the name ("theorem") is in small caps, the number is in normal font, the optional note is also in normal font, and the text is italics.

```
\newtheoremstyle{plain}{0.5\linespacing}{0.5\linespacing}{\sishape}%
   {\parindent}{\scshape}{.}{0.5em}%
   {\thmname{#1}\thmnumber{ #2}\thmnote{\normalfont{} (#3)}}
```

In the definition style the name is italics, and the body font is upright:

```
\newtheoremstyle{definition}{0.5\linespacing}{0.5\linespacing}%
   {\upshape}{\parindent}%
   {\sishape}{.}{0.5em}%
   {\thmname{#1}\thmnumber{ #2}\thmnote{\normalfont{} (#3)}}
```

In our class there is no difference between `remark` and `definition` theorem styles:

```
\newtheoremstyle{remark}{0.5\linespacing}{0.5\linespacing}%
   {\upshape}{\parindent}%
   {\sishape}{.}{0.5em}%
   {\thmname{#1}\thmnumber{ #2}\thmnote{\normalfont{} (#3)}}
```

`\newtheorem` For compatibility reasons we need to accept `\newtheorem` with optional first argument—and silently drop it. The problem is, there is `\newtheorem*`, so we need to check which one we deal with... The command `\@xnthm` here is from amsthm; it does the real work with the real parameters.

```
\renewcommand{\newtheorem}{\@ifstar{\@aom@newthm@star}{\@aom@newthm}}
\def\@aom@newthm@star{\@ifnextchar[{\@aom@newthm@star@}{\@aom@newthm@star@[]}}
\def\@aom@newthm{\@ifnextchar[{\@aom@newthm@}{\@aom@newthm@[]}}
\def\@aom@newthm@star@[#1]{\@xnthm *}
\def\@aom@newthm@[#1]{\@xnthm \relax}
```

`proof` We want our proofs to be indented:

```
\renewenvironment{proof}[1][\proofname]{\par
  \pushQED{\qed}%
  \normalfont \topsep6\p@\@plus6\p@\relax
  \trivlist
  \item[\hskip\labelsep\hskip\parindent
        \itshape
    #1\@addpunct{.}]\ignorespaces
}{%
  \popQED\endtrivlist\@endpefalse
}
```

3.14 Bibliography Macros

`\repeatedauthors` When the authors are repeated, we used change them to `\bysame`; we no more do this:

```
\def\repeatedauthors#1{\ClassWarning{aomart}{The command is obsolte}#1}
```

`\bysame` We no longer use `\bysame`

```
\let\bysame@@orig=\bysame
\def\bysame{\ClassWarning{aomart}{We no longer omit
    repeated authors}\bysame@@orig}
```

`\doi` Typesetting doi...

```
\def\doi#1{%
  \if@aom@doiMMXVI
     \url{http://dx.doi.org/#1}%
  \else
     \if@aom@olddoi
         \href{http://dx.doi.org/#1}{doi: \path{#1}}%
      \else
          \url{https://doi.org/#1}%
      \fi
  \fi}
```

\mr Typesetting urls

\zbl
```
\def\mr#1{\href{http://www.ams.org/mathscinet-getitem?mr=#1}{MR~\path{#1}}}
```
\arxiv
```
\def\zbl#1{\href{http://www.zentralblatt-math.org/zmath/en/search/?q=an:#1}{Zbl~\path{#1}}}
```
\jfm
```
\def\arxiv#1{\href{http://www.arxiv.org/abs/#1}{arXiv~\path{#1}}}
\def\jfm#1{\href{http://www.emis.de/cgi-bin/JFM-item?#1}{JFM~\path{#1}}}
```

\bibliofont We make this \small rather than \Small in amsart

```
\renewcommand{\bibliofont}{\small}
```

3.15 Additional Macros

\EditorialComment This macro is noop in normal mode, but is a tiny marginpar in the manusript mode

```
\newcommand\EditorialComment[2][default]{\if@aom@manuscript@mode\bgroup
  \expandafter\ifx\csname EditorialComment@#1\endcsname\relax
    \else
    \marginparwidth=75pt\marginpar{\scriptsize\raggedright#2}\fi
  \egroup
  \fi}
```

\ECSelect

```
\def\ECSelect#1{\if@aom@manuscript@mode
    \@for\EC@level:=#1\do{%
    \expandafter\gdef\csname
    EditorialComment@\EC@level\endcsname{\EditorialComment}}%
  \fi}
\AtBeginDocument{\ECSelect{default}}
```

\Highlight

```
\newcommand\Highlight[2][default]{%
  \expandafter\ifx\csname Highlight@#1\endcsname\relax
  #2\else
  \csname Highlight@#1\endcsname{#2}\fi}
```

\HSelect

```
\newcommand\HSelect[2][magenta]{\if@aom@manuscript@mode
  \@for\TC@level:=#2\do{\expandafter
    \gdef\csname Highlight@\TC@level\endcsname##1{\bgroup
      \Hy@colorlinksfalse
      \def\Hy@colorlink####1{\begingroup}%
      \def\Hy@endcolorlink{\endgroup}%
      \color{#1}##1\egroup}}%
  \fi}
\AtBeginDocument{\HSelect{default}}
```

\@fullref This macro creates a wide link for the reference. It has four parameters: the word (theorem, equation,...), the "pre" punctuation, the reference and the "post" punctuation.

```
\def\@fullref#1#2#3#4{\hyperref[#3]{#1~#2\ref*{#3}#4}}
```

\fullref A reference without parentheses:

```
\newcommand{\fullref}[2]{\@fullref{#1}{}{#2}{}}
```

`\pfullref` A reference with parentheses:

```
\newcommand{\pfullref}[2]{\@fullref{#1}{(}{#2}{)}}
```

`\bfullref` A reference with brackets:

```
\newcommand{\bfullref}[2]{\@fullref{#1}{[}{#2}{]}}
```

`\eqfullref` Here we do not use the standard common `\@fullref` because we want `\eqref` to work...

```
\newcommand{\eqfullref}[2]{\hyperref[#2]{#1~\textup{\tagform@{\ref*{#2}}}}}
```

`\fullpageref` A wide link for page reference. Note that the word "page" can be omitted

```
\newcommand{\fullpageref}[2][page]{\hyperref[#2]{#1~\pageref*{#2}}}
```

`\eqnarray` While we do *not* recommend the use of `eqnarray`, we still would like to correct the ugly spacing around it...

```
\def\eqnarray{%
   \stepcounter{equation}%
   \def\@currentlabel{\p@equation\theequation}%
   \global\@eqnswtrue
   \m@th
   \global\@eqcnt\z@
   \tabskip\@centering
   \let\\\@eqncr
   $$\arraycolsep1\p@
   \everycr{}\halign to\displaywidth\bgroup
       \hskip\@centering$\displaystyle\tabskip\z@skip{##}$\@eqnsel
      &\global\@eqcnt\@ne\hskip \tw@\arraycolsep \hfil${##}$\hfil
      &\global\@eqcnt\tw@ \hskip \tw@\arraycolsep
         $\displaystyle{##}$\hfil\tabskip\@centering
      &\global\@eqcnt\thr@@ \hb@xt@\z@\bgroup\hss##\egroup
         \tabskip\z@skip
      \cr
}
```

`\includecolorgraphics` Color graphics: select either the first or the second argument.

```
\newcommand\includecolorgraphics[3][]{\if@aom@screen@mode
  \includegraphics[#1]{#2}\else
  \includegraphics[#1]{#3}\fi}
```

`\funding` The macro to print grants. It adds to the rpi file the information about grants

```
\newcommand\funding[3][]{%
     \protected@write\@mainrpi{}%
     {\@percentchar sponsor=#2, grantid=#3}%
     \def\@tempa{#1}\relax%
     \ifx\@tempa\@empty\relax
       \def\@tempb{#3}%
        #2%
        \ifx\@tempb\@empty\relax\else\ (grant~#3)\fi
     \else
        #1
     \fi}
```

3.16 End of Class

752 ⟨/class⟩

References

[1] George Gräetzer. *Math into LaTeX*. Birkhäuser, Boston, third edition, 2000.

[2] UK TeX Users Group. UK list of TeX frequently asked questions. `http://www.tex.ac.uk/cgi-bin/texfaq2html`, 2008.

[3] Michael Downes and Barbara Beeton. *The amsart, amsproc, and amsbook document classes*. American Mathematical Society, August 2004. `http://mirrors.ctan.org/macros/latex/required/amslatex/classes`.

[4] Sebastian Rahtz and Heiko Oberdiek. *Hypertext Marks in LaTeX: a Manual for Hyperref*, September 2006. `http://mirrors.ctan.org/macros/latex/contrib/hyperref`.

[5] Heiko Oberdiek. *The ifpdf Package*, February 2006. `http://mirrors.ctan.org/macros/latex/contrib/oberdiek`.

[6] Piet van Oostrum. *Page Layout in LaTeX*, March 2004. `http://mirrors.ctan.org/macros/latex/contrib/fancyhdr`.

[7] Sergei V. Znamenskii. *Unslanted Punctuation in Computer Modern Italic*, January 2003. `http://mirrors.ctan.org/fonts/cm/cmtiup`.

[8] Yannis Haralambous. *My Humble Additions to (La)TeX Mathematics*, January 1996. `http://mirrors.ctan.org/macros/latex/contrib/yhmath/`.

[9] American Mathematical Society. *User's Guide for the amsmath Package (Version 2.0)*, February 2002. `http://mirrors.ctan.org/macros/latex/required/amslatex/math/amsldoc.pdf`.

[10] Johannes Braams. *Babel, a Multilingual Package For Use With LaTeX's Standard Document Classes*, April 2005. `http://mirrors.ctan.org/macros/latex/required/babel`.

[11] American Mathematical Society. *Instructions for Preparation of Papers and Monographs, AMSLaTeX*, August 2004. `http://mirrors.ctan.org/macros/latex/required/amslatex/classes/instr-l.pdf`.

[12] American Mathematical Society. *Using the amsthm Package*, August 2004. `http://mirrors.ctan.org/macros/latex/required/amslatex/classes/amsthdoc.pdf`.

[13] Michel Goossens, Sebastian Rahtz, and Frank Mittelbach. *The LaTeX Graphics Companion: Illustrating Documents With TeX and PostScript*. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Reading, Ma., 1997.

[14] Leo Stein. *The orcidlink package*.

Change History

v0.10
General: Bibliography styles update 2
Documentation update 2
Screen mode triggers special URL settings 16
\if@aom@screen@mode: Added screen mode 14
\jfm: Added macro 33
v0.2
General: First fully functional version 2
v0.3
General: Added DOI number in headers 19
Added package mdputu 17
Documentation update 2
\arxiv: Added macro 33
\corresponding: Added macro . . 25
\doinumber: Added macro 25
\EditorialComment: Added macro 33
\if@aom@manuscript@mode: Added manuscript mode 14
\mr: Added macro 33
\mrnumber: Added macro 25
\newtheorem: Redefined macro . . 32
\proposed: Added macro 25
\seconded: Added macro 25
\version: Added macro 25
\zbl: Added macro 33
\zblnumber: Added macro 25
v0.4
General: Changed definition theorem style 31
Changed plain theorem style . 31
Deleted lineno package dependence 16
Deleted remark theorem style . 32
Documentation update 2
Switched to upright digits in italics everywhere 17
Used line numbers for headings 19
\@aom@linecount: Added macro . 19
\enddoc@text: Deleted many dates. 29
v0.5
General: Added extra footer in manuscript mode 19
Corrected the byg with math in headers 19
Made remark theorem style identical to definition theorem style 32
Made Roman font the default URL font 16
\@fullref: Added macro 33
\@setaddresses: Deleted the word URL 29
E-mail is now in Roman font . 29
\@setpublishedonline: Decreased font 29
\@typesizes: Corrected typo in the definition of Small 17
Increased LARGE from 16 pt to 17 pt 17
\bfullref: Added macro 34
\emailaddrname: Changed macro 29
\eqfullref: Added macro 34
\fullref: Added macro 33
\pfullref: Added macro 34
proof: Redefined macro 32
\subsection: Redefined macro . . 30
v0.6
General: Changes to bst files 2
Fullref.pl is much less agressive now 2
\@setauthors: 'By' and 'and' are in Roman font now 27
\belowdisplayskip: Changed belowdisplayskip 18
\bibliofont: Changed default . . 33
\zbl: Changed capitalization . . . 33
v0.7
General: Bibliography styles changed 2
v0.8
General: Added yhmath 17
Bibliography styles update 2
Changed authors in header . . . 19
Documentation update 2
Switched to cmtiup 17
\specialdigits: Redefined to noop 17
v0.9
General: Bibliography styles update 2
Changed font for the folio on the first page 19
Documentation update 2
\@@and: Redefined macro 29

\@setaddresses: Deleted spurious space in urladdress 29
\@setpublishedonline: Increased font 29
abstract: Added parindent for the first par 25
\eqnarray: Redefined standard macro 34
v1.0
General: Top matter macros are now only in preamble 2
\doinumber: Added default 25
\papernumber: Added macro . . . 24
v1.1
General: In manuscript mode the links are always blue 16
v1.10
\@@and: Added internationalization 29
\@aom@and: Added macro 16
\@aom@by: Added macro 16
\@setauthors: Internationalization 27
\doi: Introduced the logic for old doi formatting 32
\if@aom@olddoi: Added old DOI processing 15
v1.11
General: Added \fulladdress 2
Added new commands for copyright statement 2
Bibliography change: titlenote, deleted bysame 2
Deleted \repeatedauthors from the documentation 2
\@adminfootnotes: Added copyright statement 28
\@setaddresses: Changed email handling 29
\bysame: Made the macro obsolete 32
\copyrightnote: Added macro . . 26
\copyrightyear: Added macro . . 26
\fulladdress: Added macro . . . 21
\repeatedauthors: Now this command is obsolete 32
v1.12
\appendix: Added hyperref definition 31
v1.13
\Hy@AlphNoErr: Added macro for older installations 31
v1.14
\@mainrpi: Added macro 26
\@maketitle@hook: Added macro 27
\aom@write@paper@info: Added macro 26
v1.14a
\annalsurl: New url 20
v1.15
\doi: Doi according to the new Crossref recommendations . . . 32
\if@aom@doiMMXVI: Added another options 15
v1.16
General: We require environ package 16
\aom@write@paper@info: Added names, abstract, subjects, keywords, zblnumber, arxivnumber 26
Corrected the endpage bug . . . 26
\arxivnumber: Added macro . . . 25
\author: Redefined amsart definition 21
abstract: Redefined using environ 25
\email: Redefined amsart definition 22
\fulladdress: Redefined 21
\givenname: Redefined 21
\surname: Redefined 21
\urladdr: Redefined amsart definition 23
v1.17
General: Added new field totalpages to the bibliography . 2
v1.17a
General: Bug fixed in aomplain.bst 2
v1.18
General: New option oldkeywords and printing keywords and subjects by default 2
\@setaddresses: Added orcid . . 29
\@setkeywords: Now we print keywords 28
\@setsubjects: Now we print subjects 29
\if@aom@oldkeywords: Added keywords processing 15
\orcid: Added macro 23
\subject: Drop scheme and primary/secondary 23
v1.19
General: Bibliography changes . . . 2
v1.2
General: Bibliography styles update 2
\@setaddresses: Changed font for current address 29

\arxiv: Now we properly treat numbers with underscores ... 33
\doi: Now we properly treat numbers with underscores ... 32
\jfm: Now we properly treat numbers with underscores ... 33
\mr: Now we properly treat numbers with underscores ... 33
\oldsubsections: Introduced macro ... 30
\subsection: Decreased vertical spacing ... 30
\zbl: Now we properly treat numbers with underscores ... 33
v1.20
\@adminfootnotes: Make primary and secondary subjects separated ... 28
\@setsubjects: Make primary and secondary subjects separated . 29
\aom@write@paper@info: Make primary and secondary subjects separated ... 26
\subject: Make primary and secondary subjects separated . 23
v1.21
\@getabstract: Added multilanguage abstracts ... 25
\aom@write@paper@info: Added main language ... 26
\g@addto@abstract: Added macro 25
v1.22
General: In screen mode we no longer crop pages ... 16
v1.23
General: Made ymath large symbols default ... 17
\widetilde: We are taking wide hat and wide tilde from amsfonts ... 17
v1.24
\if@aom@printscheme: Added optional printing of scheme .. 15
\subject: Added scheme ... 23
v1.25
\fullpageref: Added macro ... 34
v1.26
\@currentcontribution: Introduced macro ... 21
\@currentcontributors: Introduced macro ... 21
\@processcurrentcontribgroup: Introduced macro ... 22
\contrib: Redefined amsart macro 22
\contribs: Introduced macro ... 21
\if@startcontribgroup: Introduced macro ... 21
v1.27
\aom@write@paper@info: Keep the .rpi file open till the end of document ... 26
\funding: Added macro ... 34
v1.28
\@setauthors: Added treatment of orcids ... 27
\aom@current@orcid@target: Added macro ... 23
\aom@orcidlink: Added macro .. 23
\contrib: Added typesetting orcids ... 22
\orcid: Added typesetting orcid . 23
v1.29
\@setaddresses: Reformatted .. 29
v1.3
General: Corrected bug with doinumber ... 19
v1.30
\@citex: Redefined macro ... 15
\@makefnmar: Use kernel version of footnote marks ... 15
\@makefnmark@kernel: Use kernel version of footnote marks ... 15
v1.31
\@setaddresses: Reformatted .. 29
v1.32
\@citex: Added 'and' and oxford comma ... 15
\ECSelect: Added macro ... 33
\EditorialComment: Rewrote macro, adding levels ... 33
\Highlight: Added macro ... 33
\HSelect: Added macro ... 33
\includecolorgraphics: Added macro ... 34
v1.33
\@setaddresses: No break after author name ... 29
v1.4
General: Deleted noamsfonts option ... 15
\subsection: Deleted stretch in vertical spacing ... 30
\subsubsection: Introduced the macro ... 30
v1.5
General: Added noopsort to the styles, corrected typo ... 2
Added sortyear to the styles ... 2

\arxiv: Typo corrected 33
v1.6
General: Bibliography change: aomalpha now respects key field in the bib file 2
\appendix: Redefined the macro . 31
v1.7
General: Suppressed page number in the header for one-page articles 19
v1.9
\doi: Changed doi look 32
v2.28
\headheight: Increased 19
v2.30
General: Changed the margins for enumerate 18
v2.32
\itemize: Changed the margins for itemize 18

Index

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.

Symbols

\@@and 276, 507, 527, 574
\@Alph 642
\@M 591
\@accepted 360, 361, 582
\@addpunct . . . 544, 666
\@adminfootnotes . . 531
\@annalsurl . . . 192, 207
\@aom@abstract 381, 382, 390, 483
\@aom@and 97, 99, 100, 101, 276, 507, 527, 574
\@aom@by 96, 99, 100, 101, 517
\@aom@doiMMXVIfalse 42
\@aom@doiMMXVItrue . 43
\@aom@linecount 162, 176, 179, 188
\@aom@manuscript@modefalse 33
\@aom@manuscript@modetrue 34
\@aom@newthm . . 655, 657
\@aom@newthm@ . 657, 659
\@aom@newthm@star 655, 656
\@aom@newthm@star@ 656, 658
\@aom@olddoifalse . 39
\@aom@olddoitrue . . 40
\@aom@oldkeywordsfalse 45
\@aom@oldkeywordstrue 46
\@aom@printschemefalse 48
\@aom@printschemetrue 49
\@aom@screen@modefalse 36
\@aom@screen@modetrue 37
\@arxivnumber 422, 473, 475
\@auxout 76
\@captionheadfont . 643
\@centering 726, 730, 733
\@cite 65
\@cite@ofmt 81
\@citea . . 64, 66, 70, 72
\@citeb 62, 65, 75, 76, 77, 80, 81
\@citex 60
\@copyrightnote 426, 543, 544
\@copyrightyear 424, 428
\@currentcontribution 269, 282, 293, 301, 306, 314
\@currentcontributors . 270, 275, 277, 285, 290, 307, 309
\@currentlabel 722
\@date 533
\@dblarg 267
\@doinumber . . . 203, 204, 205, 416, 464
\@empty 64, 75, 203, 250, 259, 275, 278, 292, 293, 333, 335, 336, 337, 338, 340, 357, 359, 361, 363, 365, 377, 428, 465, 469, 473, 489, 500, 519, 533, 534, 535, 536, 537, 540, 543, 556, 557, 560, 561, 576, 577, 578, 579, 745, 748
\@endformatdate 349, 350
\@endpefalse 668
\@eqcnt 725, 731, 732, 734
\@eqncr 727
\@eqnsel 730
\@eqnswtrue 723
\@firstofone 75
\@footnotetext 533, 534, 540, 543, 552, 571
\@for . . . 62, 65, 696, 706
\@formatdate . . 349, 350
\@fullref 714, 715, 716, 717
\@getabstract . 382, 410
\@gobble 412, 413, 414, 415
\@ifnextchar . . 656, 657
\@ifnotempty 258, 594, 597, 598, 601, 602, 605, 606, 609
\@ifpackageloaded . 98
\@ifstar 655
\@ifundefined 77
\@itemdepth 148, 149, 150
\@itemitem . . . 150, 151
\@ixpt 120
\@keywords 333, 334, 481, 535, 549, 552
\@latex@warning . . . 79
\@listi 146
\@mainrpi . 430, 434, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 466, 470, 474, 477, 480, 482, 484, 486, 742
\@makefnmar 59
\@makefnmark 57, 59, 532
\@makefnmark@kernel 57, 59
\@maketitle@hook . . 489
\@mathmeasure . 104, 108
\@mrnumber 418, 469, 471
\@names 245, 246, 247, 248, 252, 255, 311, 312, 314, 315, 320, 324, 329, 448
\@ne . . 149, 165, 167, 731
\@nx 267, 268
\@onlypreamble 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228,

229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244
\@par 541, 544
\@percentchar 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 467, 471, 475, 478, 481, 483, 485, 743
\@plus 405, 616, 623, 662
\@primaryscheme . . . 337
\@primarysubjects 335, 478, 536, 557, 558, 561
\@processcurrentcontribgroup 274, 305, 518
\@published 362, 363, 583
\@publishedonline 364, 365, 584
\@received 356, 357, 577, 580
\@revised 358, 359, 578, 581
\@secondaryschme . . 338
\@secondarysubjects 336, 479, 537, 560, 562, 564
\@setabstract 411
\@setabstracta 411
\@setaccepted 580
\@setaddresses 579, 586
\@setauthors 499
\@setcontribs . 521, 526
\@setdate 533
\@setkeywords . 535, 547
\@setpublished 580
\@setpublishedonline 580
\@setreceived . 577, 580
\@setrevised . . 578, 580
\@setsubjclass 534
\@setsubjects 538, 539, 555
\@setthanks 541
\@settitle 490
\@settranslators . . 576
\@startcontribgroupfalse 273, 298, 302
\@startcontribgrouptrue 291
\@startsection 615, 618, 622, 625
\@subjclass 534
\@subjects 556, 558, 562, 564, 568, 571
\@tempa . . . 289, 292, 301, 376, 377, 437, 440, 462, 512, 514, 744, 745
\@tempb 746, 748
\@tempc 439, 440
\@tempcnta 61, 62, 68, 69, 165, 166, 167, 351, 355
\@tempcntb . . 63, 67, 68
\@thefnmark 532
\@title . . . 450, 493, 495
\@toodeep 148
\@topsep 504, 505
\@translators 576
\@typesizes 119
\@undefined 436
\@viiipt 120
\@viipt 120
\@vipt 120
\@xiipt 123
\@xipt 122
\@xnthm 658, 659
\@xp 268
\@xpt 121
\@xviipt 123
\@zblnumber 420, 465, 467
\\ 166, 202, 516, 590, 727
\␣ 748
10pt (option) *4*
11pt (option) *4*
12pt (option) *4*
8pt (option) *4*
9pt (option) *4*

A

\abovedisplayskip . 131
\abstract 410
abstract (env.) *6*
\abstractbox . . 398, 399
\abstractname 401
\accepted . . *7*, 225, 356
\address . . . *5*, 213, 592
\addresses 265, 316, 319, 323, 328, 579, 611
\addto 99, 100, 101
\addvspace 589
\advance 62, 67, 145, 149, 167, 505
\Alph 635
\and . . 254, 255, 262, 279, 309, 311, 435
\annalsurl 207
\aom@current@orcid@target . 257, 290, 326, 330
\aom@orcidlink 330, 332, 511
\aom@size@warning 24, 27, 28, 29, 30, 31
\aom@write@paper@info 431, 489
\appendix 639
\appendixname 641
\arraycolsep 728, 731, 732
\arxiv *12*, 684
\arxivnumber *7*, 244, 416
\AtBeginDocument . . . 98, 141, 700, 713
\AtEndDocument 486
\author *5*, 210, 249, 316, 589
\author@andify 277, 508, 528
\authors 250, 251, 254, 257, 326, 446, 500, 508, 512, 517

B

\baselineskip 125, 491, 505
\begin 19, 175, 178, 187, 490
\begingroup . . . 501, 587, 592, 596, 600, 604, 608, 709
\belowdisplayskip . 131
\bfseries 77, 401, 492, 614, 617
\bfullref *9*, 717
\bgroup 384, 398, 432, 510, 689, 707, 729, 734
\bibliofont 688
\bigskipamount 589
\box 399
\bysame 671
\bysame@@orig . 671, 673

C

\c@page 373

\c@section ... 639, 642
\c@subsection 639
\captionsenglish .. 101
\captionsfrench ... 99
\captionsgerman ... 100
\centering ... 401, 504, 580, 581, 582, 583, 584, 617
\cfoot 206
\chead 191
\citation 76
\ClassError 294
\ClassInfo 52, 54
\ClassWarning .. 25, 114, 395, 670, 672
\closeout 486
\clubpenalty 139
\CodelineIndex 16
\Collect@Body 410
\color 711
\contentsnamefont . 614
\contrib ... 5, 211, 288
\contribs . 271, 278, 279, 281, 283, 284, 519, 528, 529
\copyrightnote 6, 236, 426
\copyrightyear .. 7, 424
\copyrighyear 237
\corresponding 7, 230, 414
\cr 736
\csname 81, 151, 268, 340, 341, 343, 346, 690, 697, 702, 704, 707
\curraddr .. 5, 214, 596
\curraddrname 597
\currentissue 367, 417, 456
\CurrentOption . 27, 28, 29, 30, 31, 50
\currentpaper 369, 417, 458
\currentvolume 192, 366, 417, 454
\currentyear .. 193, 368, 417, 428, 452

D

\DeclareOption 27, 28, 29, 30, 31, 34, 37, 40, 43, 46, 49, 50
\DeclareSymbolFont . 103
\def 24, 60, 66, 70, 72, 96, 97, 99, 100, 101, 116, 119, 153, 195, 207, 245, 246, 247, 248, 269, 270, 271, 274, 276, 289, 326, 333, 339, 349, 350, 356, 358, 360, 362, 364, 366, 367, 368, 369, 371, 372, 374, 376, 377, 378, 379, 381, 382, 383, 386, 416, 418, 420, 422, 424, 426, 431, 435, 439, 443, 489, 490, 499, 502, 507, 511, 516, 526, 527, 531, 541, 544, 547, 555, 574, 575, 580, 581, 582, 583, 584, 585, 586, 589, 590, 592, 596, 600, 604, 608, 615, 618, 621, 625, 639, 642, 643, 656, 657, 658, 659, 670, 672, 674, 684, 685, 686, 687, 695, 709, 710, 714, 720, 722, 744, 746
\dimen 135
\displaystyle . 730, 733
\displaywidth 729
\do 62, 65, 696, 706
\DocInput 20
\documentclass 8
\doi 12, 205, 674
doi2016 (option) 4
\doinumber . 7, 241, 416
draft (option) 4

E

\EC@level 696, 698
\ECSelect 9, 695
\edef 75, 150, 196, 198, 200, 204, 267, 437, 440, 558, 562, 564
\editor 7, 231
\EditorialComment 8, 689, 698
\egroup 393, 409, 488, 513, 693, 711, 734
\else 71, 87, 90, 107, 111, 149, 199, 202, 203, 253, 261, 275, 278, 297, 308, 333, 342, 378, 428, 438, 465, 469, 473, 500, 520, 533, 534, 535, 538, 539, 540, 543, 551, 557, 560, 563, 570, 576, 577, 578, 579, 631, 634, 677, 680, 691, 703, 739, 748, 749
\email .. 5, 212, 318, 600
\emailaddrname 585, 601
\EnableCrossrefs .. 18
\end 21, 177, 180, 189, 497
\end@page 197, 200, 202, 377, 378
\endcsname . 81, 151, 268, 340, 341, 343, 346, 690, 698, 702, 704, 707
\enddoc@text 575
\endgroup 524, 595, 599, 603, 607, 610, 612, 710
\endlist 156, 409
\endpage 7, 240, 376, 379
\endtrivlist .. 523, 668
environments:
abstract 6
eqnarray 9
eqnarray* 9
\eqfullref 9, 718
\eqnarray 720
eqnarray (env.) 9
eqnarray* (env.) 9
\evensidemargin ... 129
\everycr 729
\expandafter ... 75, 205, 281, 282,

284, 285, 313, 314, 330, 340, 341, 343, 346, 389, 392, 440, 690, 697, 702, 706

F

\fancyfoot . . . 171, 181
\fancyhead 170, 172, 173, 175, 178, 183
\fancyhf 185
\fancypagestyle . . . 184
\fi . . 73, 74, 76, 93, 107, 111, 154, 168, 182, 190, 201, 202, 205, 256, 263, 280, 286, 299, 300, 303, 310, 334, 344, 348, 354, 375, 378, 387, 397, 411, 428, 441, 444, 468, 472, 476, 487, 496, 515, 522, 525, 533, 534, 535, 538, 539, 542, 545, 550, 553, 559, 565, 566, 569, 572, 576, 577, 578, 579, 636, 637, 682, 683, 692, 694, 699, 704, 712, 740, 748, 751
final (option) *4*
\footins 131
\footnotesize . 173, 175, 206, 504, 588
\footrulewidth 160
\footskip 136
\formatdate *7*, 349
\fulladdress *5*, 218, 245
\fullpageref *9*, 719
\fullref *9*, 715
\fullwidthdisplay . 406
\funding *11*, 741

G

\g@addto@abstract 381, 388, 389, 391, 392
\g@addto@macro 246, 247, 248, 252, 254, 255, 262, 265, 279, 281, 283, 284, 309, 311, 312, 313, 315, 316, 319, 320, 323, 324, 328, 329, 330, 334, 343, 346, 381, 390
\G@refundefinedtrue 78
\gdef 207, 251, 257, 260, 290, 306, 307, 333, 341, 416, 418, 420, 422, 622, 640, 697, 707
\givenname . *5*, 217, 245
\global 398, 489, 723, 725, 731, 732, 734
\goodbreak 589

H

\halign 729
\hangafter 593
\hangindent 593
\hb@xt@ 734
\hbox 77
\headheight 159
\headrulewidth 160
\headsep 158
\hexnumber@ . . . 106, 110
\hfil 731, 733
\Highlight *8*, 701
\href 192, 332, 603, 679, 684, 685, 686, 687
\HSelect *9*, 705
\hskip 143, 152, 598, 602, 664, 730, 731, 732
\hss 153, 734
\Hy@AlphNoErr . 628, 640
\Hy@colorlink 709
\Hy@colorlinksfalse 708
\Hy@endcolorlink . . 710
\hyperref . 714, 718, 719
\hypersetup 85, 88, 91, 495, 514, 549, 568
\HyPsd@@@pageref . . 198

I

\if@aom@doiMMXVI 41, 675
\if@aom@manuscript@mode 32, 87, 162, 174, 186, 689, 695, 705
\if@aom@olddoi . 38, 678
\if@aom@oldkeywords 44, 551, 570
\if@aom@printscheme 47, 345
\if@aom@screen@mode 35, 84, 738
\if@filesw 76, 433
\if@startcontribgroup 272, 304
\ifcase 352
\ifdim 105, 109
\IfFileExists 112
\ifnum . . 68, 69, 148, 167, 373, 629, 632
\ifpdf 494, 509, 548, 567
\ifx 197, 202, 203, 250, 259, 275, 278, 292, 293, 301, 333, 340, 377, 385, 394, 411, 428, 436, 442, 465, 469, 473, 500, 519, 533, 534, 535, 536, 537, 540, 543, 557, 560, 561, 576, 577, 578, 579, 690, 702, 745, 748
\ignorespaces 590, 594, 595, 598, 602, 606, 666
\immediate 76
\includecolorgraphics *11*, 332, 738
\includegraphics 739, 740
\indent 597, 601, 605, 609
\InputIfFileExists . 51
\interlinepenalty . 591
\issuenumber *7*, 234, 367
\item 408, 506, 664
\itemindent 404
\itemize 147
\itshape . . 117, 585, 620, 624, 627, 665

J

\jfm *12*, 684
\jobname 434

K

\kern 332

\keyword . . . 6, 221, 333

L

\labelenumi 143
\labelitemi 152
\labelsep 142, 143, 145, 152, 664
\labelwidth . . . 145, 402
\languagename 385, 386, 389, 392, 442, 443, 485
\LARGE 492
\leavevmode 60
\leftmargin 144, 152, 403
\leftmargini 143, 144, 145
\let . . 10, 57, 59, 64, 117, 118, 126, 335, 336, 337, 338, 357, 359, 361, 363, 365, 406, 412, 413, 414, 415, 489, 532, 541, 544, 556, 641, 671, 727
\lhead 187
\linebreak 516
\linespacing . . 125, 616, 619, 623, 626, 644, 647, 651
\list 151, 402
\listparindent 404
\llap 153
\LoadClass 58
\long 24, 382, 383
\loop 166

M

\m@th 724
\makelabel 153
\MakeLowercase 574
\maketitle . 6, 394, 396
\MakeUppercase 183
manuscript (option) . . 4
\marginpar 692
\marginparwidth . . . 692
\mathaccent 106, 107, 110, 111
\MessageBreak 114
\mr 12, 684
\mrnumber . . 7, 242, 416

N

\NeedsTeXFormat 1
\newcommand 327, 332, 689, 701, 705, 715, 716, 717, 718, 719, 738, 741
\newif 32, 35, 38, 41, 44, 47, 272
\newsavebox 163
\newtheorem 10, 655
\newtheoremstyle 644, 647, 651
\newwrite 430
\nobreak 587, 589, 592, 597, 601, 603, 605, 607, 609, 610
\noexpand . 104, 105, 107, 108, 109, 111
\nolinkurl 603
\normalfont . . . 401, 408, 617, 620, 624, 627, 643, 646, 650, 654, 662
\normalparindent . . 404
\normalsize . . . 125, 401
\number 630, 633

O

\oddsidemargin 129
olddoi (option) 4
oldkeywords (option) . 4
\oldsubsections . 8, 621
\openout 434
options:
  10pt 4
  11pt 4
  12pt 4
  8pt 4
  9pt 4
  doi2016 4
  draft 4
  final 4
  manuscript 4
  olddoi 4
  oldkeywords 4
  printscheme 4
  screen 4
\or 120, 121, 122, 123, 124, 352, 353, 354
\orcid . . 5, 216, 327, 608
\overline 10, 126

P

\p@ 405, 491, 504, 662, 728
\p@equation 722
\PageIndex 15
\pagenumbering 371, 373
\pageref . . 195, 377, 719
\pagespan 379
\pagestyle 169
\papernumber 7, 238, 369
\par 401, 541, 544, 580, 581, 582, 583, 584, 586, 589, 593, 595, 599, 603, 607, 610, 639, 660
\parbox 164
\parindent 137, 593, 619, 623, 626, 645, 648, 652, 664
\parsep 405
\parskip 137
\PassOptionsToClass 50
\path 679, 684, 685, 686, 687
\penalty 521
\pfullref 9, 716
\popQED 668
printscheme (option) . 4
\ProcessOptions . . . 56
\proof 660
\proofname 660
\proposed . . 7, 228, 412
\protect . . 396, 502, 516
\protected@write 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 466, 470, 474, 477, 480, 482, 484, 742
\providecommand . . . 628
\ProvidesClass 5
\ProvidesFile 3
\publicationyear 7, 235, 368
\published . 7, 226, 356
\publishedonline 7, 227, 356
\pushQED 661
\put 176, 179, 188

Q

\qed 661

R

\r@LastPage . . . 436, 440
\raggedright 692
\received . . 7, 223, 356

\RecordChanges 17
\ref 714, 718
\relax . . . 56, 68, 69, 142, 165, 292, 293, 301, 340, 351, 394, 406, 411, 491, 500, 504, 506, 532, 659, 662, 690, 702, 744, 745, 748
\renewcommand 160, 161, 249, 288, 318, 322, 614, 655, 688
\renewenvironment 147, 410, 660
\repeat 167
\repeatedauthors . . 670
\RequirePackage . . . 82, 83, 95, 102, 113
\reset@font 77
\revised . . . *7*, 224, 356
\rightmargin 403
\romannumeral . 150, 374

S

\savebox 164
screen (option) *4*
\scriptsize 166, 172, 181, 183, 191, 692
\scshape 517, 589, 598, 645
\seconded . . *7*, 229, 413
\section 615
\sectionname 641
\setbox 398
\setcounter . . . 371, 373
\setlength 127, 128, 131, 132, 133, 134, 135, 136, 137, 138, 158, 159
\settowidth . . . 143, 152
\shortauthors . . . *6*, 183, 259, 260, 262
\shorttitle 172
\sishape 117, 644, 649, 653
\skip 134
\Small 408
\small 517, 688
\space 80, 283, 355, 396, 435, 521, 598, 602
\specialdigits 116
\start@page 194, 196, 372, 374, 437, 460
\startpage *7*, 239, 371, 379
\stepcounter 721
\string . . . 76, 268, 435
\subject . . . *7*, 222, 335
\subsection . . . 618, 622
\subsubsection 625
\surname . . . *5*, 219, 245
\symAMSb 106, 110

T

\tabskip 726, 730, 733, 735
\tagform@ 718
\TC@level 706, 707
\tempa 195, 197, 198, 200, 202
\tempb 196, 202
\textbf 192
\textcopyright 427
\textheight 127
\textit 118
\textsi 118
\textstyle . . . 104, 108
\textup 718
\textwidth 127
\thanks *6*, 220, 502
\thanks@warning . . . 502
\thankses 540
\the 150, 166, 355
\theequation 722
\theHsection 640
\thepage 80, 173, 175, 206
\thesection 642
\thmname . . 646, 650, 654
\thmnote . . 646, 650, 654
\thmnumber 646, 650, 654
\thr@@ 734
\title *5*, 209
\topsep 662
\topskip 131
\trivlist 503, 663
\tw@ . . 105, 109, 731, 732

U

\undefined . . . 385, 442
\underline 166
\unskip 590, 594, 598, 602, 606
\upshape 153, 276, 507, 527, 642, 648, 652
\url . . 607, 610, 676, 681
\urladdr *5*, 215, 322, 604
\urlstyle 94
\usebox . . . 176, 179, 188
\usepackage 9, 11, 12, 13

V

\value 629, 630, 632, 633
\version . . . *7*, 232, 415
\vglue 400, 401
\volumenumber *7*, 233, 366
\vtop 398

W

\wd 105, 109
\widebar *9*, 10, 126
\widehat *9*, 104
\wideparen *9*
\widering *9*
\widetilde *9*, 104
\widetriangle *9*
\widowpenalty 139
\write 76

X

\xdef 104, 108, 512

Z

\z@ 104, 105, 108, 109, 138, 373, 402, 405, 616, 639, 725, 734
\z@skip 730, 735
\zbl *12*, 684
\zblnumber . *7*, 243, 416