

# Welcome to CMPE295W

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Week 2

# Today's Agenda

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- Lecture
  - Introduction to professional communications
  - Overview of the writing process
  - Introduction to portfolio project
  - Tips for writing abstracts
- Group Presentation
  - Introduction
  - Abstract presentation

# Zoom

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- **Log in via Zoom at the start** of every synchronous class meeting.
- **Be proactive and on time**, doing the assigned readings and out-of-class work so that you can apply what you have learned in our Zoom classes.
- Be prepared to **be mentally present** in class to fully engage with your instructors, the content, and your classmates.
- **Turn on your web camera and microphone** when you are speaking/presenting.
- Consider turning your camera on, even when you are not speaking. **Seeing everyone in our virtual classroom is good!!!**

# Instructor's Background



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Dr. Wencen Wu is an Assistant Professor in the Computer Engineering Department at San Jose State University. Prior to joining SJSU, she was an Assistant Professor in the Electrical, Computer & Systems Engineering Department of Rensselaer Polytechnic Institute. She received her Ph.D. and M.S. from the School of Electrical and Computer Engineering at the Georgia Institute of Technology, and the dual-M.S. and B.S. from Shanghai Jiao Tong University. Her research interests include robotics, systems and control theory, and machine learning as applied to intelligent autonomous multi-robot systems and distributed parameter systems. Recently, she has been working on blockchain technology as well.

# Professional Communication

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Readings: Chapters 1, 3, 5, and 21 of Markel book

# What is Technical Communication?

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- Technical information is frequently communicated through documents such as proposals, emails, reports, podcasts, computer help files, blogs, and wikis
- Technical communication has a somewhat different focus on *purpose* and *audience*



# The Professional Communication Process

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## Planning

- Analyze audience
- Analyze purpose
- Determine document type
- Make document design decisions
- Develop schedule and budget
- Do necessary prewriting

## Writing

- Use templates & styles
- Develop thesis statement and outline
- Develop graphics
- Write the text

## Revising, Editing, Proofreading

- Edit for audience and purpose
- You review and get others to review

# Examples

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- Research papers
- Proposals
- Technical reports
- Demos
- ...

CMPE Spring 2021 Project Expo page: <http://cmpe.sjsu.edu/node/277>

# Tips for Writing Abstracts

## The Publisher Sets the Guidelines

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- Title page – contains your project title and identifies your team members and project advisor
- Abstract page – repeats the project title, lists your team members, and provides a three-paragraph description of your project. The abstract is no more than one page using double-spaced format. The three paragraphs should have the following content:
  - Paragraph 1 – a setting for your project that describes the general domain of the project
  - Paragraph 2 – a description of a problem within the domain
  - Paragraph 3 – a short description of how your project will address the problem described in paragraph 2

# Tips for Writing Abstracts

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- The publisher sets the guidelines, including whether your abstract should be informational or descriptive
- Your tone should be objective and factual
- Although abstract may be useful in marketing, they are NOT marketing documents. You provide facts, not judgments
- Abstracts are usually written in the third person (he, she, it, they) or occasionally in the first person (we, it) if truly warranted. The second person (you) is never used
- Unless told otherwise, abstracts generally are no more than 200 words
- Someone other than the writer may write the abstract for a document

# Abstracts – Examples

**nature**

Explore content ▾ Journal information ▾ Publish with us ▾

nature > review articles > article

Published: 27 May 2015

## Deep learning

Yann LeCun  Yoshua Bengio & Geoffrey Hinton

Nature 521, 436–444 (2015) | Cite this article

304k Accesses | 22718 Citations | 1017 Altmetric | Metrics

### Abstract

Deep learning allows computational models that are composed of multiple processing layers to learn representations of data with multiple levels of abstraction. These methods have dramatically improved the state-of-the-art in speech recognition, visual object recognition, object detection and many other domains such as drug discovery and genomics. Deep learning discovers intricate structure in large data sets by using the backpropagation algorithm to indicate how a machine should change its internal parameters that are used to compute the representation in each layer from the representation in the previous layer. Deep convolutional nets have brought about breakthroughs in processing images, video, speech and audio, whereas recurrent nets have shone light on sequential data such as text and speech.

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# Abstracts – Examples

## Active Interaction Force Control for Contact-Based Inspection With a Fully Actuated Aerial Vehicle

Publisher: IEEE

Cite This

PDF

Karen Bodie ; Maximilian Brunner ; Michael Pantic ; Stefan Walser ; Patrick Pfändler ; Ueli Angst ; Roland Si... All Authors

1 Paper Citation

224 Full Text Views



### Abstract

#### Abstract:

This article presents and validates active interaction force control and planning for fully actuated and omnidirectional aerial manipulation platforms, with the goal of aerial contact inspection in unstructured environments. We present a variable axis-selective impedance control which integrates direct force control for intentional interaction, using feedback from an on-board force sensor. The control approach aims to reject disturbances in free flight, while handling unintentional interaction and actively controlling desired interaction forces. A fully actuated and omnidirectional tilt-rotor aerial system is used to show capabilities of the control and planning methods. Experiments demonstrate disturbance rejection, push-and-slide interaction, and force-controlled interaction in different flight orientations. The system is validated as a tool for nondestructive testing of concrete infrastructure, and statistical results of interaction control performance are presented and discussed.

Published in: *IEEE Transactions on Robotics* ( Volume: 37 , Issue: 3, June 2021)

Show Full Outline ▾

### Authors

Page(s): 709 - 722

DOI: [10.1109/TRO.2020.3036623](https://doi.org/10.1109/TRO.2020.3036623)

### Figures

Date of Publication: 15 December 2020

Publisher: IEEE

► ISSN Information:

► Funding Agency:

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# Giving Presentations

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- More important than ever in an online environment
- Planning matters
- The usual evaluation criteria still apply

# Planning Matters!!

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- Be strategic
- Who is your audience for your presentation
- What is your purpose
- How much time do you have to deliver the presentation
- What tools will you use for creating your presentation
- Will you be telling stories in your presentation
  - <https://www.youtube.com/watch?v=1nYFpuc2Umk>
  - Nancy Duarte uncovers common structure of greatest communicators

# The “Basics” – The Usual Evaluation Criteria

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- Does the speaker have a point to make, and is it clear?
  - Was it well attuned to the audience?
  - Is the use of detail appropriate for the audience and for establishing the speaker in the classroom?
  - What general conclusions can you reach about the quality of the speaker’s presentation?
  - What suggestions do you have for the speaker’s improvement?
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- Does the speaker demonstrate
    - Enthusiasm
    - Good eye contact
    - Clear diction
    - Effective projection
    - Succinctness
    - Professional appearance
    - Visuals that are clear and to the point

Now it's time for ...

## Group Presentations

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Turn on your camera when presenting, if possible

# Introduction

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- What can you tell us about yourself that you usually wouldn't put down on your resume?
- Where are you now?
- Tell everyone more about your career aspirations and passions...
- Anything you would like to share with us...

# Assignments

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- Diagnostic Individual Writing by 12/28/22
- Workbook 1 – Project Early Formation (Group)
  - Due Jan 18
- Interview with Your Advisor
  - Due Jan. 27
- Literature Survey
  - Due Jan. 20

# Workbook 1

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- Use the template
- Chapters to finish:
  - Chapter 1. Literature Search, State of the Art. This chapter is not a description of your project.
  - Chapter 2. Project Justification
  - Chapter 3. Project Requirements
  - Chapter 4. Dependencies and Deliverables, as you know them now
  - Chapter 5. Project Architecture
  - Chapter 8. Implementation Plan and Progress
  - Chapter 9. Project Schedule showing dates and tasks for each group member. This is about your project work, not the writing assignments.

# Group Meetings

## Interview with Advisor

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- Questions to Discuss
  - What are good times for everyone in your group to meet with your advisor? (Assume that this meeting should take 45 minutes to an hour and should take place over Zoom)
  - Who will contact your advisor to find out if he/she is available at any of the times that your group can meet?
  - Based on a review of the assignments, what will your script be? What questions will you ask, and how will you divide them between each other?
  - Will you use Zoom to record your interview, or will you use some other technology? (Make sure that your advisor agrees in advance to the recording)

# Week 3 Agenda

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- Plagiarism and documentation
- Using templates
- Common errors
- Document design
- Graphics

Thank you!  
See you on Jan. 12, 2023

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