

STRUCTURAL CHANGE

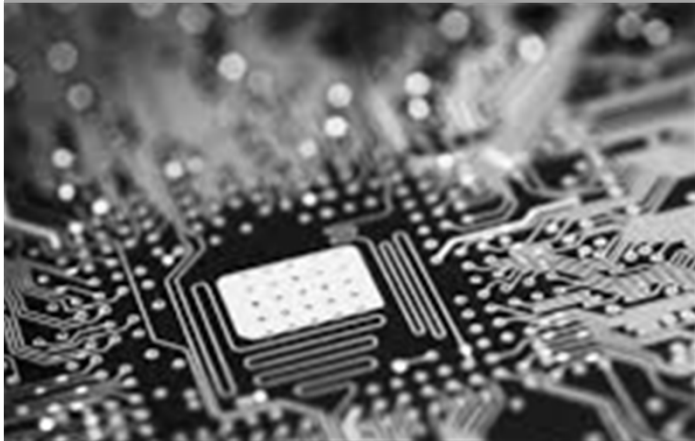
GENDER IN RESEARCH

GENDER AND CITIES

GENDER AND TRANSPORT

GENDER AND CLIMATE

INNOVATION IN INDUSTRY



Mitigating climate change through gender sensitivity

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InGOS International Conference
Non CO₂ Greenhouse Gases

Presentation structure

- From UNCED to UNFCCC and the SDGs
- Why gender is important...
- ...and why it has been neglected
- EU/Horizon 2020 commitment
- role of COST Action 'genderSTE'
- Implications of gender sensitising CC research

From UNCED to UNFCCC

- Chapter 24 of Agenda 21, agreed at the UN Conference on Environment & Development, 1992, requires the active involvement of women in economic and political decision making and will be critical to the successful implementation of Agenda 21.

From UNCED to UNFCCC

However...

- 2001: COP7 Marrakesh
- 2012: COP18 Doha
- 2014: COP20 Lima
- 2015: COP21 Paris?



From UNCED to UNFCCC



SUSTAINABLE DEVELOPMENT GOALS



SDG5:

Achieve gender equality and empower all women and girls:

- 5.1 End all forms of discrimination against all women and girls everywhere
- 5.2 Eliminate all forms of violence against all women and girls
- 5.3 Eliminate all harmful practices, eg child, early and forced marriage and FGM
- 5.4 Recognize and value unpaid care and domestic work**
- 5.5 Women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life**
- 5.6 Universal access to sexual and reproductive health and reproductive rights
- 5.A Undertake reforms to give women equal rights to resources**
- 5.B Enabling technology, in particular ICT, to promote the empowerment of women
- 5.C Policies and legislation to promote gender equality and female empowerment**

gender imbalance in climate change related sectors

- Decision makers
 - <15% elected representatives
 - <10% elected leaders
- Of the 70 most developed countries worldwide, 18 reduced/stabilised their overall carbon emissions 1990-2004. 14 of these 18 had a higher than average % of female elected representatives
 - Connection worth exploring?



SUSTAINABLE DEVELOPMENT GOALS



SDG13:

Take urgent action to combat climate change and its impacts

- 1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
 - 2 Integrate CC measures into national policies, strategies and planning
 - 3 Improve education, awareness-raising and human and institutional capacity on CC mitigation, adaptation, impact reduction and early warning
- a Implement financial commitments undertaken by developed countries
- B Raise capacity for effective CC-related planning and management in LDCs and SIDS, including for women, youth, local & marginalized communities.

Why gender is important...

- **Human rights, justice, fairness**
 - Social and economic roles are gendered
 - To capture diverse experiences
 - To respect equal value of roles
 - To challenge gender stereotyping
- **Practical:**
 - Women who are better educated and economically independent are more likely to be able to manage their own fertility
 - Women tend to take less risk prone decisions
 - Diverse decision making bodies tend to be more effective

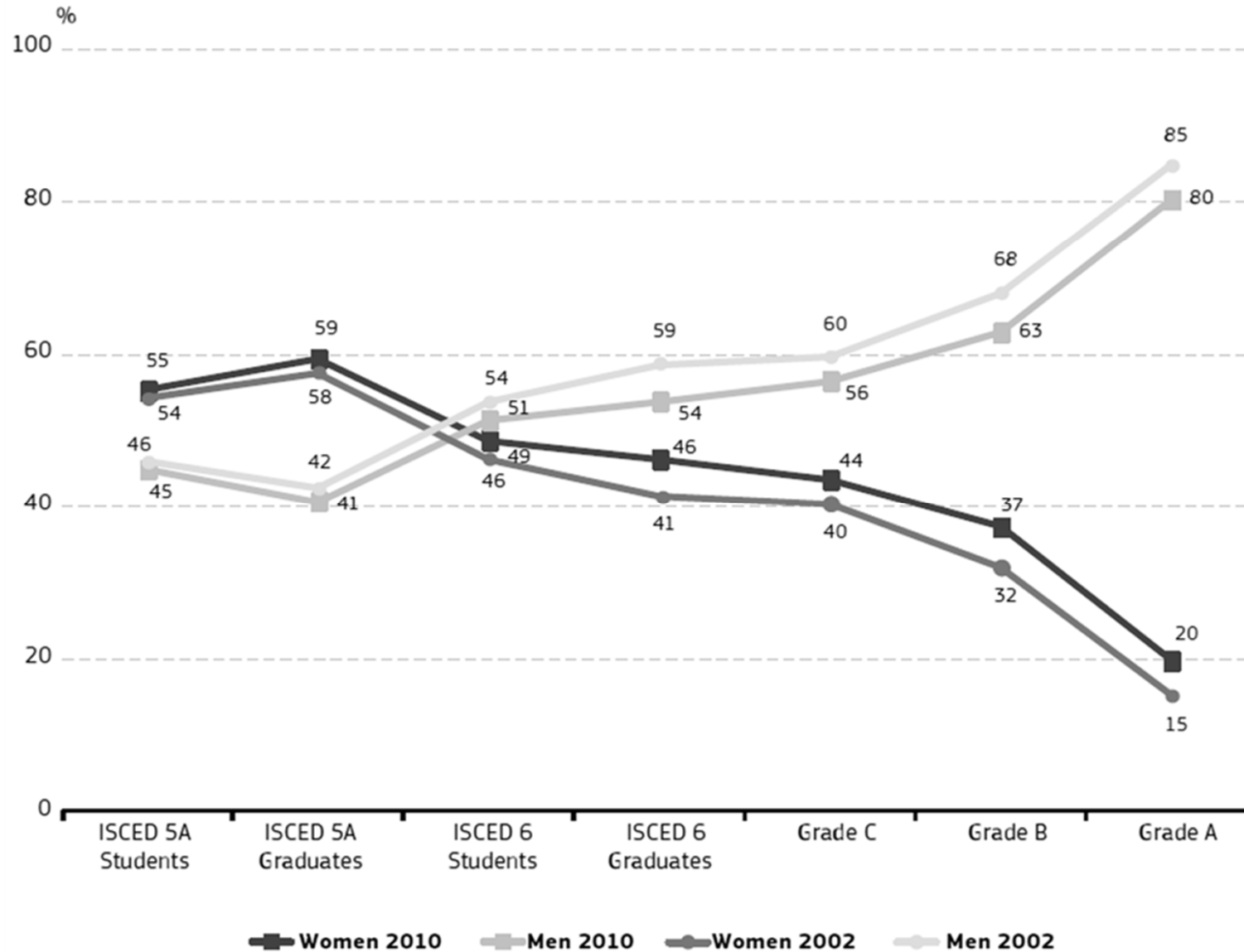
...and why is has been neglected

- SET in schools and universities male dominated

	Male (all)	Female (all)	Male (S&E)	Female S&E)
PhDs	51	49	62	38
PhD Grads	54	46	65	35
Grade C	56	44	67	33
Grade B	63	37	77	23
Grade A	80	20	89	11

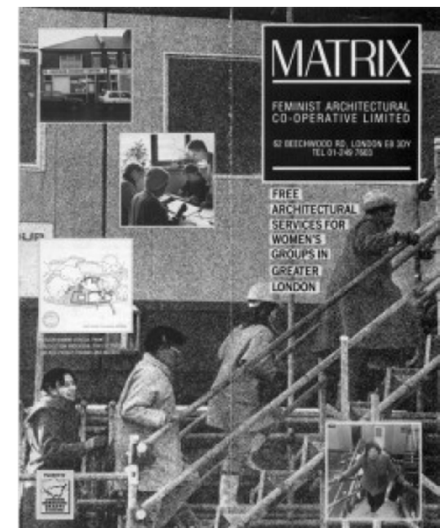
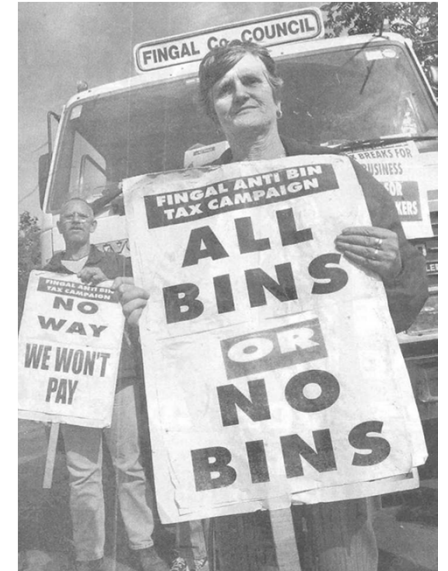


Figure 3.1: Proportions of men and women in a typical academic career, students and academic staff, EU-27, 2002–2010



gender imbalance in climate change related sectors in UK

- Energy: 27% employees women; 13% management staff
- Waste:
 - UK: 18% of employees are women
 - 72% of all administrative and secretarial staff
 - 15% of all professionals
- Transport:
 - ~30% employees women, earning 21%pts less/men
- Engineering:
 - Women 9% (UK); 15% (Germany); 25% (Sweden)
- Architecture:
 - 22% of practicing architects women (40% of students)



Implications of imbalance

- Are the right questions being asked?
- Are research subjects gendered?
 - Some evidence that – like for like – men consume marginally more energy than women, but significantly more transport related energy (Raty *et al*, 2009)
 - Car safety tested mostly on male sized dummies, therefore ‘out-of-position’ drivers (most women, and some shorter men) more vulnerable to accidents (Schiebinger, 2014)
 - EIGE, 2011: ‘alarming’ that ‘there are no [EU] member states who have carried out a thorough gender analysis for [energy and transport] policies and measures...’
- Sub-optimal research where gender differences not considered

EU/Horizon 2020 commitment

- Requires that *the gender dimension shall be adequately integrated in research and innovation content in strategies, programmes and projects and followed through **at all stages of the research cycle***
- Work Programme 2014/15:
 - The gender dimension is explicitly integrated into several topics across all the sections of the WP
 - 99 out of 610 have explicitly integrated the gender dimension, 60 with a ‘major’ component, 39 with a ‘minor’
 - In ‘climate action, environment, resource efficiency and raw material’ 7 of 9 topics said to have a ‘major’ component
 - A topic is considered gender relevant when it and/or its findings affect individuals or groups of persons....

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GENDER IN RESEARCH

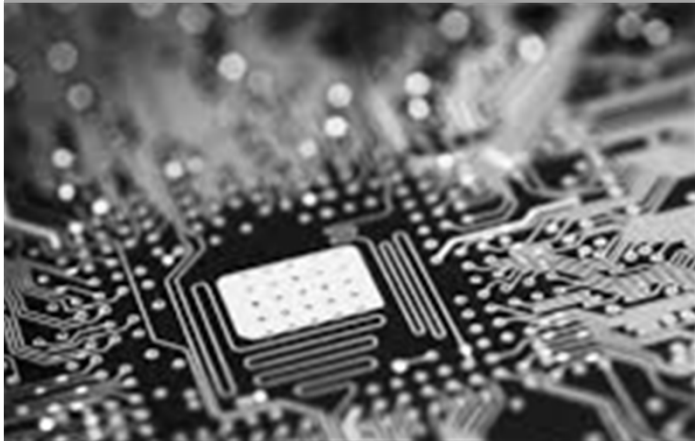
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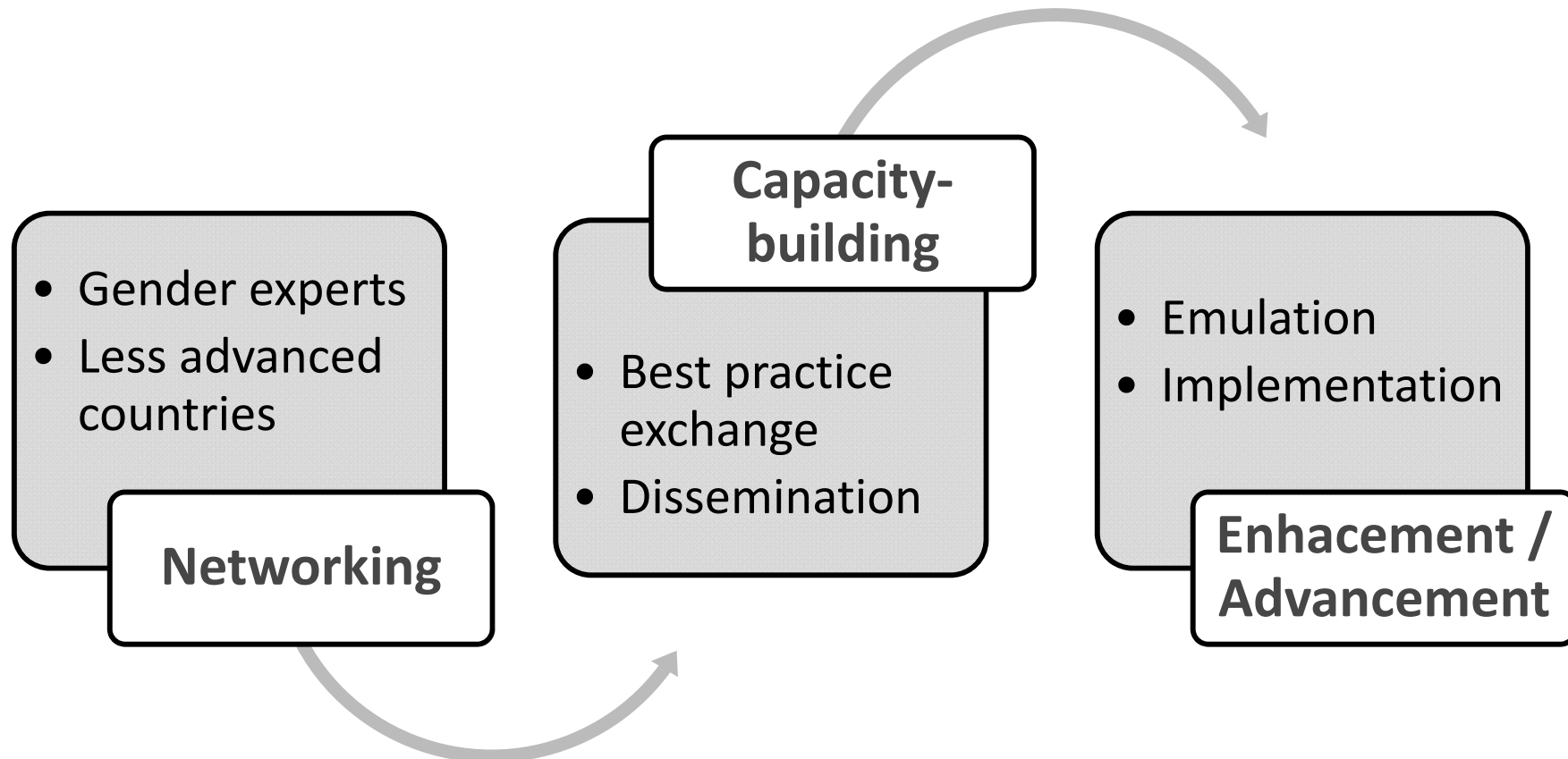
INNOVATION IN INDUSTRY

**Gender,
Science, Technology
and Environment.
A COST policy-driven network**





COST and *genderSTE* objectives & method



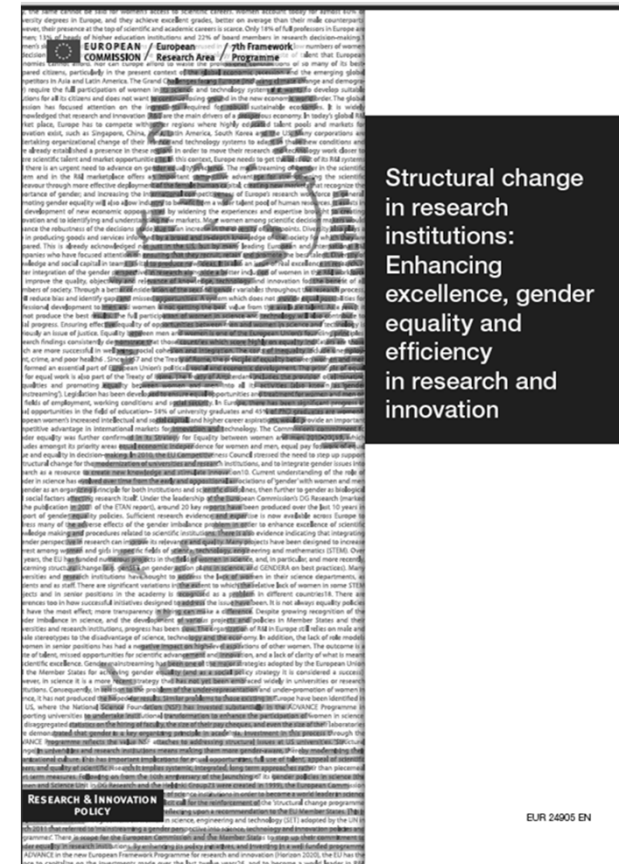


genderSTE Working Group 1

Science, Technology, Environment

Structural Change Report, EC 2011

1. Making decision-making transparent.
2. Removing unconscious bias from institutional practices.
3. Promoting excellence through diversity.
4. Improving research by integrating a gender perspective.
5. Modernising human resources management and the working environment.





COST is supported by the EU RTD Framework Programme



genderSTE is a policy-driven targeted network funded by COST (European Cooperation in Science and Technology)



genderSTE Working Group 2

Science, Technology, Environment

Gendered Innovations web site: <http://genderedinnovations.stanford.edu/>

The screenshot shows the 'Gendered Innovations' website interface. The header includes the site title and navigation links. The main content area features a case study titled 'Heart Disease in Women: Formulating Research Questions'. The page is divided into sections for 'ABSTRACT' and 'FULL CASE STUDY'. The abstract section includes a sub-section 'The Challenge' and 'Method: Formulating Research Questions'. A sidebar on the left contains navigation menus for 'What is Gendered Innovations?', 'SEX & GENDER ANALYSIS', 'CASE STUDIES', 'POLICY', and 'INSTITUTIONAL TRANSFORMATION'. Social media sharing options for Print, Tweet, and Facebook are also visible.

Gendered Innovations:

- Add value to research and engineering by ensuring **excellence** and quality in outcomes and enhancing sustainability.
- Add value to society by making research more **responsive** to social needs.
- Add value to business by **developing** new ideas, patents, and technology.



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genderSTE
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Working Group 3

Gender in environment-related areas of H2020: Mapping the state of the art and proposing future research:

- Cities
- Transport
- Energy and Climate Change
 - Establishing **expert advisors**, scope of research, and gaps;
 - Hosting Short Term Scientific Missions
 - Disseminate research
 - Advising H2020
 - Gender awareness in research training





Implications for Horizon 2020

addressing member states, institutions and other stakeholders (i)

- Are the programme design committees gender balanced? If they were, would the research programme look different?
- How does H2020 link to other European programmes, eg commitment to 40% board members of publicly listed companies by 2020. What about universities?
- Are working practices of EU research commensurate with the realities of many women's (and some men's) paid work/family responsibilities balance? (eg minimise travel; willingness to consider PT and job share appointments)
- Work-life balance for those with caring responsibilities who wish to be PIs is very difficult. How to mitigate?
- How is H2020 improving understanding of gender inequalities and gender sensitivities amongst all scientists?
- How to overcome the 'so what?' response from (mostly male) scientists/researchers regarding gender?



COST is supported by the EU RTD Framework Programme



genderSTE is a policy-driven targeted network funded by COST (European Cooperation in Science and Technology)

genderSTE
Science, Technology, Environment

Thank you

Online at: www.genderSTE.eu

The screenshot shows the homepage of the genderSTE website. At the top left is the logo 'genderSTE Science, Technology, Environment'. To the right is a navigation menu with links: Structural change, Gender in research, Cities, Transport, Climate change, Innovation in industry, Activities, and Login. Below the navigation is a main content area with a background image of a circuit board. On the left side of this area are three vertical sections: 'What we do Add a story >>', 'Who we are', and 'Why we do it Reasons for action >>'. On the right side is a dropdown menu for 'Structural change' with sub-links: 'Why Institutional change', 'Our objectives', 'Sources and links', and 'Activities'. Below this is a section titled 'what is genderSTE' with a paragraph of text: 'genderSTE is a network of policy makers and experts committed to promoting a fairer representation of women and better integration of gender dimensions in research and innovation. We disseminate state of the art know-how on structural change of institutions and on methods for gendered analysis in research. We aim at advancing the state of knowledge in the specific fields of cities, transport, energy and climate change. Our members represent government bodies, research organizations, universities, non-profits, and SMEs from over 30 countries, in Europe and beyond.' Below the main content is an 'Events' section with a timeline for April. The events listed are: 3 Apr 7:00pm 'Dan Ariely: The Problem of Self-Control', 8 Apr 6:00pm 'Office Hours: Ask Your Questions Live!', 15 Apr 6:00pm 'Office Hours: Ask Your Questions Live!', 17 Apr 7:00pm 'Adrian Drake: Engineering, Space & LEGO', and 22 Apr 6:00pm 'Office Hours: Ask Your Questions Live!'. At the bottom of the page is a footer with logos for various partners: 'SECRETARÍA DE ESTADO DE INVESTIGACIONES CIENTÍFICAS, INNOVACIÓN E INICIATIVAS EMPRENDEADORAS', 'um'c', 'cost EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY', 'POLITÉCNICA Universidad de Sevilla', 'CAMPUS DE EXCELENCIA INTERNACIONAL', and the EU flag with the text 'COST is supported by the EU RTD Framework Programme'.