**How to Read Research Articles:**

It can be difficult to read a research article. They are often written using specialized or technical vocabulary and are organized following a particular structure. These sections usually include:

**Abstract:** An overview of why the study or research was conducted, methods used, results, and conclusions. Essentially this is a brief summary of the article.

**Introduction:** Provides information about what is already known about the topic and what questions this new or novel research hopes to answer. May also address what gaps in knowledge this research hopes to fill and/or a proposed solution. This is usually where you’ll find literature reviews and/or citations of other research papers.

**Methods:** An important section since you’ll be analyzing the application of a methodology. This section describes the problem studied, the research design, and the data collected. This section might also be referred to as “Experiment.”

**Figures/Tables:** Visualizes the results generated from the research/experiments performed.

**Results/Discussion:** Usually provides a summary of the results, plus future directions for research. This section will also detail whether or not the research supports the hypothesis or research strategy presented in the abstract or introduction.

**References:** A list of works cited. This is useful for finding related research on your topic. This is also a good place to help examine the credibility and scholastic authenticity of the article you are consulting. Are the authors researchers you recognize? Are the journals or conference proceedings reputable? Are the authors affiliated with universities or research institutions? The reference list is also a great example of how researchers avoid plagiarism by crediting the work of others.

**Tips:** Look for **keywords** that signal how the author is describing or positioning their work within the broader field. Words like propose, present, introduce, unexpected, surprising, examine, departure, develop, confirm, deploy, establish, goal, objective, examine, or phrases like “build upon previous work” etc., can be clues as to where key points are being made in the article.

  - **Keywords** about the article’s topic can also be ways to find related research. When you begin searching for articles, it can be hard to brainstorm keywords or subject terms if you are unfamiliar with the topic or technical language.

  *It can also be helpful to **first skim** through the article to get a basic gist of the research, and also to determine whether or not it is pertinent to the assignment or project. Ultimately you may have to read the article multiple times. Take notes using your own words: paraphrasing and citing will help you avoid plagiarism – direct quotes are rarely used in scientific or technical writing. You’ll notice this as you begin to read more research papers.

  *Ask yourself a few questions about the article: Is the methodology persuasive? Could a better method have been used? Is the participant sample size appropriate? Are there factors that have been overlooked? How can the scholar’s research apply to your work?

  *These aren’t hard and fast rules but serve as guidelines that can help you efficiently read, understand, and critique research articles.
Where to find peer reviewed research papers:

**ACM Digital Library:** Access to all ACM (Association for Computing Machinery) Publications including Journals/Transaction, Conference Proceedings, SIGs, Technical Magazines, etc.

**CumInCAD:** CumInCAD (Cumulative Index of Computer-Aided Architectural Design) is a cumulative index of publications about computer aided architectural design. Content begins in 1998, with selective coverage dating back to as early as 1960. All papers include full abstracts. Full texts, in PDF, of some 6,000 papers are also available. CumInCAD is supported by the sibling associations ACADIA, CAADRIA, eCAADe, SIGraDi, ASCAAD and CAAD futures.

**Google Scholar:** Interdisciplinary search of literature across subject areas. Includes articles, books, and patents, as well as metrics about citation counts. Full text access is provided by NJIT if “FindIt@NJIT Libraries” appears next to the citation:

*Be sure to use extra scrutiny when assessing the scholarly characteristics of results provided by Google Scholar. Not all results meet the criteria of scholarly or peer-reviewed research/literature.*

*Make sure to uncheck include patents and citations to make sure you are only seeing results for full-text research articles.*
Search All (Littman and Van Houten Library Databases)

Provides a cross-collection search of nearly all journals and articles accessible through NJIT Library databases. You may limit your results to only peer reviewed articles.