

# Naiset tieteissä: numeroita

Ovatko naiset vähemmistönä luonnontieteissä ja insinööritieteissä? Seuraavilla sivuilla on esitetty muutamia graafeja ja taulukoita jotka tarjoavat vastauksen tähän kysymykseen. Mutta mitä nämä statistiikat todella kertovat? Millaisia johtopäätöksiä voit vetää näistä ja mitä ylitulkintoja aineistosta voitaisiin tehdä?

Lue otsikot ja kuvaukset ennen keskustelua tilastoista. Varmistaaksesi että olet ymmärtänyt graafin tai taulukon, kirjoita vähintään yksi tulkinta lauseksi. Esimerkiksi lause jonka voisit nostaa graafista 1) voisi olla:

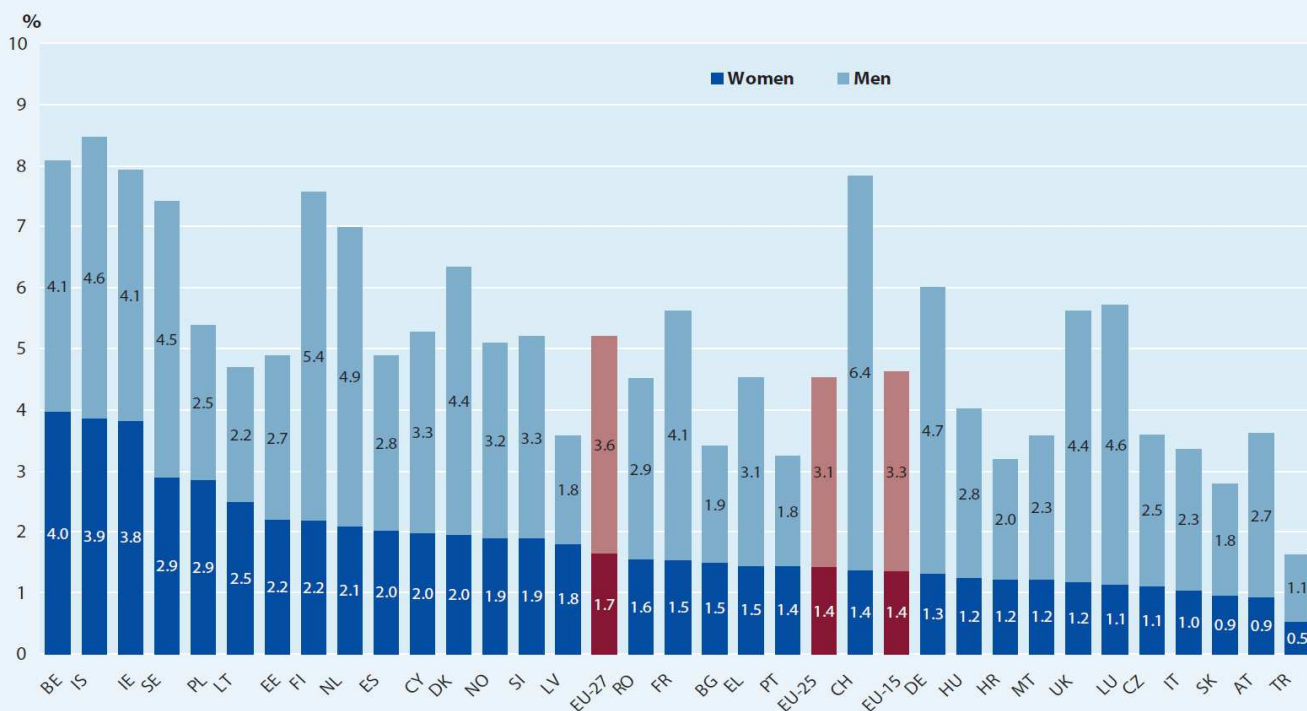
“Vuonna 2007, 1.4 % kaikista EU-25-alueella olevista työväestöön kuuluvista naisista olivat tieteentekijöitä tai insinöörejä.”



**Lähde: She figures 2009**

Julkaisija: European Commission, DG Science and Society, sivu 27

**Figure 1.3:** Proportion of scientists and engineers in the total labour force by sex, 2007



Source: Labour Force Survey, HRST statistics (Eurostat)

Exceptions to the reference year: HR, IS: 2006

Data unavailable: IL

Data estimated: EU-27 (by Eurostat), EU-25, EU-15 (by DG Research)

Confidential data: DK (women), EE (men), LU (women), HR (women)

The labour force is defined as the sum of employed and unemployed persons

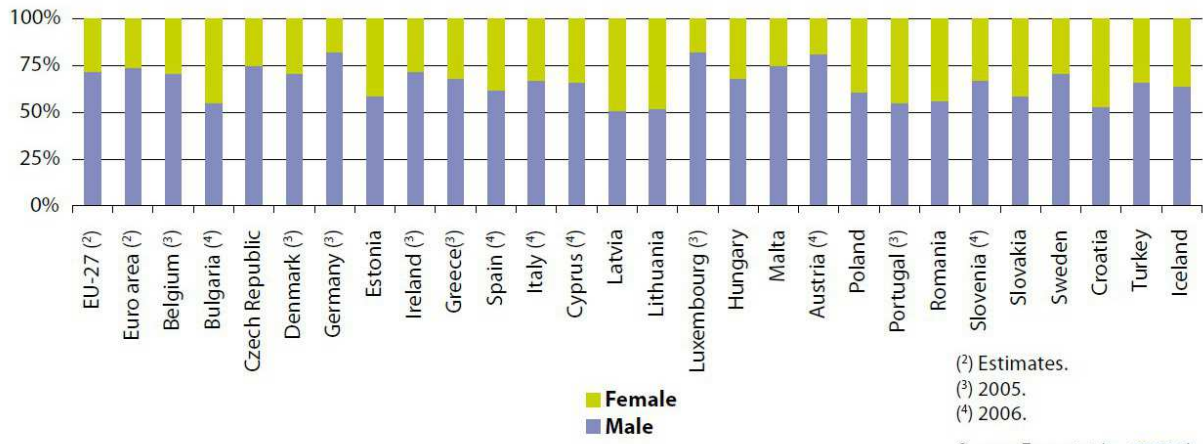
AT	Itävalta	EL	Kreikka	IT	Italia	RO	Romania
BE	Belgia	ES	Espanja	LT	Liettua	SE	Ruotsi
BG	Bulgaria	FI	Suomi	LU	Luxemburg	SI	Slovenia
CY	Kypros	FR	Ranska	LV	Latvia	SK	Slovakia
CZ	Tsekin tasavalta	HR	Kroatia	MT	Malta	TR	Turkki
DE	Saksa	HU	Unkari	NL	Alankomaat	UK	Iso-Britannia
DK	Tanska	IE	Irlanti	PL	Puola		
EE	Viro	IS	Islanti	PT	Portugali		



**Lähde: Eurostat Yearbook 2010**

Julkaisija: European Commission, Eurostat, sivu 596

**Figure 12.2: Gender breakdown of researchers in all institutional sectors, 2007 <sup>(1)</sup>**  
(% of total researchers, based on FTEs)



<sup>(2)</sup> Estimates.

<sup>(3)</sup> 2005.

<sup>(4)</sup> 2006.

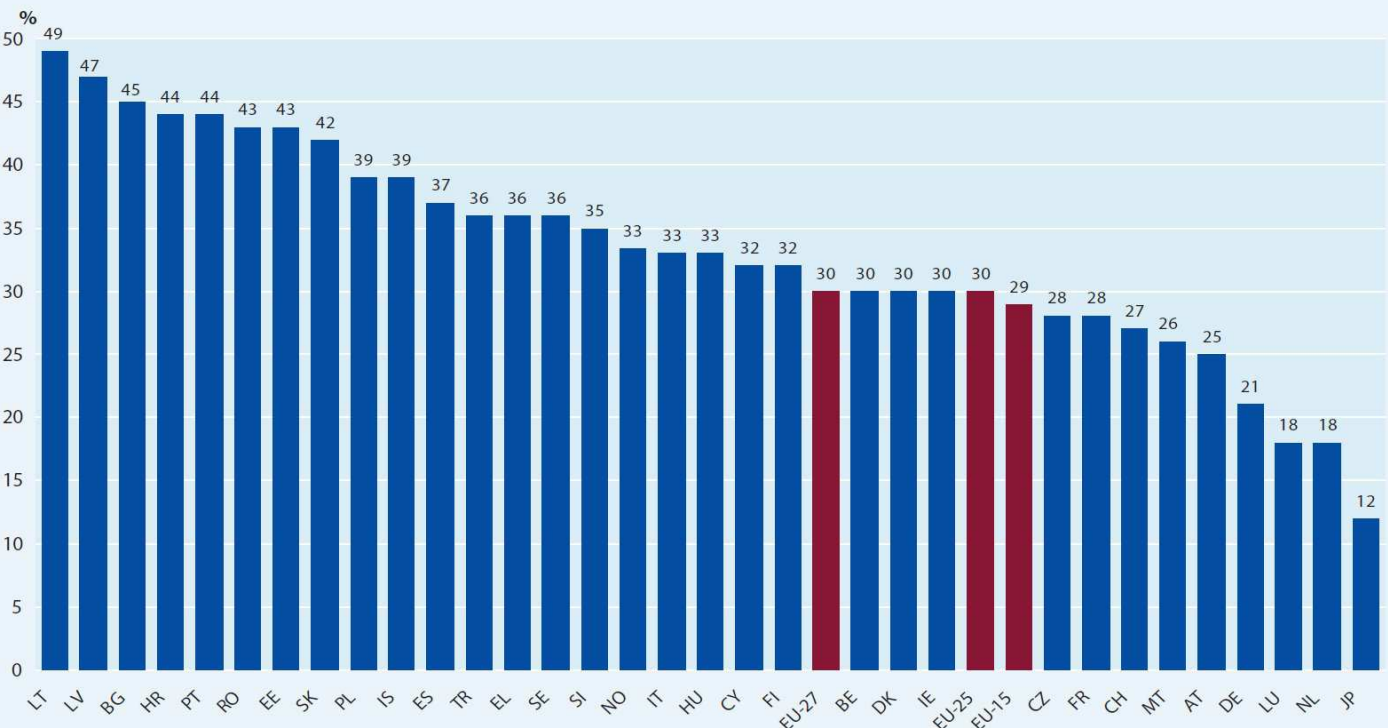
Source: Eurostat (tsc00006)



**Lähde: "She figures 2009"**

Julkaisija: European Commission, DG Science and Society, sivu 28

**Figure 1.4: Proportion of female researchers, 2006**



Source: S&T statistics (Eurostat), Norwegian Institute for Studies in Innovation, Research and Education

Exceptions to the reference year: CZ, EE, SK, NO: 2007; BE, DK, DE, IE, EL, LU, NL, PT, SE, IS, JP: 2005; CH: 2004

Data unavailable: UK, IL

Provisional data: NL

Data estimated: EU-27, EU-15 (by Eurostat), EU-25 (by DG Research), EE



**Lähde: Eurostat Yearbook 2010**

Julkaisija: European Commission, Eurostat, sivu 597

**Table 12.5: Science and technology graduates**  
(tertiary graduates in science and technology per 1 000 persons aged 20-29 years)

	Total		Male		Female	
	2002	2007	2002	2007	2002	2007
<b>EU-27</b>	11.3	13.4	15.4	17.9	7.1	8.7
Belgium	10.5	14.0	16.1	15.3	7.5	6.9
Bulgaria	11.7	8.4	13.9	14.2	4.8	5.1
Czech Republic	6.0	12.0	9.7	12.2	6.5	6.1
Denmark	11.7	16.4	:	9.1	:	7.8
Germany	8.1	11.4	6.8	9.2	2.8	3.5
Estonia	8.0	13.3	5.6	5.8	2.1	2.7
Ireland	20.5	18.7	15.7	20.8	7.5	11.9
Greece	:	8.5	7.3	14.0	4.4	9.8
Spain	11.9	11.2	4.5	8.5	1.7	5.5
France (!)	20.1	20.5	13.8	10.0	9.5	6.8
Italy	7.4	8.2	10.1	15.1	5.3	8.6
Cyprus	3.8	4.2	27.2	23.8	13.3	11.0
Latvia	8.1	9.2	10.6	16.7	5.9	11.1
Lithuania	14.6	18.1	12.2	15.9	3.8	6.9
Luxembourg	:	:	15.7	20.4	5.2	7.6
Hungary	4.8	6.4	17.0	17.8	9.3	9.2
Malta	3.1	7.1	24.6	26.1	9.9	11.1
Netherlands	6.6	8.9	8.6	23.3	6.1	12.8
Austria	7.9	11.0	10.8	14.4	2.4	3.4
Poland	8.3	13.9	28.1	29.3	12.0	11.6
Portugal	7.4	18.1	9.6	16.0	6.4	10.4
Romania	5.8	11.9	18.3	24.0	10.9	12.0
Slovenia	9.5	9.8	12.4	16.6	3.4	5.3
Slovakia	7.8	11.9	:	:	:	:
Finland	17.4	18.8	8.3	16.6	3.5	7.2
Sweden	13.3	13.6	9.4	10.2	5.4	6.2
United Kingdom	20.3	17.5	26.4	25.5	14.6	11.8
Croatia	:	6.8	:	8.6	:	4.8
FYR of Macedonia	3.1	4.6	3.4	5.4	2.8	3.7
Turkey	5.0	6.7	6.7	9.1	3.1	4.3
Iceland	9.2	10.2	12.1	13.1	6.2	7.2
Liechtenstein	:	10.5	:	14.4	:	6.5
Norway	7.7	9.3	11.1	13.1	4.2	5.4
Switzerland	15.1	17.9	25.5	29.4	4.6	6.4
Japan	13.0	14.4	21.9	24.2	3.8	4.2
United States	10.0	10.1	13.3	13.5	6.6	6.4

(!) 2001 instead of 2002.

Source: Eurostat (tsiir050)


**Lähde: Eurostat Yearbook 2010**

Julkaisija: European Commission, Eurostat, sivu 598

**Table 12.6: PhD students (ISCED level 6), 2007**  
 (% of total PhD students)

	Total number of PhD students (1 000)	Male	Female	Social sciences, business & law	Teacher training & educ.; humanities & arts	Science, maths & computing; engineering, manuf. & construction	Agriculture & veterinary	Health & welfare; services	Others (!)
<b>EU-27</b>	525.8	52.2	47.8	21.8	21.0	36.4	2.9	14.5	2.0
Belgium	7.4	57.3	42.7	19.3	13.7	45.0	7.6	14.5	0.0
Bulgaria	4.8	50.4	49.6	19.5	22.3	41.8	2.9	13.5	0.0
Czech Republic	23.7	60.9	39.1	16.6	15.6	46.2	4.3	15.5	1.9
Denmark	4.8	53.6	46.4	12.6	14.9	34.7	8.7	29.1	0.0
Germany	:	:	:	:	:	:	:	:	:
Estonia	2.1	45.1	54.9	22.5	21.2	42.7	5.3	8.3	0.0
Ireland	5.6	53.0	47.0	17.0	23.2	47.3	1.7	8.9	1.8
Greece	21.7	57.5	42.5	14.3	24.7	34.3	4.4	22.4	0.0
Spain	72.7	48.2	51.8	22.8	21.7	21.3	2.1	19.9	12.3
France	71.6	53.5	46.5	29.3	25.6	41.7	0.1	3.3	0.0
Italy	40.1	47.8	52.2	19.7	14.9	42.5	6.1	16.4	0.5
Cyprus	0.4	52.4	47.6	16.0	32.2	51.9	0.0	0.0	0.0
Latvia	1.8	39.0	61.0	34.8	24.0	28.2	1.9	11.1	0.0
Lithuania	2.9	42.2	57.8	31.6	13.6	39.8	4.8	10.2	0.0
Luxembourg	:	:	:	:	:	:	:	:	:
Hungary	7.8	51.4	48.6	21.7	25.6	29.3	6.3	17.1	0.0
Malta	0.1	65.3	34.7	18.1	34.7	33.3	0.0	13.9	0.0
Netherlands	7.5	58.0	42.0	:	:	:	:	:	:
Austria	18.2	54.2	45.8	36.2	22.4	31.1	3.2	4.6	2.5
Poland	31.8	50.0	50.0	20.8	31.2	33.0	5.3	9.7	0.0
Portugal	18.7	44.2	55.8	29.6	20.8	31.4	1.6	16.6	0.0
Romania	27.7	54.4	45.6	17.2	15.4	43.0	7.0	17.4	0.0
Slovenia	1.3	52.2	47.8	13.3	17.1	49.2	3.0	17.4	0.0
Slovakia	11.1	55.1	44.9	20.9	18.1	37.1	3.2	20.8	:
Finland	21.9	47.9	52.1	22.6	24.2	39.8	2.1	11.4	0.0
Sweden	20.8	50.5	49.5	12.1	12.2	41.6	1.9	32.2	0.0
United Kingdom	99.4	54.8	45.2	21.1	21.6	40.3	1.3	15.3	0.3
Croatia	1.8	54.6	45.4	3.6	17.0	55.1	1.4	23.0	0.0
FYR of Macedonia	0.1	50.4	49.6	22.7	26.1	26.9	1.7	22.7	0.0
Turkey	33.8	59.0	41.0	23.9	22.6	34.0	7.8	11.7	0.0
Iceland	0.2	42.8	57.2	16.4	27.4	31.8	0.0	24.4	0.0
Liechtenstein	0.0	72.2	27.8	0.0	22.2	0.0	0.0	77.8	0.0
Norway	5.7	53.3	46.7	18.9	11.9	41.9	2.8	24.4	0.0
Switzerland	17.6	58.7	41.3	26.7	15.8	39.1	2.7	15.3	0.4
Japan	75.5	69.9	30.1	13.1	13.7	32.6	5.8	32.2	2.4
United States	396.2	47.9	52.1	26.9	24.4	30.2	0.8	17.7	0.0

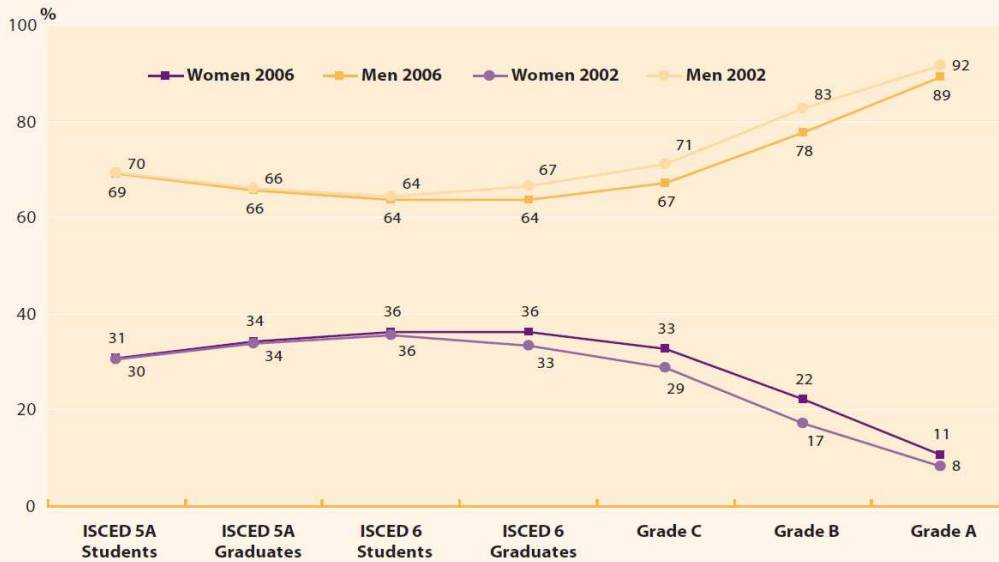
(!) Unknown or not specified.



**Lähde: She figures 2009**

Julkaisija: European Commission, DG Science and Society, sivu 74

**Figure 3.2:** Proportions of men and women in a typical academic career in science and engineering, students and academic staff, EU-27, 2002/2006



**Definition of grades:**

**A:** The single highest grade/post at which research is normally conducted.

**B:** Researchers working in positions not as senior as top position (A) but more senior than newly qualified PhD holders.

**C:** The first grade/post into which a newly qualified PhD graduate would normally be recruited.

**ISCED 5A:** Tertiary programmes to provide sufficient qualifications to enter into advanced research programmes & professions with high skills requirements.

**ISCED 6:** Tertiary programmes which lead to an advanced research qualification (PhD).

**SET fields of education** = 400 Science, maths and computing + 500 Engineering, manufacturing and construction.

**SET fields of science** = Engineering and Technology + Natural Sciences.

Source: Education Statistics (Eurostat); WiS database (DG Research)

Exceptions to the reference year (s): ISCED 6 students 2002: RO (men 2003), SI (men 2005); WiS 2006: ES (2007), MT (2004), PT (2003), SI (2007), SK (2007), FI (2007); 2002: IE (2004), FR (2000), LT (2005), NL (2003), UK (2003)

Data unavailable: ISCED 6 students 2002: DE, FR, LU, NL, SI (Women); WiS 2006: BG, EE, EL, FR, LV, LU, HU, RO, IE (Grade A); 2002: BG, EE, EL, ES, LV, LU, HU, RO, IE (Grade A)

Break in series: CZ (2005)

Provisional data: ES

Data estimated: EU-27 (by DG Research) for WiS, ISCED 6 students, SI

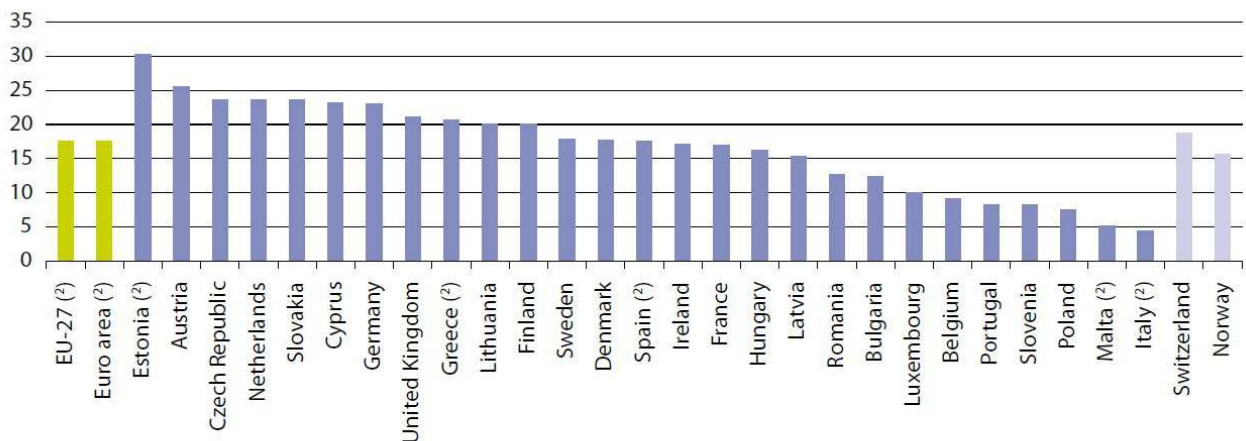


**Lähde: Eurostat Yearbook 2010**

Julkaisija: European Commission, Eurostat, page 307

**Figure 5.13:** Gender pay gap, 2007 (¹)

(% difference between average gross hourly earnings of male and female employees, as % of male gross earnings, unadjusted form)



(¹) Enterprises employing 10 or more employees; excluding agriculture, fishing, public administration, private households and extra-territorial organisations.

(²) Provisional.