

UNIVERSITÀ DI PISA

DIPARTIMENTO DI INGEGNERIA DELL'INFORMAZIONE

Dottorato di Ricerca in Ingegneria dell'Informazione

Doctoral Course

"Academic English: Writing and Presenting WITH the support of LLMs"

Dr. Adrian Wallwork

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Short Abstract:

This course explores how LLMs transform academic writing and presentations, offering high English accuracy, title suggestions, and support across academic tasks, including social aspects. Participants will learn to critically assess and effectively prompt LLM outputs.

Key challenges, such as unintended text changes, lack of readability and relevance flags, and overly verbose email structures, are discussed.

The course emphasizes manuscript skills (clarity, conciseness, and readability), managing referees, and effective presentations, including co-creating slides with LLMs, selecting inclusive visuals, and improving pronunciation.

Course Contents in brief:

Large Language Models

LLMs are transforming how academic papers and presentations are written. They have some major advantages:

- 1. they generate texts that are 99.9% accurate from an English point of view (though not from a factual point of view); they can correct texts already in English with at least 95% accuracy
- 2. they can give suggestions on titles for papers, on how to interact with referees, and on some elements regarding the quality and content of the writing
- they can help with practically every aspect of academic life not just studying for also socializing

The key is in learning how to prompt and to judge the bot's output using critical thinking skills. However LLMs have major drawbacks:

- when correcting and paraphrasing they may make serious undesired modifications
- they do NOT flag some major issues that guarantee that a paper will be published: readability, conciseness, relevance, inclusion of all aspects that referees expect to find (e.g. limitations of work)

they generate emails that always follow the same verbose style and structure

Manuscript writing skills

Focus on key areas of a paper where special human attention is required – highlighting key findings, differentiate own work from that of others, discussing limitations; short clear simple sentences and paragraphs.

Effective titles and abstracts that will attract attention and thus be read.

Readability.

Dealing with referees and editors.

Presentation skills

Drafting a skeleton presentation co-created with ChatGPT.

Designing, practising and delivering well-structured presentation that attracts and holds audience attention.

Drafting a script using simple and short sentences.

Choosing appropriate and inclusive images - highlighting importance of diversity.

Learning from TED and 3MTs.

Improving pronunciation and intonation in English.

Total # of hours of lecture: 20 hours

References:

[1] Al. https://link.springer.com/book/10.1007/978-3-031-48147-5

[2] Writing. https://link.springer.com/book/10.1007/978-3-031-31072-0

[3] Presentations. https://link.springer.com/book/10.1007/978-3-319-26330-4

Adrian Wallwork: Bio

- Since 2000, Adrian Wallwork has held more than 100 courses for doctoral students and researchers at universities primarily in Italy, but also recently in China and Qatar.
- Author of textbooks for Springer Science, Oxford University Press, Cambridge University Press,
 BBC, De Agostini and Vallardi. His books for Springer Science on English for science
 communication are used by universities around the world and have to date been translated into
 Chinese, Korean, Japanese and Persian.
- In Feb 2023 he began teaching PhD students and researchers how to improve their English using Google Translate and ChatGPT with an overall increase in accuracy from about 75% to 95%.

Other relevant experience:

- A <u>textbook</u> entitled *AI-Assisted Writing and Presenting in English* (Springer, June 2024)
- The hugely successful *English for Academic Research* series (the books are mainly bought/downloaded from the website, so ignore the sales shown on Amazon).
- Twelve textbooks for OUP, CUP, BBC and Scholastic.
- Seven 2-week courses (24-30 hours) on LLMs around Italy, where I live and work. Around 10 more
 to be held in the 24/25 academic year.
- Webinar for <u>AJE</u> on chatbots vs Curie (for which 978 people enrolled)
- An article on LLMs for <u>Laboratory News</u>
- Course on chatbots and translation for Orta Doğu Teknik Üniversitesi / Middle East Technical University in Turkey (October 2024)
- Future courses organized for research centres in Qatar and Russia.

Final Exam:

Continual assessment: writing Abstracts, commenting on images, various short written exercises, presentation scripts; + giving short presentation of research work. There is **no** final written or oral exam.

Room and Schedule

Room: Aula Riunioni del Dipartimento di Ingegneria dell'Informazione, Via G. Caruso 16, Pisa – Ground

Aula Riunioni del Dipartimento di Ingegneria dell'Informazione, Largo Lucio Lazzarino 2, Piano 6

Schedule:

March 6, 2025: 10:30-13.00 - Via Caruso
March 7, 2025: 10:30-13.00 - Via Caruso
March 11, 2025: 10:30-13.00 - Via Caruso
March 13, 2025: 10:30-13.00 - Via Caruso
March 18, 2025: 10:30-13.00 - Via Caruso
March 20, 2025: 10:30-13.00 - Via Caruso
March 25, 2025: 10:30-13.00 - Via Caruso

March 27, 2025: 10:30-13.00 - Largo Lucio Lazzarino