Welcome

Introduction to the UKRI Centre for Doctoral Training in Natural Language Processing

Professor Mirella Lapata President of NLP CDT

This session will begin at 2pm







THE UNIVERSITY of EDINBURGH School of Philosophy, Psychology and Language Sciences



UK Research and Innovation

CDT NLP Virtual Open Day

Mirella Lapata School of Informatics University of Edinburgh mlap@inf.ed.ac.uk



- CDT = Centre for Doctoral Training.
- In a nutshell: a large training grant for 50+ students.
- Combines research and training over 4 years.
- Students learn together in cohorts
- ... but not in a silo: CDTs should bring together a broader community (incl. academic, industry, public).
- emphasis on equality, diversity & inclusion.
- CDT in NLP is one of 18 CDTs in AI across the UK.
- Our CDT: partnership between Informatics and PPLS.
- Scope: computation and language, broadly construed.

What is Natural Language Processing?

NLP is a field of computer science and artificial intelligence concerned with enabling computers to analyze and generate natural language text.



Research Areas: Informatics and PPLS

- Natural language processing
- Computational linguistics
- Speech technology
- Dialogue
- Language and vision
- Information retrieval and visualization
- Computational social science
- Computational cognitive science

- Human-Computer interaction
- Assistive and educational technology
- Psycholinguistics
- Language acquisition
- Language evolution, language variation and change
- Linguistic foundations of language and speech processing
- Design Informatics

CDT in NLP: Who are We?



Mirella Lapata: president; scientific programme, main UKRI contact, EAB liaison

Ivan Titov: director; recruitment coordinator; promotion of programme, selection of new cohorts

Frank Keller: training coordinator; taught component, responsible innovation (RI) champion

Kenneth Heafield: industry liaison; industry cofunding, partnership opportunities

Simon King: PPLS liaison; coordination of programme delivery and recruitment, outreach

Bjorn Ross: pastoral care, ED&I champion



Sally Galloway: Overall programme delivery and administration

Our Very First Cohort (2019)



Key Dates

Early application is actively encouraged and, to ensure full consideration for funding, completed applications must include all supporting documents.



International Fees: 26th November 2021

UK/Home fees: January 28, 2022 Ideally, an undergraduate or master's degree in:

- computer science
- linguistics or cognitive science
- Al or a related discipline

You should also satisfy the University's English language requirements:

- IELTS Academic: total 6.5 with at least 6.0 in each component.
- TOEFL-iBT: total 92 with at least 20 in each section.
- CAE and CPE: total 176 with at least 169 in each paper.
- Trinity ISE: ISE II with distinctions in all four components.

English language qualification must be no more than three and a half years old from the start date of the programme; if using IELTS, TOEFL, Trinity ISE, or LanguageCert International ESOL it must be no more than two years old.

- **1** Before applying, you need to find a supervisor.
- **②** Go through the list of supervisors on CDT website, and contact them.
- **③** Be brief, include, transcripts, research interests, and possible research topic.
- Once the supervisor agrees, prepare application, you will need a research proposal (you can ask supervisor for feedback).
- S Prepare application materials and apply early!



A Kelpie is a shape-shifting water spirit inhabiting the lochs and pools of Scotland. It is usually described as a black horselike creature, able to adopt human form.

- We review all applicants!
- Promising applicants are interviewed: good grades (usually a first), research experience (publications), industry experience, strong letters of recommendation, strong interest from supervisor.
- You will be automatically considered for a scholarship.
- Approximately 12 studentships are available each year, maintenance (currently \pounds 15,609 per year) and tuition fees.
- We particularly encourage women, minority groups, and members of other groups that are underrepresented in technology to apply.
- Interviews Jan-March, all offers being notified by April at latest.
- The programme starts in September each year and requires all students to be based in Edinburgh to optimise the cohort benefits.

- Interdisciplinary: students from different backgrounds in disciplines and demographics. ED&I is important!
- **Collaborative:** students and supervisors work together, are exposed to different viewpoints and working styles.
- Students take courses to complement background.
- But should start research from day one.
- So, teaching should complement practice.

- Working with outside partners (mostly from industry, but not only).
- Responsible innovation activities.
- Outreach activities.
- Events and workshops to foster all of the above.
- Participation of aligned students from outside the CDT.
- Students expected to help with programme delivery after year 1: work as teaching assistants, tutors, etc.

Programme Structure

- PhD with Integrated Training (new UoE degree type)
- 4 years: 75% research, 25% taught
- Students select courses to complement their training
- Students take 180 course credits over 3 years.
- The following courses are compulsory:

Year 1	
Doing Research in NLP	[20 credits]
Group Project in Advanced NLP	[20 credits]
Individual Project in Advanced NLP	[40 credits]
Year 2	
Case Studies in AI Ethics	[10 credits]

• This leaves you with a choice of 90 course credits.

Programme Structure: An Example

Year 1	Doing Re- search in NLP [20]	Foundational courses [40]		Group Project [20]	Individual Project [40]	PhD [60]	research
Year 2	Specialist courses [20]	Case studies [10]	PhD re	search [140]		
Year 3	Specialist courses [20]	PhD rese	arch [160]			
Year 4	PhD research	n [180]					

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In a given year, in order to progress to the next year, a student needs to:

- pass all obligatory taught courses taken with a mark of at least 50; and
- pass at least 2/3 of all taught credits taken with a mark of at least 50 in each of the courses which make up these credits; and
- attain an average of at least 50 across all taught credits taken in this year; and
- be awarded a grade of at least "good" by the annual review panel in the annual review for this year.

No resits are allowed. Students who do not meet the progression criteria will not be allowed to progress to the next year of study; they may be asked to submit for a Master of Science by Research.

Why You should Come to Edinburgh!

- Biggest concentration of NLP researchers nationally and internationally.
- Our PhD program combines research and training over 4 years.
- Students learn together in cohorts
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- What should I put in the research proposal? What is the research problem you wish to address? What makes it interesting/important? How do you propose to solve it? We want to see you can formulate a scientific hypothesis, you are aware of research context, and can articulate scientific argument.

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A master's degree is not required for entry and many students on the programme do not have one.



Apply by November 26, 2021

