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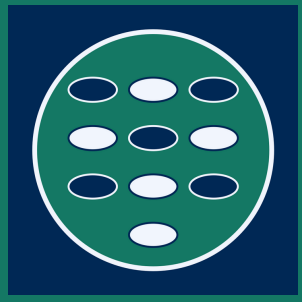

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DAT390
Data science seminar

2 Literature review

2.1 Literature research tools
2.2 Writing the literature review

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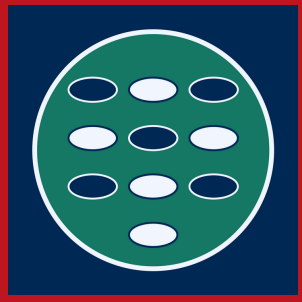

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2 Literature review

2.1 Literature research tools

DAT390

18. september 2023

Literature research exercise

Take **five minutes right now** to **search for literature**.

(Use whatever method for literature research that you are comfortable with.)

What is the most cited paper from … … …?

- How many **citations** does it have?
- What are the first five words of the **title**?
- Who is the **first author**? (What author is from … … …, if not the first one?)
- Who is the **corresponding author**?

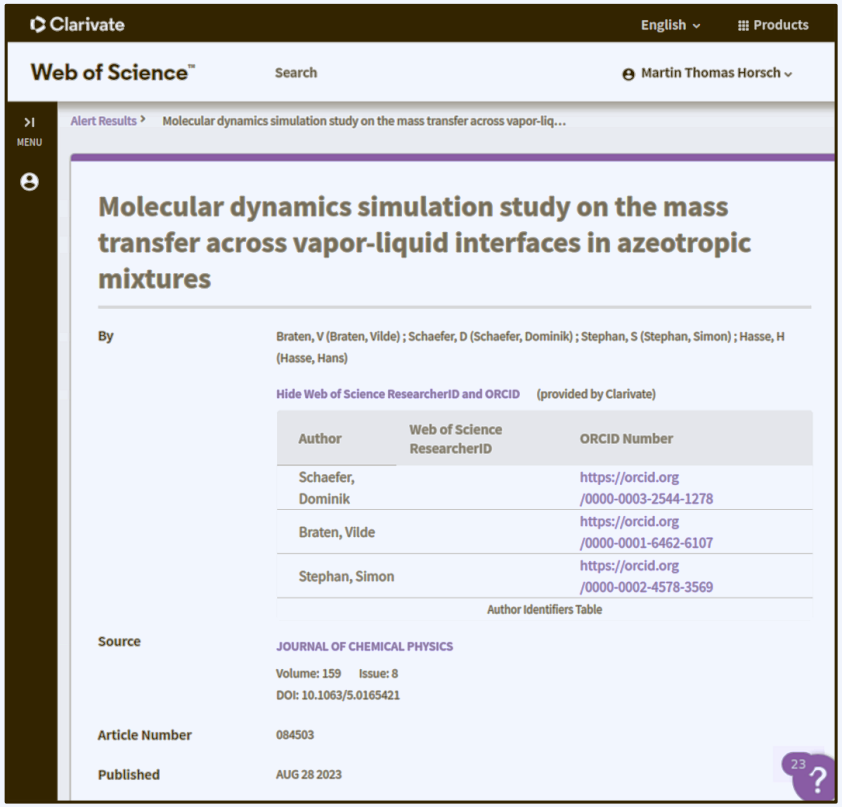
*All papers count where **at least one author** belonged to … … …

If you don't have any equipment ready, sit together with a neighbour for this.

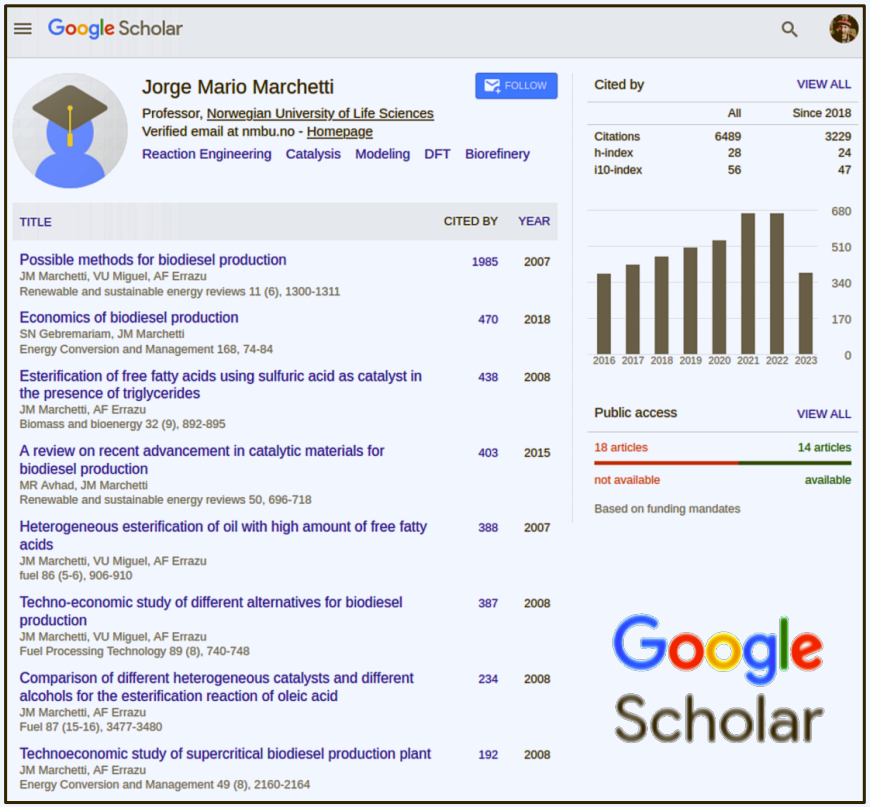
Popular tools for researching literature

Norwegian University of Life Sciences

Clarivate*



Google Scholar

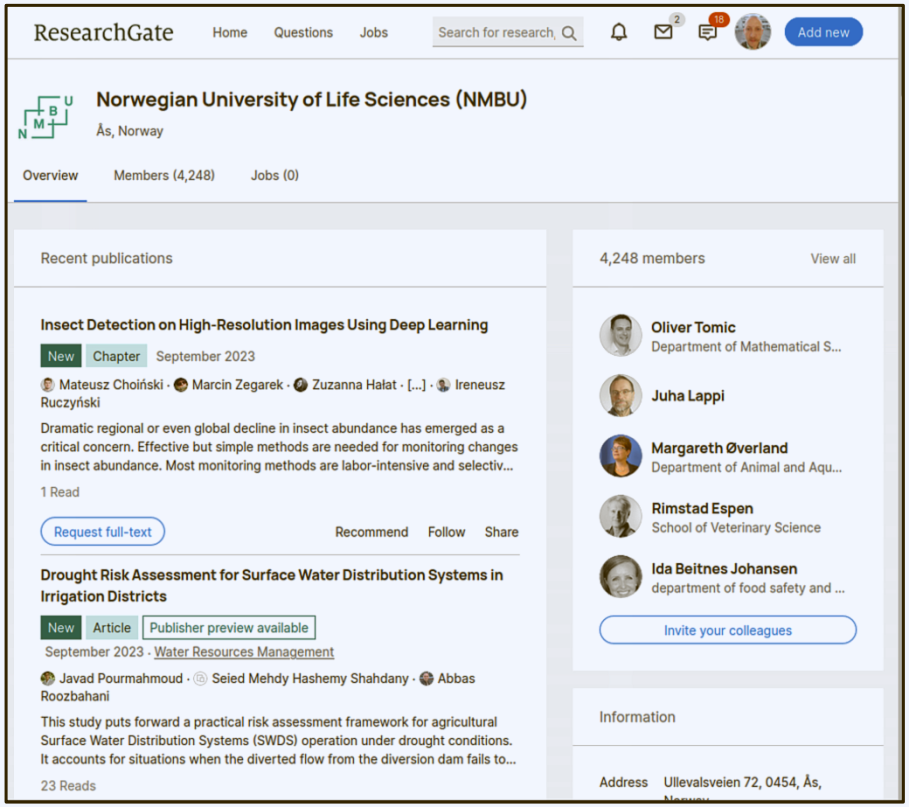


*previously known as
"ISI Web of Knowledge/Science"
and as "Thomson Reuters"

Popular tools for researching literature

Norwegian University of Life Sciences

ResearchGate



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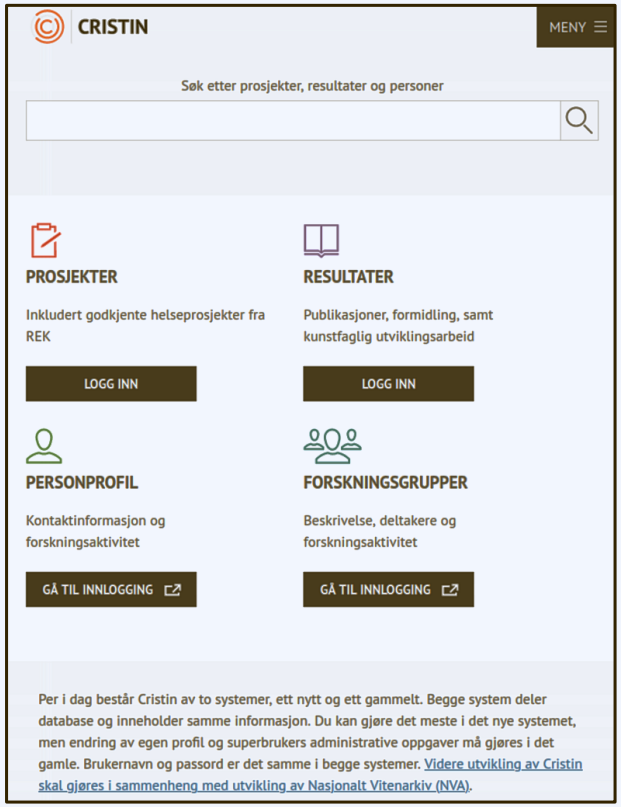

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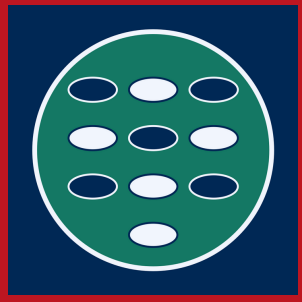

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2 Literature review

2.1 Literature research tools

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DAT390

18. september 2023

Literature review in the DAT390 timeline

22nd September 2023: Statement on master topic and advisor
no strict requirement, but better for these to be final

"draft report"

6th October 2023: **Literature review** document (individual) submission
research and summarize the state of the art

"nearly finished report"

10th November 2023: **Methodology** document (individual) submission
describe the work to be done and show feasibility

15th December 2023: **DAT390 report** (individual) submission
this is the work that determines the grade

Literature reviews as stand-alone journal articles

Papers that review the literature can be well-received contributions to science. Let us look into two examples by our colleagues:

van der Waals forces in density functional theory: The vdW-DF method

Kristian Berland,[1] Valentino R. Cooper,[2] Kyuho Lee,[3,4] Elsebeth Schröder,[5] T. Thonhauser,[6] Per Hyldgaard,[5] and Bengt I. Lundqvist[7]

[1] *Centre for Materials Science and Nanotechnology, SMN, University of Oslo, NO-0318 Oslo, Norway*
[2] *Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831-6114, USA.*
[3] *Molecular Foundry, Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA.*
[4] *Department of Chemical and Biomolecular Engineering, University of California, Berkeley, California 94720, USA.*
[5] *Microtechnology and Nanoscience, MC2, Chalmers University of Technology, SE-412 96 Göteborg, Sweden.*
[6] *Department of Physics, Wake Forest University, Winston-Salem, North Carolina 27109, USA.*
[7] *Department of Applied Physics, Chalmers University of Technology, SE-412 96 Göteborg, Sweden.*

(Dated: December 23, 2014)

A density functional theory (DFT) that accounts for van der Waals (vdW) interactions in condensed matter, materials physics, chemistry, and biology is reviewed. The insights that led to the construction of the Rutgers-Chalmers van der Waals Density Functional (vdW-DF) are presented

Research Article

International Journal of Distributed Sensor Networks

International Journal of Distributed Sensor Networks
2016, Vol. 12(8)

DOI: 10.1177/1550147716665520
ijdsn.sagepub.com
SAGE

A review on applications of activity recognition systems with regard to performance and evaluation

Suneth Ranasinghe, Fadi Al Machot and Heinrich C Mayr

Abstract

Activity recognition systems are a large field of research and development, currently with a focus on advanced machine learning algorithms, innovations in the field of hardware architecture, and on decreasing the costs of monitoring while increasing safety. This article concentrates on the applications of activity recognition systems and surveys their state of the art. We categorize such applications into active and assisted living systems for smart homes, healthcare monitoring applications, monitoring and surveillance systems for indoor and outdoor activities, and tele-immersion applications.

What not to do during this exercise

Don't let ChatGPT write your text.

- Remember that this exercise is not graded. It is to help you learn this.

- ChatGPT also often makes up false information and literature sources.

Don't cite "unacademic" literature.

- Are you "allowed" to cite websites, newspapers, forums, standard textbooks read by students, *etc.*? Yes, it is "allowed." But it looks unprofessional, and as a beginner you must learn how to look professional.

Don't steal other authors' diagrams and other figures.

- Even if you cite the source (otherwise it's plagiarism), it may be illegal.

What to do instead

Don't let ChatGPT write your text.

- Remember that this exercise is not graded. It is to help you learn this. You do not **improve your academic writing** unless you **do it yourself**.
- ChatGPT also often makes up false information and literature sources.
- **Instead, do** read the academic literature carefully and replicate the style of successful authors from the field of application that you will work on.

Don't cite "unacademic" literature.

- Are you "allowed" to cite websites, newspapers, forums, standard textbooks read by students, *etc.*? Yes, it is "allowed." But it looks unprofessional, and as a beginner you must learn how to look professional.
- **Instead, do** cite **journal articles** and **conference papers** only, for now.

Don't steal other authors' diagrams and other figures.

- Even if you cite the source (otherwise it's plagiarism), it may be illegal.
- **Instead, do** submit **documentation that you hold the license** for any figures that you are reusing, or avoid reusing others' figures altogether.

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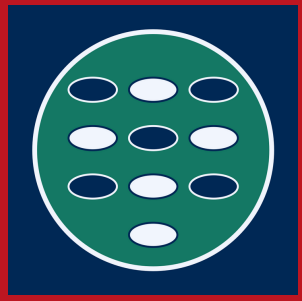

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Schedule and presentations

DAT390

18. september 2023

Schedule for calendar week 38

Monday, 18th September 2023

14.15 – 15.00 First lecture on "reviewing the state of the art"

	Highlight talks		Peer feedback	
15.15 – 15.19	#1	Mathilde Haglund	15.19 – 15.21	#1 Hedda Kleven Berg
15.24 – 15.28	#2	Disha Preeta Kannan	15.28 – 15.30	#2 Kim Næss Kynningsrud
15.33 – 15.37	#3	Jony Karmakar	15.37 – 15.39	#3 Areej Malik
15.42 – 15.46	#4	Torjus Strandenes Moen	15.46 – 15.48	#4 Vetle Aasen Reinholt
15.51 – 15.55	#5	Gurubaran Rajeshwaran	15.55 – 15.57	#5 Navneet Sharma

Friday, 22nd September 2023

23.59 Submit info on topic (for DAT390 and the master) & advisor (for the master)

Schedule for calendar week 39

Monday, 25th September 2023

14.15 – 15.00 Group formation and second lecture on “reviewing the state of the art”

	Highlight talks		Peer feedback	
15.15 – 15.19	#1	Hedda Kleven Berg	15.19 – 15.21	#1 Alin Dak Al-Bab
15.24 – 15.28	#2	Kim Næss Kynningsrud	15.28 – 15.30	#2 Olutomi S. Okubadejo
15.33 – 15.37	#3	Areej Malik	15.37 – 15.39	#3 August Noer Steinset
15.42 – 15.46	#4	Vetle Aasen Reinholt	15.46 – 15.48	#4 Nivetha Suntharamoorthy
15.51 – 15.55	#5	Navneet Sharma	15.55 – 15.57	#5 Michael N. Tholstrup

Friday, 29th September 2023

23.59 Deadline for having held a first group meeting and choosing a group name

Schedule for calendar week 40

Monday, 2nd October 2023

14.15 – 15.00 Q&A and third lecture on “reviewing the state of the art”

		Highlight talks			Peer feedback
15.15 – 15.19	#1	Ole Benjamin Gauslaa	15.19 – 15.21	#1	David C. Ajaegbu
15.24 – 15.28	#2	Ulrik Egge Husby	15.28 – 15.30	#2	Petter Bøe Hørtvedt
15.33 – 15.37	#3	Tonje M. Lorgen Kirkholt	15.37 – 15.39	#3	Razieh Kaveh
15.42 – 15.46	#4	Karan Kumar	15.46 – 15.48	#4	Avnik Orbelians
15.51 – 15.55	#5	Bikesh Shrestha	15.55 – 15.57	#5	Haakon T. Vangsnes

Friday, 6th October 2023

23.59 Submission deadline for the literature review (“draft report”) document

Presentations and feedback

- **Four minutes** for the **highlight talk**
- **Two minutes** for **feedback** from a peer reviewer
- **One minute** for an **acknowledgment** of the feedback

  (Two minutes for the next contributor to connect the laptop.)

The **individual presentations** are **short highlight talks**, four minutes long, on your master project. What should you focus on in the four minutes?

1) What is your topic – and who will be advising on it?
2) Why is your work interesting and relevant? *What will it make possible?*
3) Why is it not possible now, and what is missing to get it done?
4) What is it that you will actually be doing as your main scientific work?

Presentations and feedback

- **Four minutes** for the **highlight talk**
- **Two minutes** for **feedback** from a peer reviewer
- **One minute** for an **acknowledgment** of the feedback

  (Two minutes for the next contributor to connect the laptop.)

The feedback must contain two statements:

- What about the highlight talk was *not so strong* or *not so clear*?
  - Say **what** and **why**.
  - Don't attack the speaker, of course. Remain respectful.
  - But you do not need to provide a "constructive criticism." If you can, that is ideal, but it can be hard to come up with – in the short time.
- What about the highlight talk was *particularly strong or clear*?
  - Say **what** and **why**.

Feedback that is always only positive is also completely useless.
It is important to be able to provide criticism in a respectful way.

Presentations and feedback

- **Four minutes** for the **highlight talk**
- **Two minutes** for **feedback** from a peer reviewer
- **One minute** for an **acknowledgment** of the feedback

(Two minutes for the next contributor to connect the laptop.)

Observe: Which of these four was conveyed the **least strongly and clearly**?

Which of these four was conveyed **most strongly and clearly**?

1) What is your **topic** – and **who** will be advising on it?
2) Why is your work **interesting and relevant**? What will it make possible?
3) Why is it not possible now, and **what is missing** to get it done?
4) What is it that you will **actually be doing** as your main scientific work?

Presentations and feedback

- **Four minutes** for the **highlight talk**
- **Two minutes** for **feedback** from a peer reviewer
- **One minute** for an **acknowledgment** of the feedback

  (Two minutes for the next contributor to connect the laptop.)

What not to do as a response to the feedback:

- Criticise the feedback or even attack the person providing it.
- Correct any misunderstandings.

You have thought a bit about your topic, the reviewer has only listened to your four minutes. That's why it requires courage to provide criticism. Resist the urge to begin a discussion. You are better prepared – you would win – we know it!

What to do instead:

- **Repeat** the main points that the reviewer made **in your own words**.

  You don't need to agree with the feedback, just try to understand it.

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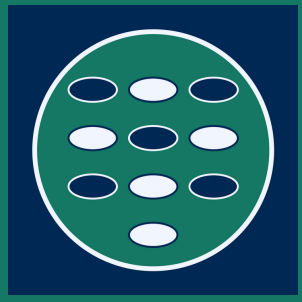

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