

# Sample L<sup>A</sup>T<sub>E</sub>X Source File

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**Abstract.** This paper will illustrate how to use the tjm.sty file with your L<sup>A</sup>T<sub>E</sub>X source file.

## 1. Introduction

**1.1. Case 1.** When you do not need equation numbers, you can write

$$E_z(a) \geq \int_0^1 \hat{\omega}_t(a) dt.$$

**1.2. Case 2.** When you need equation numbers, you can write

$$E_z(a) = \int_0^1 \hat{\omega}_t(a) dt. \tag{1.1}$$

**1.3. Case 3.** When there are several equations,

$$\begin{aligned} \frac{d\theta}{dh} &= \frac{1}{(1+h)\tan\gamma}, \\ \frac{du}{dh} &= -\frac{2}{(1+h)^2} - \frac{B(1+\lambda^2)ue^{-h/\varepsilon}}{\varepsilon E^* \sin\gamma}, \\ \frac{du}{dh} &\leq \left\{ \frac{1}{(1+h)} - \frac{1}{u(1+h)^2} \right\} \frac{1}{\tan\gamma} + \frac{B\lambda e^{-h/\varepsilon}}{\varepsilon \sin\gamma}. \end{aligned} \tag{1.2}$$

## 2. Theorems

Theorem, Proposition, Definition, Lemma etc. are written in small capitals.

**THEOREM 2.1.** *This might be followed by a series of equations*

$$P_x(X \in A \mid \tau > \tau_y) \geq P_x(X \in A, \tau > \tau_y > s) / P_x(\tau > \tau_y)$$

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$$= E_x g\left(\frac{P_{X(s)}(\tau > \tau_y)}{P_x(\tau > \tau_y)}, (\tau_y \wedge \tau) > s, X \in A\right).$$

LEMMA 2.2. *Let  $x > 0$  and  $\theta > 0$ .*

(a) *If  $X$  is in Class I, then*

$$\lim_{t \rightarrow \infty} t^{3/2} (e^{-\theta X(t)}, \tau > t) = \frac{c_1}{\sqrt{2\pi\phi''(\alpha)}} U(x) \int_0^\infty e^{-\theta z} U(z) dz.$$

(b) *If  $X$  is in Class III, then*

$$\lim_{t \rightarrow \infty} t^{3/2} (e^{-\theta X(t)}, \tau > t) = \frac{c_1 r}{\sqrt{2\pi\phi''(\alpha)}} U(x) \sum_{j \in r\mathbf{N}} e^{-\theta(j+l(x))} U(j).$$

Here  $c_1 = \exp\{\int_0^\infty (e^{-t} - 1)t^{-1}(X_t = 0)dt\}$  and  $l(x) = x - rk$  if  $r(k-1) < x \leq rk$ ,  $k \in \mathbf{N}$ . In addition, we can replace  $\tau, X, U(x)$  by their duals.

### 3. Tables

Tables should be produced in the following way:

First	Second	Third
11	22	33
111	222	333

TABLE 1. (captions like this are optional)

### 4. Pictures

Pictures should be in EPS format. Here is an example.



FIGURE 1. (captions like this are optional)

## 5. Text

You must use the “return” command (not `\\`) to start a new paragraph, in order to produce the correct indentation.

Paragraphs should be separated by blank lines.

References [1], [2], and [3] below are samples of three different types.

ACKNOWLEDGEMENT(s). Your acknowledgments go here if necessary.

## References

- [ 1 ] S. C. COUTINHO, *A Primer of Algebraic D-Modules*, LMS Student Texts 33, Cambridge Univ. Press, 1995.
- [ 2 ] A. HAEFLIGER, Local theory of meromorphic connections in dimension one (Fuchs theory), *Algebraic D-modules*, eds. A. Borel et al, Perspectives in Math. 2, Academic Press, 1987, 129–149.
- [ 3 ] V. E. ZAKHAROV, A. B. SHABAT, Integration of non-linear equations of mathematical physics by the inverse scattering method II, *Funct. Anal. Appl.* **13** (1979), 166–174.

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