

Engineering Ethics and Integrity

Material presented in today's lecture is mostly from Dr. Salman's PhD course at University of Alberta, Canada

What is plagiarism?

- *Plagiarism*: to steal or pass off as one's own (the idea or words of another); use (a created production) without crediting the source; to commit literary theft; present as new and original an idea or product derived from an existing source (*Webster's Third New International Dictionary of the English Language, Unabridged, p. 1728*).

"Cyber-plagiarism" -- The process by which students either copy ideas found on the Web without giving proper attribution,

OR

The process by which students download research papers from the Web, in whole or in part, and submit the paper as their own original work.

Plagiarism

We will examine and discuss the issues relevant to plagiarism as an academic offense.

Perspective
How serious is the problem?

Defining the problem
through statistics (lets see HEC
website)

A Closer View of Plagiarism

- Plagiarism encompasses a range of actions from incorrectly citing sources (*unintentional plagiarism*) to the outright theft of someone else's work (*intentional plagiarism*).
- The type of plagiarism committed, *intentional plagiarism* or *unintentional plagiarism*, affects the disciplinary action.

Why Do People Plagiarize?

Research and Writing Issues

- Lack of research and writing skills
- Confusion between plagiarizing and paraphrasing text (typically “Patchwriting”)
- Incomplete, careless note-taking
- Confusion about how to properly cite sources
- Problems evaluating internet resources

Why Do People Plagiarize?

External Factors

- Pressure from family, competition for scholarships and jobs
- The co-modification of knowledge and education

Internal Factors

- Poor time management and organizational skills
- Ignorance, laziness, procrastination
- Lack of confidence/boredom/lack of interest

Cultural Factors

- Culturally based attitudes towards plagiarism

Factors leading to Plagiarism: Cultural Factors

- Some cultures view plagiarism differently than Western cultures
- Copying may be considered a high form of flattery
- It is important to remember that individuals from other cultures may take more time to master proper attribution.

Factors leading to Plagiarism: Ethics (or a lack thereof)

Student ethics and relationship with the University

- Don't expect to get caught
- Some will plagiarize deliberately
- Some perceive education only as a means of fulfilling career aspirations.
- However, most plagiarism is unintentional.

Problems Related to the Web

- Perception of online information as public knowledge
- Instability of URLs
- Authority of web sites
- Citing online sources is difficult

Consequences (these happen mostly abroad but not in Pakistan)

- No credit given for an assignment
- Failure in the course
- Suspension from the University
- Dismissal from the University
- Records of plagiarism can follow on transcripts and career documentation

Strategies to Combat Plagiarism

Don't become paranoid – Cite!

But when you present a work for evaluation:

- It must be entirely your own work, written by you in your own words, and containing your own interpretations, ideas, approaches etc.
- It must state clearly where you got other people's words or major ideas.
- It must state clearly where you got your charts, diagrams, photos, graphics, and media (including sound, video and digital images).

Summary

- Plagiarism is a moral and ethical issue
- Plagiarism is a deceptively complex issue; proper citation is a fine art
- Ask for help if you are having trouble with citing
- Give yourself enough time to do proper research
- Err on the side of caution. **Cite!**

Why We Cite & Reference

- Acknowledgement of others' work(s)
- Readers (such as your advisors) can follow your train of thought
- Readers can locate your sources
 - **Failure to cite** your references can lead to charges of **plagiarism** & its consequences

How to Cite? - Style Manuals

- Papers and reports you write **must** include a list of the sources used in your research
- You may be required you to use a particular **style**, or use one of your choosing
- It is important to use any style correctly and consistently
- The question is: which style to use?

Style Manuals

- As a discipline, engineering does not have its own standard style guide
- A number of popular style manuals exist, and provide guidance to citing references. These include:
 - **Chicago Manual of Style**
 - Publication Manual of the American Psychological Association
 - The ACS Style Guide: Effective Communication of Scientific Information (*American Chemical Society*)

Writing for Publication

- Scholarly publishers and professional societies require specific styles for citing references in their publications
- A journal will normally have specific guidelines and instructions for formatting references
- Any style used will provide **sufficient information** to find the sources cited in your publication

Engineering Societies' Guidelines and Instructions for Authors


- **ACM Publications Page**
 - author guidelines (Comm. ACM)
- **AIAA Publishing Information**
 - How to submit a paper
- **AIChE Journal – instructions to authors**
 - Style manuals and guidelines for AIChE Conferences
- **ASCE Resources for Authors**
- **ASME Journal Author Resources**
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- **SAE International**
 - How to Prepare and Present an SAE Paper
- **SPIE Press Books**
 - SPIE Proceedings Guidelines
 - SPIE Journal Guidelines

*Examples of citing different formats including:
journal article, book chapter, conference paper,
standalone paper, dissertation, technical report.*

Sample References

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- [5] Hashish, M., 2000, "600 MPa Waterjet Technology Development," High Pressure Technology, PVP-Vol. 406, pp. 135-140.
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- [7] Tung, C. Y., 1982, "Evaporative Heat Transfer in the Contact Line of a Mixture," Ph.D. thesis, Rensselaer Polytechnic Institute, Troy, NY.
- [8] Kwon, O. K., and Pletcher, R. H., 1981, "Prediction of the Incompressible Flow Over A Rearward-Facing Step," Technical Report No. HTL-26, CFD-4, Iowa State Univ., Ames, IA.
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Ethical Obligations
include:
Citing References!



Ethical Obligations of Authors

1. An author's central obligation is to present a concise and accurate account of the research, work, or project completed, together with an objective discussion of its significance.
2. A submitted manuscript shall contain detail and reference to public sources of information sufficient to permit the author's peers to repeat the work or otherwise verify its accuracy.
3. An author shall cite and give appropriate attribution to those publications influential in determining the nature of the reported work sufficient to guide the reader quickly to earlier work essential to an understanding of the present work. Information obtained by an author privately, from conversation, correspondence, or discussion with third parties, shall not be used or reported in the author's work without explicit permission from the persons from whom the information was obtained. Information obtained in the course of confidential services, such as refereeing manuscripts or grant applications, shall be treated in the same confidential manner.
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6. In submitting a manuscript for publication, an author should inform the editor of related manuscripts that the author has under editorial consideration or in press. Copies of these manuscripts should be supplied to the editor, and the relationships of such manuscripts to the one submitted should be indicated.

Warning
against
plagiarism!



Example:

Citing an **online journal article** based on a print source

Authors and title
of article

Journal title, year, volume, pages

Energy & Fuels 2004, 18, 539–546

539

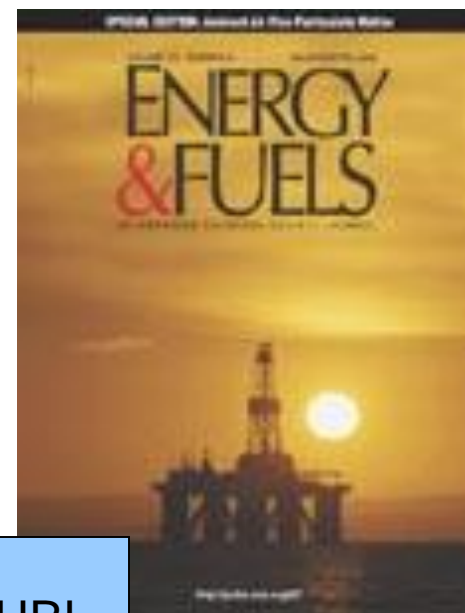
Inhibition and Deactivation of Hydrodenitrogenation (HDN) Catalysts by Narrow-Boiling Fractions of Athabasca Coker Gas Oil

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The hydrodenitrogenation (HDN) of quinoline in the presence of narrow-boiling fractions of Athabasca bitumen coker gas oil was studied over a commercial NiMo/ γ -Al₂O₃ hydrotreatment catalyst. The study was conducted to determine whether trends in HDN activity with increasing boiling point were the result of the increased molecular weight of the Athabasca coker gas oil (i.e., changes in hydrocarbon structure) or due to the nitrogen species contained in the feedstock. In each boiling-point range, the components in the gas oils demonstrated a varying degree



Article URL

<http://pubs.acs.org/cgi-bin/article.cgi/enfuem/2004/18/i02/pdf/ef034063p.pdf>

Example:

Citing an **online journal article** based on a print source

- **APA Style:**

- Kanda, W., Siu I., Adjaye, J., Nelson, A.E., & Gray, M.R. (2004). Inhibition and deactivation of hydrodenitrogenation (HDN) catalysts by narrow cuts of Athabasca coker gas oil. [Electronic version]. *Energy and Fuels*, 18(2), 539-546.

- **Chicago Style**

- Kanda, W., I. Siu, J. Adjaye, A.E. Nelson, and M.R Gray. 2004. Inhibition and deactivation of hydrodenitrogenation (HDN) catalysts by narrow cuts of Athabasca coker gas oil. *Energy and Fuels* 18, no. 2 (March/April): 539-546. <http://pubs.acs.org/cgi-bin/article.cgi/enfuem/2004/18/i02/pdf/ef034063p.pdf> (Accessed October 28, 2010).

What is Copyright?

- “Property” is a cultural & legal concept
- Bundle of statutory rights – moral, artistic and property – which expire in fixed time
- Right of creator/owner to control and license production or copying of a “work” or of performing a “work” (dance, drama, music, film). Text, graphs, tables, charts and computer programs are all “works”.

Copyright & Originality

- Copyright does not protect ideas – it protects the expression – “the work”.

Copyright Infringement

- Copying or performing a “work” without permission of the copyright owner.
- Profit [\$\$\$] as a result of making the copy is not required.

Using Own Work Over

Q: Do you still own the copyright?

- If yes, give yourself permission.
- If no, you have to request permission from the owner of the copyright.

Many STM journals require you to transfer copyright. They may or may not allow you to freely re-use of information you produced.

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