

## TIPS FOR RESEARCHERS

### PUNCTUATION

**Series comma: American style uses a comma after the next to last element in a series:**

- The performance-based earthquake engineering methodology developed is broadly applicable for predicting the seismic performance of *bridges, buildings, and lifeline systems*.

**Quotation marks and comma: American style uses double quotes, with commas or periods placed inside the quotes. Single quotes are used for a quote within a quote.**

- The simulation results in the figures are truly “*blind*,” meaning they were established before the strong motion data were released.
- He said, “The simulation results in the figures are truly ‘*blind*,’ meaning they were established before the strong motion data were released.”

**Commas precede and follow *i.e.* and *e.g.* in sentences like the following:**

- The initial strain of a simple truss model showed a secondary geometric *effect, i.e.*, the P- $\Delta$  effect.
- The larger target frequency is generally taken as an odd-integer multiplier of the fundamental frequency, *e.g.*, 3, 5, 7.

**Parentheses with numbering or labeling: always include both parentheses: (1), (i), (a)**

**An “-ly” adverb used with an adjective as a unit modifier of a noun should not be hyphenated:**

- *relatively complex* site effects
- *seismically induced* slope displacement

**As, since, or while: always use a comma after an adverbial clause introduced by these words if the intention is to express an idea of cause or condition; without the comma these conjunctions express time only.**

- *As the four stages of the PBEE assessment methodology are treated as conditionally independent*, each stage can be conducted separately.
- *While the experimental programs in Chapter 3 indicate the substantial benefit of the new method for reduction of residual displacements*, the investigations were based on a limited number of column designs and only one ground motion.
- *Since there are very limited well-recorded normal fault data available worldwide*, these ground motions are important for the earthquake engineering community.

### RESTRICTIVE CLAUSES

**Punctuation of an adverbial clause following the main clause depends upon the nature of the adverbial clause. A nonrestrictive clause, which merely gives additional information, should be preceded by a comma; a restrictive clause, which limits the action of the main verb to a particular time, manner, or circumstance, should not be preceded by a comma. (Clauses beginning with *because, unless, or except* are usually restrictive.**

- Figure 4.1 illustrates such a case, where stiffness deterioration occurs without reaching the lateral force resistance.
- Careful modeling of the superstructure torsional stiffness is necessary because it can greatly affect the post-earthquake bridge truck load capacity.

***That, which:* Use *that* when the meaning is restrictive, *which* when it is not.**

- We have to seek more advanced methodologies to account for the uncertainties that are currently ignored.
- We have to seek more advanced methodologies to account for the uncertainties, which are currently ignored.

[Note the difference in meaning. The first restricts the need to account for only ignored uncertainties; the second indicates that all uncertainties are ignored.]

## DASHES

The three types of dashes in order of length are

- hyphen To join compound words: *performance-based* earthquake engineering
- en dash To represent *to* between figures or words. But use *to* if the figures are preceded by *from*.  
This response can be seen in *Figures 2.3–2.4*. [But] From Figures 2.3 to 2.4 we can see the response.
- em dash To indicate an abrupt change of thought. Because the four stages of the PBEE assessment methodology are treated as conditionally independent, each stage can be conducted separately—provided that the exchange of information is carefully organized.

## COMMA WITH ADJECTIVE MODIFIERS

Two or more adjectives modifying the same noun should be separated by commas if they are coordinate in thought, that is, if *and* could be used between them without changing the meaning; but if a compound is formed by one or more adjectives included in thought with the noun modified, an adjective modifying this compound should not be separated from it by a comma:

- These figures show the back-calculated p-y curves for *cohesionless, cohesive* soils obtained from field tests.
- The subject of this report is a *four-story, three-bay* nonductile reinforced concrete building.
- The figures show *major continuous diagonal cracking*.
- What follows is a *relatively simple two-page description*.

## MISCELLANEOUS

**Definite article: unless the reference is indefinite, use the definite article:**

- *The results* obtained from the shaking table tests of the specimen are presented in this section.
- *Shaking table tests* are often necessary to verify results of numerical analyses.

***Comprise/Constitute: Comprise* means to contain, embrace. Don't use *comprised of*—it's wrong. *Constitute* means to make up part of a whole.**

- This report *comprises* eight chapters.
- Eight chapters *constitute* the book.

***Data* is plural, so use a plural verb:**

- The data are presented below.

***Due to the fact; the fact that:* Avoid using these wordy phrases. In many instances *because* is better.**

- *Because* crossies were used, no out-of-plane failure occurred.

***Only:* the placement of *only* is important to the meaning:**

- Lateral buckling of double-angle bracing was observed at the penthouse level *only*. [or "...*only* at the penthouse level." i.e., not at any other level]
- Lateral buckling of *only* double-angle bracing was observed at the penthouse level. [i.e., double-angle and no other type of bracing that might have been there]
- Lateral buckling of double-angle bracing was *only* observed at the penthouse level. [i.e., the bracing was observed but not examined, fixed, or disassembled, etc.]

***As well as, together with, including:* If the thought is plural, use *and* instead, especially if the second element is of equal importance to the first.**

- This test is intended to check the performance of the shaking table, as well as to establish the baseline dynamic characteristics of specimens under low-level excitations.
- [Better:] This test is intended to check the performance of the shaking table *and* to establish the baseline dynamic characteristics of specimens under low-level excitations.