# Uncovering gender dimensions in energy policy using Natural Language Processing

**Research Focus:**

**Clean Energy Transition**

**Research Question:**

**Is the language in Energy Policy Documents Gender Neutral?**



Assoc prof. Paula Caroll
Business Analytics and
Operations Research
School of Business

Bhawna Singh
Generative AI, LLM,
Responsible AI
CeADAR

Prof. Eleni Mangina
Data Analytics,
Energy Efficiency,
Applied Ethical AI
School of Computer
Science

UCD ENERGY INSTITUTE

NEXSYS

CeADAR
Ireland's Centre for AI

**Impact:**

**Spotlight on language usage in Energy Policy**
**Corpora of Energy Policy Vocabulary**



NECP NLP Gender Bias Rankings by Country
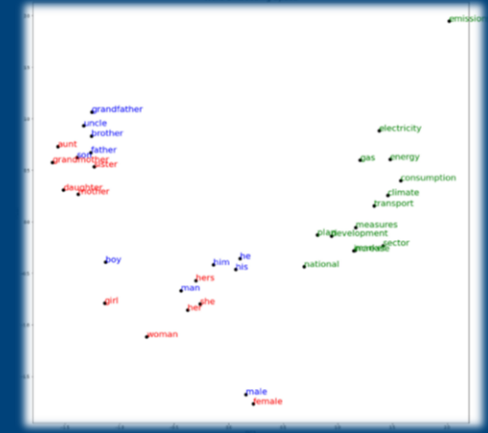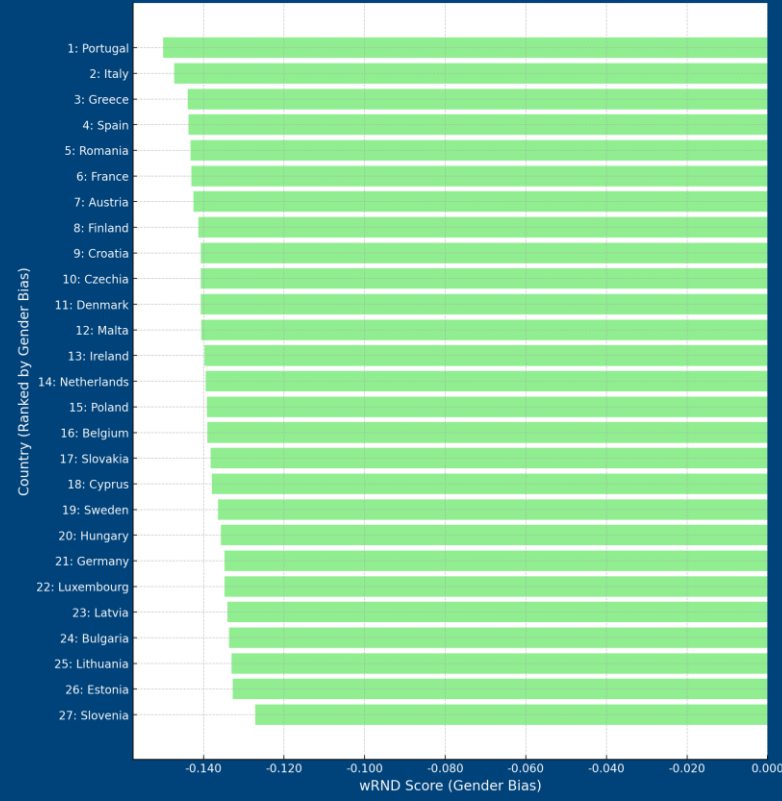
# Implementing the BioBeo Gender Action Plan through Events and Learning Resources ([www.biobeo.eu](www.biobeo.eu))

❖ Tom Curran (BioBeo Project Leader);

- ❖ Associate Professor, UCD School of Biosystems and Food Engineering;
- ❖ Vice Principal for Internationalisation, UCD College of Engineering & Architecture

❖ BioBeo Horizon Europe Project

- ❖ Education for the Bioeconomy
- ❖ Management structure, work package leaders & deputies, meeting times
- ❖ Speakers at events

❖ Impact

- ❖ Universal Design for Learning (UDL)
- ❖ Flexibility and diversity in curriculum and classroom practices
- ❖ Better & more project outputs

www.biobeo.eu/project-outcomes
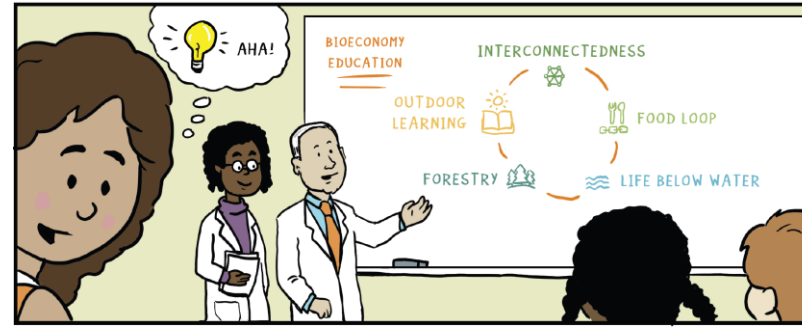
# It is time to talk about sex in biomedicine

## REMODEL & Dimitrios I. Zeugolis



Cell culture technologies / products sector



Regenerative medicine / tissue engineering sector



Medical devices / biomaterials sector

## Case study: Gender mismatch in medical devices

| Group | Young's Modulus (KPa) |
| --- | --- |
| Porcine male skin | 0.63 ± 0.09 |
| Porcine female skin | 1.07 ± 0.05 |
| Porcine male tendon | 1.31 ± 0.11 |
| Porcine female tendon | 2.29 ± 0.12 |

| Group | Biological properties |
| --- | --- |
| Porcine male tendon + human male tendon cells | High correlation |
| Porcine female tendon + human male tendon cells | Low correlation |
| Porcine male tendon + human female tendon cells | Low correlation |
| Porcine female tendon + human female tendon cells | High correlation |

## Impact



Personalised medicine becomes a clinical reality



Better patient therapeutic outcomes



Savings for patients and healthcare providers

University College Dublin
Ireland's Global University

**Earth Institute International Women's Day Research Celebration, 03/2025, UCD**

REMODEL
REGENERATIVE, MODULAR & DEVELOPMENTAL
ENGINEERING LABORATORY

# Integrating Gender Equity in Co-Design Labs for Urban Climate Change Adaptation

**The WECOAdapt Co-Design Process**



University College Dublin

Ardhi University

Centre for Community Initiatives

Subward government in Kisiwani, Mtoni Unguja and Kombo

**Project Partners**

*Initiate the process*

Select

5 women and 4 men in each subward

**Committee x3**

*Institutionalize results*

Select

Women

Experts

Men

Youth

**Co-Design Lab – Discussion Groups x3**

*Identify challenges and adaptation options*

Attempt to form a separate discussion group for people with special needs in Kisiwani

*Impact:*

- Gender-inclusive toolkit
- Permanent leadership positions for women in climate change adaptation committees
- Findings on women's perceptions and priorities regarding climate change
- Gender considerations integrated in adaptation pathways

# Investigating gender aspects of Ireland's Clean Energy Transition

## Dr Dervla MacManus

Research Ireland Public Service Fellow

UCD School of Philosophy

Former architect

PhD Architectural History

IRC Postdoc *Gender Equity in Irish Architecture*

**Gender (socially) disaggregated data**

Assess the current collection of gender data across SEAI programmes

Review academic and grey literature for best practices in collecting gender-disaggregated data

Develop a framework for the collection of intersectional gender data to allow for gender responsive evaluation

**seai** SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Taighde Éireann Research Ireland

## Impact - Mainstreaming of Gender Responsive Evaluation

### Public Sector Duty
Section 42 of the Irish Human Rights and Equality Commission Act 2014

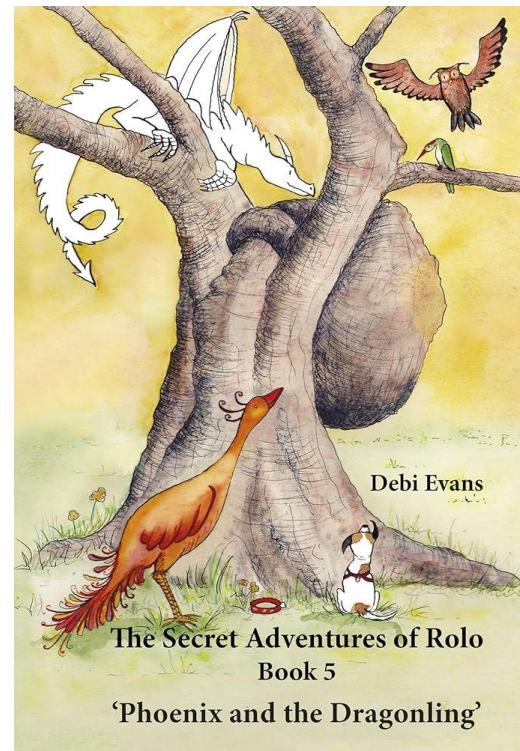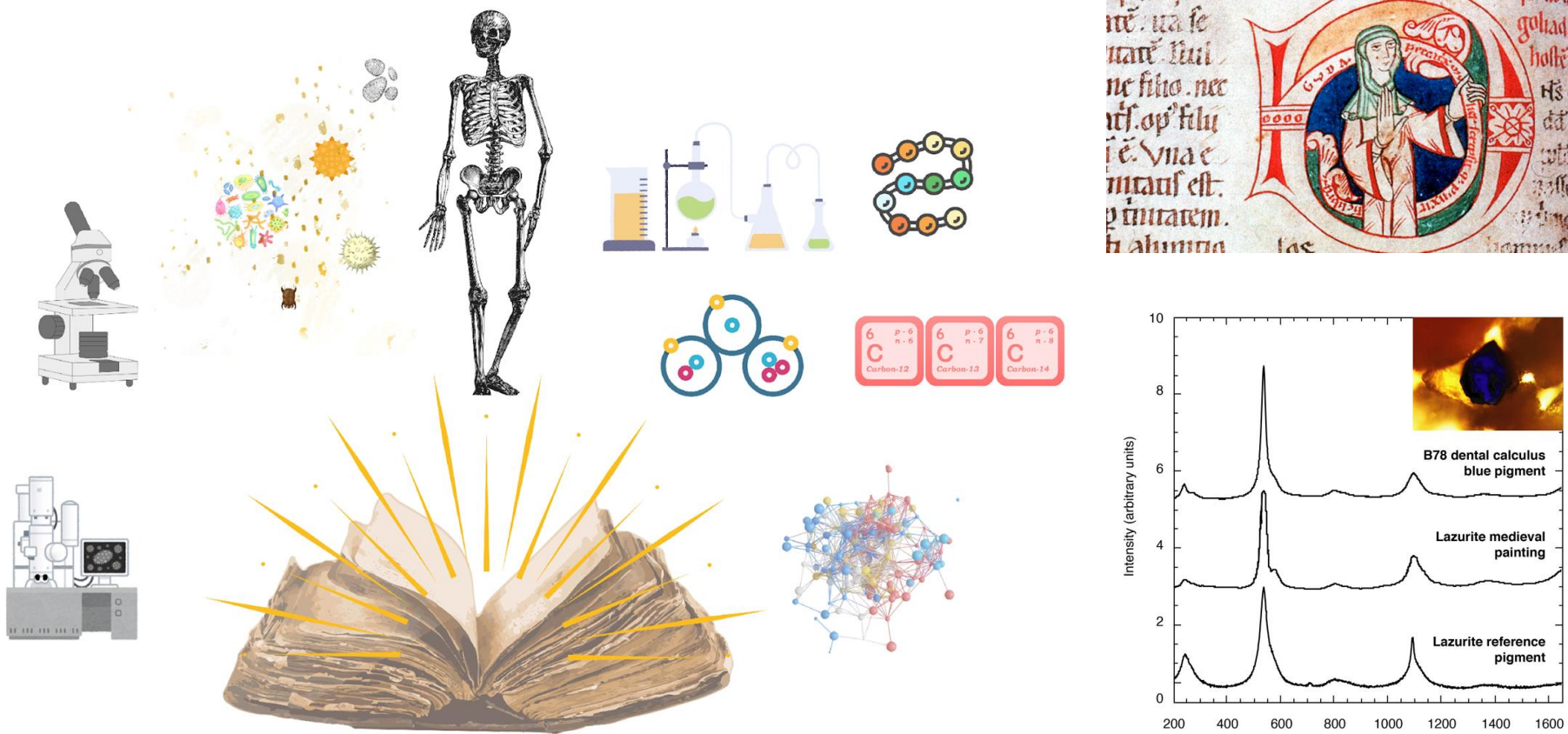### EU Frameworks for gender-responsive evaluations
A legal and policy base for the assessment of gender impacts across four frameworks

# Woman or Master?
## *Challenging gender stereotypes through the combined strengths of Archaeology, History and Science*


UCD School of Archaeology
Scoil na Seandálaíochta UCD


Ad Astra Fellows

**Dr Anita Radini**



B78 dental calculus blue pigment

Lazurite medieval painting

Lazurite reference pigment


Debi Evans
The Secret Adventures of Rolo
Book 5
'Phoenix and the Dragonling'

https://www.teamnun.org/

https://www.science.org/doi/full/10.1126/sciadv.aau7126