

# Journal Club

## NEIU CROCUS Summer Research

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### Abstract

This handout explains the purpose of a journal club, provides links and references to understand the background for atmospheric measurements and observations, and gives instructions for your journal club presentations.

## 1 INTRODUCTION

Scientists and policy makers need to keep up with the current developments in their field. Reading peer-reviewed research publications and scientific reports is one of the best ways to do this, yet reading technical literature can be challenging and time consuming – even for experienced scientists. A *journal club* is a regular gathering of scientists to discuss a scientific paper, one typically one found in a research journal. This is a longstanding tradition in many research groups. At a journal club meeting, one or more members of the club present a summary of the chosen paper.

## 2 SCIENTIFIC LITERATURE

### 2.1 Curated Lists

Your advisors, mentors, and colleagues will have lists of papers they think are important. Getting recommendations from scientists with experience in a field is an excellent way to begin your study of a subject. An example of a curated list can be found below:

#### 2.1.1 Zotero

<https://www.zotero.org> is a free, easy-to-use tool to help you collect, organize, annotate, cite, and share research. Scott Collis, the head of the CROCUS Measurement Strategy Team, has set up a zotero group called *atmosstudents2023* to collect useful papers and references for CROCUS students. Many of the references in this document are taken from that list.

## 2.2 Searching Scientific Literature

Beyond these recommendations, how does one find articles to study for their own edification or to discuss at journal club? Using a standard search engine like Google, Bing, DuckDuckGo, ... yields many links that are not written for, nor have been vetted by, a scientific audience. Those search engines can lead to interesting popular articles, but if you want to focus on the science literature, there are several websites that allow you to search specifically for scholarly articles. Of these platforms, Google Scholar and Research Gate are among the most common.

- Google Scholar (<https://scholar.google.com/>) is a web search engine for scholarly literature. This index includes printed and online journals, books, conference papers, theses and dissertations, preprints, and technical reports.

Google scholar also allows you to search by institution or even a particular scholar.

- Google Scholar (NEIU):
- Google Scholar for Greg Anderson, Ken Nicholson.
- Research Gate is a commercial social networking site for scientists and other scholars. In addition to finding publications, scholars can post the full text of their articles and ask questions.

Peer-reviewed publications are the gold standard for the dissemination of science, but the review process can take time. Preprints, conference proceedings, and posters can be good sources of information when you are looking for the most recent research.

## 2.3 Digital Object Identifier

A Digital Object Identifier (DOI) is a unique string assigned to online articles, books and other works. Knowing the DOI can help locate an article, and many citation styles recommend using them. Shadow library websites like Sci-Hub make use of DOI. For more information on DOI, see <https://www.doi.org>.

## 3 Community Research on Climate & Urban Science

Many of the papers will be reading are related to NEIU's role in the CROCUS collaboration. CROCUS is an Urban Integrated Field Laboratory led by the U.S. Department of Energy's (DOE) Argonne National Laboratory in partnership with academic institutions like NEIU and community organizations and civic and industry champions.

The main CROCUS websites is:

- CROCUS Home Page,

## 4 YOUR PRESENTATION

We will be conducting our own journal club focused on the papers listed in the references. Members of the journal club are expected to read the assigned articles. Designated presenters will summarize a paper, or portions of a papers and do their best to field questions from the group.

Giving a journal club presentation will probably not be like other presentations you have made. You should not prepare a PowerPoint presentation, handouts or any documents. Your presentation will mostly be oral. You can use notes and you can use the whiteboard. We can project the article on the LCD screen if you need to refer to figures in the paper, but avoid “reading” the paper to us. This is a challenging task, and we understand that. We do not expect you to become experts on this subject in a week. It is okay, and even expected, that you have not gotten to the bottom of everything in your section. That is the nature of a journal club. The expectation is that you spend a couple to a few hours doing your best to understand the section you are presenting. This may include consulting supplemental material to understand the section you are presenting. Your talk should be aimed at your peers. It may be appropriate to delve into some details, but try to keep some focus on the big picture. Our journal club will use some of the papers listed in the Reference section.

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