

Template and User Guide for EGAI Conference Submissions: A Comprehensive Example of Document Formatting and Style Guidelines

First Author^{1,2*}, Second Author^{2,3}, and Third Author^{1,2*}

This document serves as both a template and comprehensive user guide for authors preparing manuscripts for the 3rd International Conference on Evolutionary Game Theory and Artificial Intelligence (EGAI). The `egai.cls` document class provides automated formatting that follows conference guidelines. This template demonstrates proper usage of all available commands, environments, and formatting features, including author attribution, affiliations, sectioning, mathematical expressions, figures, tables, algorithms, and reference citations. Authors can use this document as a starting point for their own submissions.

Introduction

The EGAI conference document class (`egai.cls`) provides a standardized format for academic papers submitted to the International Conference on Evolutionary Game Theory and Artificial Intelligence. This template demonstrates all available features and serves as a comprehensive guide for authors.

Document Structure and Basic Usage

Document Class Declaration

The document should begin with a simple declaration:

```
\documentclass{assets/egai}
```

Author and Affiliation System

The `egai.cls` provides flexible author handling supporting any number of authors and affiliations. Authors are specified using:

```
% Regular author:
\author[affiliations]{Author Name}
% Corresponding author:
\author*[affiliations]{Author Name}
```

Affiliations can be single numbers [1], multiple numbers [1,2], or ranges as needed. To define affiliations, use the `affiliations` environment after `\maketitle`:

```
\begin{affiliations}
  \item{Affiliation 1, City, Country}
  \item{Affiliation 2, City, Country}
\end{affiliations}
```

The `\maketitle` command automatically formats the title, authors, and affiliations according to conference standards.

Mathematical Content

Inline and Display Mathematics

Inline mathematics uses standard LaTeX syntax with `$...$`. For example, the equation $E = mc^2$ demonstrates inline math formatting.

To display equations, use the standard equation environment:

$$\nabla \cdot \mathbf{E} = \frac{\rho}{\epsilon_0} \quad (1)$$

For multi-line equations, use the `align` environment:

$$\frac{\partial \mathbf{E}}{\partial t} = c^2 \nabla \times \mathbf{B} \quad (2)$$

$$\frac{\partial \mathbf{B}}{\partial t} = -\nabla \times \mathbf{E} \quad (3)$$

The `egai.cls` automatically handles equation numbering and spacing. Cross-references work normally, as shown in Equation 1.

Mathematical Symbols and Fonts

Standard AMS math packages are compatible:

$$\mathbb{R}^n, \quad \mathcal{F}(\omega), \quad \mathcal{L}[f(t)] \quad (4)$$

Complex expressions are properly formatted:

$$\sum_{i=1}^n \int_{-\infty}^{\infty} f_i(x) e^{-i\omega x} dx = \prod_{j=1}^m \frac{\alpha_j}{\beta_j + \gamma_j} \quad (5)$$

Figures and Graphics

Figures should be included using the standard figure environment. The `egai.cls` automatically formats captions with "Fig." prefix and proper spacing.

³Affiliation 1, City, Country ³Affiliation 2, City, Country ³Affiliation 3, City, Country

*Email(s): corresponding.author1@example.com, corresponding.author2@example.com

For single-column figures, use the standard figure environment. For example, Fig. 1 shows a single-column figure.



Fig. 1 | Example of a single-column figure with properly formatted caption. The caption automatically uses the correct font size and formatting according to conference standards.

For figures spanning both columns, use the starred version. For example, Fig. 2 shows a two-column figure.

Reference figures using standard LaTeX commands: Fig. 1 shows a single-column example, while Fig. 2 demonstrates the two-column format.

Tables and Data Presentation

Tables in `egai.cls` are formatted with conference-appropriate styling. Use the `booktabs` package for professional appearance:

Table 1 | Example table showing experimental results with proper formatting and styling according to EGAI conference standards.

Method	Accuracy (%)	Time (s)	Memory (MB)
Algorithm A	87.3	12.4	256
Algorithm B	91.7	8.9	312
Proposed Method	94.2	6.3	289

For larger tables spanning both columns, use the starred version. For example, Table 2 shows a two-column table.

Algorithms and Code

The `egai.cls` supports algorithm presentation using the `algorithm` and `algorithmicx` packages. For example, Algorithm 1 shows a standard algorithm format.

Algorithm 1 demonstrates the standard formatting for algorithmic content in EGAI papers.

Code Listings

For code snippets, use the `verbatim` environment or `listings` package:

```
def fibonacci(n):
    if n <= 1:
        return n
    a, b = 0, 1
    for i in range(2, n + 1):
        a, b = b, a + b
    return b
```

Algorithm 1 Example Algorithm for EGAI Conference

Require: $n \geq 1$, initial population P_0
Ensure: Evolved solution s^*

```

1:  $t \leftarrow 0$ 
2:  $P \leftarrow P_0$ 
3: while  $t < T_{max}$  and not converged do
4:    $F \leftarrow \text{EvaluateFitness}(P)$ 
5:    $P_{\text{parents}} \leftarrow \text{Selection}(P, F)$ 
6:    $P_{\text{offspring}} \leftarrow \text{Crossover}(P_{\text{parents}})$ 
7:    $P_{\text{offspring}} \leftarrow \text{Mutation}(P_{\text{offspring}})$ 
8:    $P \leftarrow \text{Replacement}(P, P_{\text{offspring}})$ 
9:    $t \leftarrow t + 1$ 
10: end while
11:  $s^* \leftarrow \text{BestSolution}(P)$ 
12: return  $s^*$ 
```

Cross-Referencing and Citations

Internal References

The `egai.cls` supports standard LaTeX cross-referencing. References to sections, figures, tables, and equations work automatically:

- Figure references: Figure 1
- Table references: Table 1
- Equation references: Equation 1
- Algorithm references: Algorithm 1

Citation Management

The `egai.cls` uses `natbib` for citation management with superscript numeric style. Citations can be formatted as:

- Single citation:¹
- Multiple citations:^{2,3}
- Citation ranges:^{1–4}

All citations are automatically formatted in superscript style consistent with Nature formatting standards.

Sectioning and Document Structure

Section Hierarchy

The `egai.cls` provides three levels of sectioning:

```

\section{Main Section Title}
\subsection{Subsection Title}
\subsubsection{Subsubsection Title}
```

Subsubsection Example. This is a subsubsection.

Bibliography and References

The `egai.cls` uses `natbib` with `egai bibliography` style for reference management. All references should be included in `ref.bib` in standard BibTeX format and cited using standard `natbib` commands.

To properly compile the bibliography, use the following sequence:

1. Compile with LaTeX: `pdflatex example.tex`
2. Generate bibliography: `bibtex example`
3. Compile twice more: `pdflatex example.tex`



Fig. 2 | Example of a two-column spanning figure. These figures are automatically placed appropriately and formatted according to conference guidelines. Use this format for larger figures, flowcharts, or complex diagrams that require more space than a single column provides.

Table 2 | Extended comparison table spanning both columns for comprehensive data presentation.

Method	Dataset A			Dataset B		
	Precision	Recall	F1-Score	Precision	Recall	F1-Score
Baseline	0.823	0.791	0.807	0.756	0.734	0.745
Method 1	0.867	0.845	0.856	0.801	0.789	0.795
Method 2	0.891	0.873	0.882	0.834	0.821	0.827
Proposed	0.923	0.908	0.915	0.867	0.851	0.859

Conclusion

This template demonstrates the comprehensive features available in the `egai.cls` document class for EGAI conference submissions. The class provides automated formatting that ensures consistency across all conference papers while supporting the full range of academic content types including mathematics, figures, tables, algorithms, and citations.

Authors should use this template as a starting point for their submissions, replacing the example content with their research while maintaining the demonstrated formatting structure. The `egai.cls` handles most formatting automatically, allowing authors to focus on content rather than styling details.

For additional questions about the template or submission process, please consult the conference website <https://egai.org> or contact the organizing committee via email info@egai.cc.

Acknowledgements The development of this template was supported by the EGAI conference organizing committee. We thank the LaTeX community for providing the foundation packages that make professional academic formatting possible.

Author Contributions Y.G. designed and implemented the template struc-

ture, developed the documentation, and created the example content. X.C. and F.F. conceived the template framework, provided guidance throughout the development process, and supervised the overall project.

Competing Interests The authors declare no competing interests related to this template development.

Data Availability This template and associated files are available at the conference website and can be freely distributed to conference participants.

Code Availability The `egai.cls` source code and this template are provided under standard LaTeX licensing terms for academic use.

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