

# Instructions for Authors

## International Mathematical Schools

### The Main Requirements

- A manuscript should be written in good American English, designed and typed according to the enclosed style file and sample, and submitted in the form of tex- and pdf-files.
- The number of pages of a manuscript should be from 5 to 35 pages.
- Abstract should contain 5-10 lines and only describe the main result of the article. The introductory section provides a more extensive (than in the abstract) description of the result without unnecessary information and unnecessary words.
- The article is divided into sections. Double numbering of theorems, formulas, etc. is used. To enumerate theorems, lemmas, formulas, use `\label`. When creating references, use `\eqref` for formulas and `\ref` for theorems, lemmas, etc.
- The reference list should be enumerated in the order of mention and contain only published works (i.e. no preprints, arxiv, and references to journals not registered in the Zentralblatt math database). (see details below).
- The tex file should contain only those packages and macros that are specified in the sample. Author's macros, non-standard fonts, etc. are prohibited (some examples of typesetting of formulas are given below).

# Instruction for Authors

of the JMS-source *Advances in Pure and Applied Mathematics*

## Acknowledgments

Acknowledgments of people, grants, funds, etc. should be placed in a separate section without number (Type `\section*{Acknowledgments}`) after the main text and before the Reference list. The names of funding organizations should be written in full.

## Reference citations

Reference citations in the text should be identified by numbers in square brackets. (Use LaTeX commands `\bibitem` and `\cite`).

Some examples:

1. This result was later contradicted by Becker and Seligman [5].  
(Type `\cite{Bek}`)
2. This result was later contradicted by Becker and Seligman [5, Theorem2].  
(Type `\cite[Theorem 2]{Bek}`)
3. This result was later contradicted in [1]-[3].  
(Type `\cite{Bek}--\cite{Ill}`)

## Reference list

The list of references should only include works that are cited in the text and that have been published. The entries in the list should be consecutively numbered as they are cited in the main text.

Some examples:

### **Journal article published:**

J. B. Holmes and M. R. Schofield,  
"Moments of the logit-normal distribution,"  
*Commun. Stat., Theory Methods* **51**, No. 3, 610-623 (2022).

A. Bachstein, W. Goddard, M. Henning, and J. Xue,  
"Compelling colorings: a generalization of the dominator chromatic number,"  
*Appl. Math. Comput.* **428**, Article ID 127193, 8 p. (2022).

### **Journal article accepted to publish (Online First article):**

A. A. Arkhipova,  
"Local regularity of weak solutions to a class of parabolic systems with quadratic nonlinearities in the gradient,"  
*Manuscr. Math.* DOI: 10.1007/s00229-022-01376-0 (2022).

### **Book:**

T. Alazard and C. Zuily,  
*Tools and Problems in Partial Differential Equations*,  
Springer, Cham (2020).

**Book chapter:**

M. B. Nathanson,  
"Dimenisions of monomial varieties,"  
In: *Combinatorial and Additive Number Theory III*,  
pp. 147—160, Springer, Cham (2020).

**Clarifying remarks**

**The author's names should be listed in accordance with the following table.**

|                       |  |
|-----------------------|--|
| One author            | T. Smith,                                |
| Two authors           | T. Smith and J. John,                    |
| Three authors         | T. Smith, J. John, and K. Nill,          |
| Four authors          | T. Smith, J. John, K. Nill, and A. Ball, |
| Five or more authors: | T. Smith et al.,                         |

**Don't forget that commas and periods are placed inside quotation marks and comma is not required before the volume number.**

Example:

"Moments of the logit-normal distribution," *Commun. Stat., Theory Methods* **51**, No. 3, 610-623 (2022).

**Also, write No. before the issue number and use two dashes for page ranges (type 610—623).**

**Journal names and book titles should be italicized and capitalized.**

Type `\textit{}` and use the capitalization rule:

"Capitalize all the words in a title except the following: articles (a, an, the), to in infinitives, and connecting words (prepositions and conjunctions) of fewer than five letters. Capitalize even these short words when they are the first or last word or when they fall after a colon or semicololon."

*The Successful Writer's Handbook* by Kathleen T. McWhorter and Jane E. Aaron

**Journal names should be abbreviated.**

Always use the official abbreviation of a journal's name (cf. [Serials Search - zbMATH Open](#)).

If the journal is absent in zbMATH OPEN series list, use the standard abbreviations according to the ISSN List of Title Word Abbreviations

(cf. <http://www.issn.org/services/online-services/access-to-the-ltwa/0>).

Indicate **only English edition** (translation or original) of a paper or a book published in several languages.

**A paper from proceedings** of a conference may be included in the reference list **only if** the proceedings were published as an issue of a series (ISSN should be assigned to the series) or as a book (ISBN should be assigned to the book). The reference is designed as a journal article or a book chapter respectively.

## TEX-File

The tex file should contain only those packages and macros that are specified in the sample. Author's macros, non-standard fonts, etc. are prohibited

To abbreviate words in formulas, the command `\operatorname` should be used, for example,

`\operatorname{const}`, `\operatorname{loc}`, `\operatorname{dist}`

### Formatting formulas. Examples

DO NOT USE the commands `array`, `multline`, `gather`, `\[`.

1.

$$\mathcal{S}_j(I_j)(\omega, x) = \frac{1}{4\pi} \int_{\Omega} \theta_j(\omega' \cdot \omega) I_j(\omega', x) d\omega', \quad (\omega, x) \in D_j,$$

```
\begin{equation*}
{\mathcal S}_j(I_j)(\omega, x) = \frac{1}{4\pi} \int_{\Omega} \theta_j(\omega' \cdot \omega) I_j(\omega', x) d\omega',
\quad (\omega, x) \in D_j,
\end{equation*}
```

2.

$$\mathcal{S}_j(I_j)(\omega, x) = \frac{1}{4\pi} \int_{\Omega} \theta_j(\omega' \cdot \omega) I_j(\omega', x) d\omega', \quad (\omega, x) \in D_j, \quad (1.1)$$

```
\begin{equation}
{\mathcal S}_j(I_j)(\omega, x) = \frac{1}{4\pi} \int_{\Omega} \theta_j(\omega' \cdot \omega) I_j(\omega', x) d\omega',
\quad (\omega, x) \in D_j,
\label{calS}
\end{equation}
```

3.

$$\begin{aligned} & - \int_0^T (c_p u(t), v)_G \frac{d\eta}{dt}(t) dt + \int_0^T a(u(t), v) \eta(t) dt + \int_0^T b(u(t), I(t), J(t), v) \eta(t) dt \\ & = (c_p u^0, v)_G \cdot \eta(0) + \int_0^T (f(t), v)_G \eta(t) dt + \int_0^T (g(t), \widehat{\text{tr}} v_0)_{\partial \widehat{G}} \eta(t) dt \quad \forall v \in V. \end{aligned}$$

```

\begin{align*}
&-\int\limits_0^T(c_p u(t), v)_G \frac{d\eta}{dt}(t) \, dt + \\
&\int\limits_0^T a(u(t), v) \, \eta(t) \, dt + \\
&\int\limits_0^T b(u(t), I(t), J(t), v) \, \eta(t) \, dt \\
&= (c_p u^0, v)_G \dot{\eta}(0) \\
&\quad \& \\
&+\int\limits_0^T (f(t), v)_G \, \eta(t) \, dt \\
&+\int\limits_0^T (g(t), \widehat{\operatorname{tr}} v_0)_{\partial \widehat{G}} \, \eta(t) \, dt \\
&\quad \forall v \in V. \\
\end{align*}

```

4.

$$\begin{aligned}
&-\int_0^T (c_p u(t), v)_G \frac{d\eta}{dt}(t) \, dt + \int_0^T a(u(t), v) \eta(t) \, dt + \int_0^T b(u(t), I(t), J(t), v) \eta(t) \, dt \\
&= (c_p u^0, v)_G \cdot \eta(0) + \int_0^T (f(t), v)_G \eta(t) \, dt + \int_0^T (g(t), \widehat{\operatorname{tr}} v_0)_{\partial \widehat{G}} \eta(t) \, dt \quad \forall v \in V, \quad (1.2)
\end{aligned}$$

```

\begin{align}
&-\int\limits_0^T(c_p u(t), v)_G \frac{d\eta}{dt}(t) \, dt + \\
&\int\limits_0^T a(u(t), v) \, \eta(t) \, dt + \\
&\int\limits_0^T b(u(t), I(t), J(t), v) \, \eta(t) \, dt \\
&\quad \& \\
&= (c_p u^0, v)_G \dot{\eta}(0) + \int\limits_0^T (f(t), v)_G \, \eta(t) \, dt \\
&+\int\limits_0^T (g(t), \widehat{\operatorname{tr}} v_0)_{\partial \widehat{G}} \, \eta(t) \, dt \\
&\quad \forall v \in V, \\
\label{Tozhd1} \\
\end{align}

```

5.

$$\begin{aligned}
a(u, v) &= a_0(u, v) + a_1(u, v), \\
a_0(u, v) &= (\lambda(\cdot, u) \nabla u, \nabla v)_{L^2(G)} = \int_G \lambda(x, u(x)) \nabla u(x) \cdot \nabla v(x) \, dx.
\end{aligned}$$

```

\begin{align*}
&a(u, v) = a_0(u, v) + a_1(u, v), \\
&\quad \&
\end{align*}

```

```

a_0(u,v)=(\lambda(\cdot,u)\nabla u,\nabla v)_{L^2(G)}
=\int\limits_G\lambda(x,u(x))\nabla u(x)\cdot\nabla v(x)\,dx.
\end{align*}

```

6.

$$c_p \frac{\partial u_0}{\partial t} - \operatorname{div}(\lambda(x, u_0) \nabla u_0) = f, \quad (x, t) \in Q_{0,T}, \quad (1.3)$$

$$c_p \frac{\partial u_j}{\partial t} - \operatorname{div}(\lambda(x, u_j) \nabla u_j) + 4\kappa_j k_j^2 h(u_j) = \kappa_j \int_{\Omega} I_j d\omega + f, \quad (x, t) \in Q_{j,T}, \quad (1.4)$$

```

\begin{align}
&c_p \frac{\partial u_0}{\partial t} - \operatorname{div}(\lambda(x, u_0) \nabla u_0) = f, \quad (x, t) \in Q_{0,T}, \\
&\label{1.1} \\
&\quad \& \\
&c_p \frac{\partial u_j}{\partial t} - \operatorname{div}(\lambda(x, u_j) \nabla u_j) + 4\kappa_j k_j^2 h(u_j) = \kappa_j \int_{\Omega} I_j d\omega + f, \\
&\quad (x, t) \in Q_{j,T}, \\
&\label{1.2} \\
&\end{align}

```

7.

$$A_{ij} \in W_{\infty}^1(\Omega), \quad A_j, A_0 \in L_{\infty}(\Omega), \quad i, j = 1, \dots, 2, \quad (1.5)$$

$$\operatorname{Re} \sum_{i,j=1}^2 A_{ij}(x) z_i \overline{z_j} \geq c_2 |z|^2, \quad \operatorname{Im} \sum_{i,j=1}^2 A_{ij}(x) z_i \overline{z_j} < c_3 |z|^2, \quad x \in \Omega,$$

```

\begin{equation}
\label{2.2}
\begin{aligned}
&A_{ij} \in W_{\infty}^1(\Omega), \quad \quad A_j, A_0 \in L_{\infty}(\Omega), \\
&\quad i, j=1, \dots, 2, \\
&\quad \& \\
&\operatorname{Re} \sum_{i,j=1}^2 A_{ij}(x) z_i \overline{z_j} \\
&\geqslant c_2 |z|^2, \\
&\quad \operatorname{Im} \sum_{i,j=1}^2 A_{ij}(x) z_i \overline{z_j} \\
&< c_3 |z|^2, \\
&\quad x \in \Omega, \\
&\end{aligned}
\end{equation}

```