Informatics education in Europe: institutions, degrees, students, positions, salaries Key Data 2008-2012

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ABOUT THIS REPORT

"**Informatics Education in Europe: Institutions, Degrees, Students, Positions, Salaries — Key Data 2008-2012**" is the first comprehensive attempt to document the state of higher education in informatics (computer science) in Europe. Based on information from representative countries, it presents a wealth of fundamental data, starting from a list of institutions awarding degrees in the field and continuing with student enrollments, degrees awarded with gender information, academic titles, as well as precise and much-needed data about academic salaries across European countries.

The picture presented here is a snapshot of the informatics situation in the period 2008-2012. It will be regularly updated and extended to continue providing the European Informatics community with a clear picture of the key academic and economic parameters defining its situation and evolution.

This survey is the latest in a set of influential reports published by Informatics Europe:

- *The Role and Relevance of Experimentation in Informatics* (2013, eds. Jan van Leeuwen and Viola Schiaffonati).
- *Informatics Doctorates in Europe — Some Facts and Figures* (2013, ed. Manfred Nagl).
- *Informatics Education in Europe: Europe Cannot Afford to Miss the Boat* (2013, joint report with ACM Europe, ed. Walter Gander).
- *Research Evaluation for Computer Science* (2008, eds. Bertrand Meyer, Christine Choppy, Jan van Leeuwen and Jørgen Staunstrup).
- *Student Enrollment and Image of the Informatics Discipline* (2007, eds. Jan van Leeuwen and Letizia Tanca).

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Table of Contents

Executive Summary

Informatics, the science behind IT, may be the most important key to the future economic success in Europe. Crucial to that success is the availability of superb informatics education throughout Europe.

In this report, the first to attempt a general study of the state of the art in European informatics education, the emphasis is on raw facts and figures rather than deep analysis; it provides the material for such analyses as others may wish to perform. Still, a number of salient points emerge.

- The field in Europe suffers from a **serious branding problem**. Even after an approximate translation to English, a good dozen terms are used to denote what is fundamentally the same discipline.

- The quantity and quality of available data varies considerably from country to country. In the interest of reliability, this report has mostly used data from countries where a solid and reasonably complete picture could be drawn from official sources. Even when available, the data does not always[1] allow direct comparisons, since the methods of collection vary significantly from country to country. It is important for the field to ensure that **consistent, solid informatics education data becomes available in all European countries**.

- Informatics is a well-developed academic field, with **hundreds of accredited institutions** training huge numbers of students for bachelor, master and PhD degrees.

- Extrapolating from precise data in specific countries, limited to universities, we come to a rough estimate that **over half a million students are enrolled in informatics bachelor's programs** across Europe.

- The corresponding **estimated figure for master's programs is close to 200,000**.

- The **status of faculty** varies considerably across Europe.

- **The salaries vary even more**. Our detailed study of the exact salaries of faculty in four of the most advanced economies in Europe (Germany, Italy, Netherlands, Switzerland) shows **the ratio of maximum to minimum is about a factor of three**. For example a full professor at the top level receives, in some countries, the salary of a high-level industry executive, whereas in others the compensation is more comparable to that of a junior engineer in the IT industry.

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[1] Here and in the rest of this report we follow the IT industry's practice of using "data" as a singular noun.

1 Introduction

The quality of higher education in informatics, the science behind information technology (IT) [2], is critical to the future of Europe. Guaranteeing and improving this quality is of paramount concern to the informatics community; it is part of the mandate of Informatics Europe, the association of university departments and industrial research laboratories in the field, to help achieve this goal.

Any coherent attempt at improvement must begin with a clear understanding of the current situation, supported by credible qualitative and quantitative data. Examples of fundamental questions that can only be answered seriously by relying on such data include:

- What exactly makes up an informatics education program, and under what other names can such programs be found?
- What degrees are available, and how do they compare across countries?
- How many students are studying for such degrees?
- How have these student enrollment numbers evolved in response to the ups and downs of the economy and of the popular perceptions of information technology, for example as a result of concerns about outsourcing?
- Are there significant differences in the state of education in different European countries? Differences with other industrialized countries such as the USA and Australia?
- What are typical salaries in informatics for PhD students, postdoctoral researchers, assistant professors, full professors and other ranks for educators and researchers?

The example of the Computing Research Association's surveys in the USA — such as the annual "Taulbee survey" on informatics PhDs — shows that providing well-supported data can play a crucial role in the development of the community and the discipline.

Unfortunately, there has not until now been any concerted effort at a Europe-wide collection of data that would permit answering such questions on a trans-national basis. Some national repositories of data exist, but they do not readily give a general European perspective: they can be hard to find; they are at different levels of advancement, some detailed, others partial; they do not necessarily measure exactly the same things, sometimes with subtle differences; they are based on different methodologies; and, naturally enough in light of Europe's diversity, they use different languages.

The present report is the result of the first concerted effort to provide the European informatics community with solid information on the state of higher education. It concentrates on the following key indicators:

- Names of the "informatics" subject in various countries (section 3).
- List of institutions teaching informatics (section 4)
- Student enrollment and gender information (section 5).
- Degrees awarded and gender information (section 6).
- Academic positions (section 7).
- Academic salaries (section 8, with details in appendix B).

Section 2 describes the sources of data used for the preparation of the report, with the details in appendix A. Section 9 concludes with perspectives for expansion of this work in the coming years.

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[2] Another term for informatics, prevalent in the USA, is "computer science". For other alternative names, see section 3.

2 Sources of data

2.1 Methodology

There is no European-wide source for data relative to the topics of this report. It consequently relies on national data repositories. Not all countries, however, have equally accessible and credible repositories.

One possible choice would have been to attempt to cover all European countries, using whatever data one can find in each case. The clear disadvantage of this approach is that the quality of the result may be determined by the quality of the weakest source. Instead, the choice was made to **limit the study to countries for which reliable data is available**. To complement this approach, some extrapolations are made to the Europe-wide situation, using simple indicators; these are only extrapolations, and should be taken with caution.

The methodologies for data collection, analysis and reporting (documented on the web site of the organizations consulted) vary, adding to the general difficulty of cross-country comparisons.

2.2 Data sources for institution lists, degrees and student enrollments

For institutions, student enrollments and degrees (sections 3 to 6), the report concentrates on five countries for which reliable data is available from official organizations:

- Denmark: StatBank Denmark (www.statbank.dk)
- Germany: Statistisches Bundesamt (www.destatis.de)
- Italy: Ufficio di Statistica - Ministero dell'Instruzione, dell'Università e della Ricerca (statistica.miur.it)
- Netherlands: Centraal Bureau voor de Statistiek (statline.cbs.nl)
- Switzerland: Bundesamt für Statistik (www.bfs.admin.ch)
- UK: Higher Education Statistics Agency (www.hesa.ac.uk)

These sources of data are public-domain except in the UK case, where HESA sells its reports.

For the list of institutions, several sources were consulted in each country, including references DK1, GE1-GE3, IT1, NE1, SW1-SW3, UK1-UK3 and university web sites.

The university system of these countries (and others) varies considerably. For consistency, this report only includes numbers from traditional universities and **excludes "universities of applied sciences"**: Fachhochschulen (Germany and Switzerland)[3], Hogescholen (Netherlands), Professionshøjskolerne (Denmark). This omission was made for consistency, but has an important downward effect on the results since a significant proportion of informatics students (the majority in the Netherlands and Switzerland, about half in Germany) study in such institutions. In addition, it **skews comparisons with the UK**, where "polytechnics", formerly the equivalent of universities of applied sciences, no longer exist as a separate category, having over the past three decades been either turned into universities or incorporated into existing universities.

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[3] For discussions of institutions, programs and degrees in Switzerland, we rely on English terminology when in common use, or otherwise on German terminology. French and Italian versions of these terms are used in the corresponding regions.

2.3 Data sources for salaries

For salaries (section 8), reported at the level of PhD candidate, postdoctoral researcher and several Professor ranks, the present report is based on data from France, Germany, Italy, The Netherlands and Switzerland, where information on the base gross salaries of academics is publicly available and reported by higher education and research ministries, academics associations, unions, or directly by the universities.

2.4 A general warning

This report has chosen, as noted, precision and exactness over generality. We have limited ourselves to countries and parameters for which reliable official data was available[4]. We have high confidence in the quality of the results presented here, and ask the reader to be wary of hasty reactions if some results do not immediately seem believable. Even if you think *you* know the situation in your country inside out, and a particular figure does not "look right", please remember the following observations:

- Do not jump to conclusions after reading the results in a table without consulting the notes that follow it. This comment is particularly important for the salary tables of section 8, since salary conditions vary considerably across countries. As an example, Italian professor salaries are listed as "monthly" for comparison with other countries, but the actual monthly paycheck is lower since Italian professors receive their yearly salary in 13 paychecks. Not being aware of this convention might wrongly suggest that the monthly figures are wrong.
- UK student numbers are over-rated in comparison to those of other countries as a result of the integration of polytechnics in universities, mentioned above (2.2).
- All numerical information comes from official governmental sources[5]. In some cases colleagues told us that they had doubts about some of the resulting figures. Our view has been that, whatever their possible limitations, we were better off trusting government statistical offices than relying on private sources.

Genuine errors may of course have crept in, and we will be grateful for corrections.

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[4] The two exceptions, clearly marked as such, are the rough extrapolations in sections 5.4 and 6.4.
[5] Here too exceptions are marked clearly, for example with the mention "*X*, personal communication".

3 Names of subjects

As noted in section 3, informatics is known under different names in different European languages and countries, and in English as well. Table 1 lists the subject names that were used to identify informatics programs in the countries selected for the survey of institutions in section 4.

When a clear translation of foreign terms into English exists, it is given in parentheses. Not included are some programs with informatics content taught in non-informatics curricula, for example in Electrical Engineering in universities where this discipline is separated from Informatics. Note that we used the term "Informatics" as a translation of Informatik/Informatica/Informatique although some departments in Germany, Switzerland and the Netherlands translate it into "Computer Science" in the English versions of their web sites.

Table 1. Names of informatics subject	
Denmark	Datalogi-IT *(Computer Science) (Information Technology)*
Germany	Bioinformatik (*Bionformatics*), Computer- und Kommunikationstechniken (*Computer and Communications Engineering*), Informatik (*Informatics*), Ingenieurinformatik/Technische Informatik/Informationstechnik (*Computer Engineering*), Medieninformatik (*Media Informatics*), Medizinische Informatik (*Medical Informatics*), Wirtschaftsinformatik (*Business Informatics or Information Systems*)
Italy	Bioinformatica (*Bioinformatics*), Comunicazione Digitale (*Digital Communication*), Comunicazione Multimediale (*Multimedia Communication*), Informatica (*Informatics*), Informatica Musicale (*Musical Informatics*) Informatica per il Management (*Management Informatics*), Ingegneria dell'Informazione (*Information Engineering*), Ingegneria Informatica (*Informatics Engineering*), Scienze e Tecnologie dell'Informazione (*Information Science and Technology*), Sicurezza Informatica (*Informatics Security*)
Netherlands	Bedrijfskundige Informatica (*Business IT & Management*), Communicatiesystemen (*Communication Systems*), Informatica Algemeen (*Informatics*), Informatica en Informatiekunde (*Information Science*), Technische Informatica (*Computer Engineering*)
Switzerland	Bioinformatik (*Bionformatics*), Computerlinguistik (*Computer Linguistics*), Geoinformatik (*Geoinformatics*), Informatik (*Informatics*), Ingenieurinformatik/Technische Informatik (Computer Engineering), Kommunikationssysteme (*Communication Systems*), Medieninformatik (*Media Informatics*), Neuroinformatik (*Neuroinformatics*), Rechnergestützte Wissenschaften (*Computational Science and Engineering*), Softwaresysteme (*Software Systems*), Wirtschaftsinformatik (*Business Informatics or Information Systems*)
UK	Artificial Intelligence, Broadly-based programs within Computer Science, Computer Science, Information Systems, Software Engineering, Others in Computing Sciences

For Switzerland the names given are the German ones; French and Italian names are used in the corresponding parts of the country.

It is clear from this table that the discipline has a branding problem in Europe. While tradition is an obstacle, converging on a single name would help convey the discipline's fundamental unity.

4 Institutions

The list of institutions in the countries selected — Denmark, Germany, Italy, Netherlands, Switzerland, UK — appears below. It only includes full universities, meaning (see 2.2) that for the UK former polytechnics are included but for the other countries the "universities of applied sciences" are not.

This list is intended to evolve into a comprehensive record of all institutions offering undergraduate and graduate studies in Informatics in all of Europe, a goal that we feel has been achieved for the listed countries, although it is of course possible that some information was missed. Institutions' names are given in the local language.

Diversity is also evident in the internal structure of universities: one finds Faculties, Schools, Sections, Institutes, Departments etc.; some of these units cover Informatics only, others combines it with Mathematics, Electronics, or Electrical Engineering.

Table 2. Informatics institutions in Denmark		
University	*Department/Faculty/School/Institute*	*Web site*
1. Aalborg Universitet	Institut for Datalogi	http://www.cs.aau.dk
2. Aarhus Universitet	Institut for Datalogi	http://cs.au.dk
3. Danmarks Tekniske Universitet	DTU Informatik	http://www.imm.dtu.dk
4. IT-Universitetet i København		http://www.itu.dk
5. Københavns Universitet	Datalogisk Institut	http://diku.dk
6. Roskilde Universitet	Institut for Kommunikation, Virksomhed og Informationsteknologier	http://www.ruc.dk/en/departments/department-of-communication-business-and-information-technologies
7. Syddansk Universitet	Institut for Matematik og Datalogi	http://sdu.dk/en/Om_SDU/Institutter_centre/Imada_matematik_og_datalogi

Table 3. Informatics institutions in Germany		
University	*Department/Faculty/School/Institute*	*Web site*
1. Bergische Universität Wuppertal	Fachbereich Elektrotechnik, Informationstechnik, Medientechnik	http://www.fbe.uni-wuppertal.de/en.html
2. Brandenburgische Technische Universität Cottbus	Institut für Informatik	http://www.informatik.tu-cottbus.de
3. Carl von Ossietzky Universität Oldenburg	Department für Informatik	http://www.informatik.uni-oldenburg.de
4. Christian-Albrechts-Universität zu Kiel	Institut für Informatik	http://www.informatik.uni-kiel.de/en/ifi
5. Eberhard-Karls-Universität Tübingen	Fachbereich Informatik	http://www.informatik.uni-tuebingen.de
6. Ernst-Moritz-Arndt-Universität Greifswald	Institut für Mathematik und Informatik	http://www.math-inf.uni-greifswald.de/mathe

7.	FernUniversität in Hagen	Fakultät für Mathematik und Informatik	http://www.fernuni-hagen.de/mathinf
8.	Freie Universität Berlin	Mathematik und Informatik	http://www.inf.fu-berlin.de
9.	Friedrich-Alexander-Universität Erlangen-Nürnberg	Department Informatik	http://www.informatik.uni-erlangen.de
10.	Friedrich-Schiller-Universität Jena	Fakultät für Mathematik und Informatik	http://www.minet.uni-jena.de
11.	Georg-August-Universität Göttingen	Institut für Informatik	http://www.uni-goettingen.de/de/138524.html
12.	Hasso-Plattner (Universität Potsdam)	Institut für Softwaresystemtechnik	http://www.hpi.uni-potsdam.de
13.	Heinrich-Heine-Universität Düsseldorf	Institut für Informatik	http://www.cs.uni-duesseldorf.de
14.	Helmut-Schmidt-Universität/Universität der Bundeswehr Hamburg	Fakultät für Elektrotechnik	http://www.hsu-hh.de/et
15.	Humboldt-Universität zu Berlin	Institut für Informatik	http://www.informatik.hu-berlin.de
16.	Jacobs University Bremen	Electrical Engineering & Computer Science	http://ses.jacobs-university.de/eecs-research
17.	Johann Wolfgang Goethe-Universität, Frankfurt am Main	Institut für Informatik	http://www-extern.informatik.uni-frankfurt.de
18.	Johannes Gutenberg-Universität Mainz	Institut für Informatik	http://www.phmi.uni-mainz.de/1847.php
19.	Julius-Maximilians-Universität Würzburg	Fakultät für Mathematik und Informatik	http://www.mathematik-informatik.uni-wuerzburg.de
20.	Justus-Liebig-Universität Gießen	Institut für Informatik	http://www.uni-giessen.de/cms/fbz/fb07/fachgebiete/mathematik/informatik
21.	Karlsruher Institut für Technologie	Fakultät für Informatik	http://www.informatik.kit.edu
22.	Leibniz Universität Hannover	Fakultät für Elektrotechnik und Informatik	http://www.inf.uni-hannover.de
23.	Ludwig-Maximilians-Universität München	Institut für Informatik	http://www.ifi.lmu.de
24.	Martin-Luther-Universität Halle-Wittenberg	Institut für Informatik	http://www.informatik.uni-halle.de
25.	Otto-Friedrich-Universität Bamberg	Fakultät Wirtschaftsinformatik und Angewandte Informatik	http://www.uni-bamberg.de/wiai
26.	Otto-von-Guericke-Universität Magdeburg	Fakultät für Informatik	http://www.cs.uni-magdeburg.de
27.	Philipps-Universität Marburg	Fachbereich Mathematik und Informatik	http://www.uni-marburg.de/fb12
28.	Rheinische Friedrich-Wilhelms-Universität Bonn	Institut für Informatik	http://www.informatik.uni-bonn.de

29. Rheinisch-Westfälische Technische Hochschule Aachen	Fakultät 1, Fachgruppe Informatik	http://www.informatik.rwth-aachen.de
30. Ruhr-Universität Bochum	Fakultät für Elektrotechnik und Informationstechnik	http://www.ei.ruhr-uni-bochum.de
31. Ruprecht-Karls-Universität Heidelberg	Informatik	http://www.informatik.uni-heidelberg.de
32. Technische Universität Braunschweig	Carl-Friedrich-Gauß-Fakultät	http://www.cs.tu-bs.de
33. Technische Universität Bergakademie Freiberg	Fakultät für Mathematik und Informatik	http://www.mathe.tu-freiberg.de
34. Technische Universität Berlin	Elektrotechnik und Informatik	http://www.eecs.tu-berlin.de
35. Technische Universität Chemnitz	Fakultät für Informatik	http://www.tu-chemnitz.de/informatik
36. Technische Universität Clausthal	Fakultät für Mathematik/Informatik und Maschinenbau	http://www.in.tu-clausthal.de
37. Technische Universität Darmstadt	Informatik	http://www.informatik.tu-darmstadt.de
38. Technische Universität Dortmund	Fakultät für Informatik	http://www.cs.tu-dortmund.de
39. Technische Universität Dresden	Fakultät Informatik	http://www.inf.tu-dresden.de
40. Technische Universität Hamburg-Harburg	Fachbereich Elektrotechnik, Informatik und Mathematik	http://www.tu-harburg.de/tuhh/studium/studiendekanate/elektrotechnik-informatik-und-mathematik.html
41. Technische Universität Ilmenau	Fakultät für Informatik und Automatisierung	http://www.tu-ilmenau.de/fakia
42. Technische Universität Kaiserslautern	Institut für Informatik	http://www.informatik.uni-kl.de
43. Technische Universität München	Fakultät für Informatik	http://www.in.tum.de
44. Universität Augsburg	Fakultät für Angewandte Informatik	http://www.uni-augsburg.de/fakultaeten/fai
45. Universität Bayreuth	Institut für Informatik	http://www.ai.uni-bayreuth.de/de/index.html
46. Universität Bielefeld	Technische Fakultät	http://www.techfak.uni-bielefeld.de
47. Universität Bremen	Mathematik und Informatik	http://www.informatik.uni-bremen.de
48. Universität der Bundeswehr München	Fakultät für Informatik	http://www.unibw.de/inf/fakultaet
49. Universität des Saarlandes	Informatik	http://frweb.cs.uni-sb.de
50. Universität Duisburg-Essen	Ingenieurwissenschaften	http://www.uni-due.de/iw/de
51. Universität Duisburg-Essen	Institut für Informatik und Wirtschaftsinformatik	http://www.icb.uni-due.de
52. Universität Freiburg	Institut für Informatik	http://www.informatik.uni-freiburg.de

53. Universität Hamburg	Fachbereich Informatik	http://www.informatik.uni-hamburg.de
54. Universität Hildesheim	Institut für Informatik	http://www.uni-hildesheim.de/index.php?id=1320
55. Universität Kassel	Fachbereich Elektrotechnik/Informatik	http://www.uni-kassel.de/eecs
56. Universität Koblenz-Landau	Fachbereich Informatik	http://www.uni-koblenz-landau.de/koblenz/fb4
57. Universität Konstanz	Fachbereich Informatik und Informationswissenschaft	http://www.inf.uni-konstanz.de
58. Universität Leipzig	Fakultät für Mathematik und Informatik	http://www.fmi.uni-leipzig.de/cms
59. Universität Mannheim	Fakultät für Mathematik und Informatik	http://www.fmi.uni-mannheim.de
60. Universität Osnabrück	Institut für Informatik	http://www.informatik.uni-osnabrueck.de/index.php.de
61. Universität Paderborn	Institut für Informatik	http://wwwcs.upb.de/cs
62. Universität Passau	Fakultät für Informatik und Mathematik	http://www.fim.uni-passau.de
63. Universität Potsdam	Institut für Informatik	http://www.cs.uni-potsdam.de
64. Universität Rostock	Institut für Informatik	http://www.informatik.uni-rostock.de
65. Universität Siegen	Elektrotechnik und Informatik	http://www.fb12.uni-siegen.de
66. Universität Stuttgart	Informatik	http://www.informatik.uni-stuttgart.de
67. Universität Trier	Fachbereich Informatik/Wirtschaftsinformatik	http://www.uni-trier.de/index.php?id=2031
68. Universität Ulm	Fakultät für Ingenieurwissenschaften und Informatik	http://www.uni-ulm.de/ecs
69. Universität zu Köln	Institut für Informatik	http://www.informatik.uni-koeln.de
70. Universität zu Lübeck	Informatik, Technisch-Naturwissenschaftliche Fakultät	http://www.informatik.uni-luebeck.de
71. Westfälische Wilhelms-Universität Münster	Institut für Informatik	http://cs.uni-muenster.de:8010

Table 4. Informatics institutions in Italy		
University	*Department/Faculty/School/Section*	*Web site*
1. Libera Università di Bolzano	Facoltà di Scienze E Tecnologie Informatiche	http://www.unibz.it/it/inf
2. Politecnico di Bari	Dipartimento di Ingegneria Elettrica e dell'Informazione	http://www-dee.poliba.it/DEE/DEE.html
3. Politecnico di Milano	Dipartimento di Elettronica, Informazione e Bioingegneria	http://www.polimi.it
4. Politecnico di Torino	Dipartimento di Automatica e Informatica	http://www.polito.it
5. Seconda Università degli Studi di Napoli	Dipartimento di Ingegneria Industriale e dell'Informazione	http://www.unina2.it

6. Università "Cà Foscari" Venezia	Dipartimento di Scienze Ambientali, Informatica e Statistica	http://www.unive.it/dais
7. Università degli Studi "Mediterranea" di Reggio Calabria	Dipartimento di Ingegneria dell'Informazione, delle Infrastrutture e dell'Energia Sostenibile	http://www.diies.unirc.it
8. Università degli Studi de L'aquila	Dipartimento di Ingegneria e Scienze dell'Informazione e Matematica	http://www.univaq.it
9. Università degli Studi de L'aquila	Dipartimento di Ingegneria Industriale e dell'Informazione e di Economia	http://www.univaq.it
10. Università degli Studi della Basilicata	Dipartimento di Matematica, Informatica ed Economia	http://www.unibas.it
11. Università degli Studi di Bari "Aldo Moro"	Dipartimento di Informatica	http://www.uniba.it
12. Università degli Studi di Bologna	Dipartimento di Informatica - Scienza e Ingegneria	http://www.unibo.it
13. Università degli Studi di Bologna	Dipartimento di Ingegneria dell'Energia Elettrica e dell'Informazione	http://www.unibo.it
14. Università degli Studi di Brescia	Dipartimento di Ingegneria dell'Informazione	http://www.unibs.it/dipartimenti/ingegneria-dell'informazione
15. Università degli Studi di Cagliari	Dipartimento di Matematica e Informatica	http://riemann.unica.it
16. Università degli Studi di Cassino E del Lazio Meridionale	Dipartimento di Ingegneria Elettrica e dell'Informazione	http://www.unicas.it
17. Università degli Studi di Catania	Dipartimento di Ingegneria Elettrica Elettronica e Informatica	http://www.dieei.unict.it
18. Università degli Studi di Catania	Dipartimento di Matematica e Informatica	http://web.dmi.unict.it
19. Università degli Studi di Ferrara	Dipartimento di Matematica e informatica	http://www.unife.it
20. Università degli Studi di Firenze	Dipartimento di Ingegneria dell'Informazione	http://www.inginf.unifi.it
21. Università degli Studi di Firenze	Dipartimento di Matematica e Informatica	http://www.math.unifi.it
22. Università degli Studi di Firenze	Dipartimento di Statistica, Informatica, Applicazioni	http://www.disia.unifi.it
23. Università degli Studi di Genova	Dipartimento di Informatica, bioingegneria,robotica e ingegneria dei sistemi	http://www.dibris.unige.it
24. Università degli Studi di	Dipartimento di Ingegneria Civile,	http://www.unime.it

	Messina	Informatica, Edile, Ambientale e Matematica Applicata	
25.	Università degli Studi di Messina	Dipartimento di Matematica e Informatica	http://www.unime.it
26.	Università degli Studi di Milano	Dipartimento di Informatica	http://www.unimi.it
27.	Università degli Studi di Milano-Bicocca	Dipartimento di Informatica, Sistemistica e Comunicazione	http://www.disco.unimib.it
28.	Università degli Studi di Modena e Reggio Emilia	Dipartimento di Scienze fisiche, informatiche e matematiche	http://www.unimo.it
29.	Università degli Studi di Napoli "Federico II"	Dipartimento di Ingegneria Elettrica e delle Tecnologie dell'Informazione	http://www.unina.it
30.	Università degli Studi di Padova	Dipartimento di Ingegneria dell'Informazione	http://www.unipd.it
31.	Università degli Studi di Palermo	Dipartimento di Energia, Ingegneria dell'Informazione e Modelli Matematici	http://www.unipa.it
32.	Università degli Studi di Palermo	Dipartimento di Ingegneria Chimica, Gestionale, Informatica, Meccanica	http://www.unipa.it
33.	Università degli Studi di Palermo	Dipartimento di Matematica e Informatica	http://www.unipa.it
34.	Università degli Studi di Parma	Dipartimento di Ingegneria dell'Informazione	http://www.unipr.it/dipartimenti
35.	Università degli Studi di Parma	Dipartimento di Matematica e Informatica	http://www.unipr.it/dipartimenti
36.	Università degli Studi di Pavia	Dipartimento di Ingegneria Industriale e dell'Informazione	http://iii.unipv.it
37.	Università degli Studi di Perugia	Dipartimento di Ingegneria Elettronica e dell'informazione	http://www.diei.unipg.it
38.	Università degli Studi di Perugia	Dipartimento di Matematica e Informatica	http://dipmat.unipg.it
39.	Università degli Studi di Roma "La Sapienza"	Dipartimento di Informatica	http://www.uniroma1.it
40.	Università degli Studi di Roma "La Sapienza"	Dipartimento di Ingegneria dell'Informazione, Elettronica e Telecomunicazioni	http://www.uniroma1.it
41.	Università degli Studi di Roma "La Sapienza"	Dipartimento di Ingegneria Informatica, Automatica e Gestionale	http://www.uniroma1.it
42.	Università degli Studi di Roma "Tor Vergata"	Dipartimento di Ingegneria Civile e Ingegneria Informatica	http://www.uniroma2.it
43.	Università degli Studi di Roma	Dipartimento di Ingegneria dell'Impresa	http://www.uniroma2.it

	"Tor Vergata"		
44.	Università degli Studi di Salerno	Dipartimento di Informatica	http://www.unisa.it
45.	Università degli Studi di Salerno	Dipartimento di Ingegneria dell'Informazione, Ingegneria Elettrica e Matematica Applicata	http://www.unisa.it
46.	Università degli Studi di Sassari	Dipartimento di Scienze Politiche, Scienze della Comunicazione e Ingegneria dell'Informazione	http://www.uniss.it
47.	Università degli Studi di Siena	Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche	http://www.unisi.it
48.	Università degli Studi di Torino	Dipartimento di Informatica	http://www.di.unito.it
49.	Università degli Studi di Trento	Dipartimento di Ingegneria e Scienza dell'Informazione	http://disi.unitn.it
50.	Università degli Studi di Udine	Dipartimento di Matematica e Informatica	http://www.dimi.uniud.it
51.	Università degli Studi di Verona	Dipartimento di Informatica	http://www.di.univr.it
52.	Università della Calabria	Dipartimento di Ingegneria Informatica, Modellistica, Elettronica e Sistemistica	http://www.unical.it
53.	Università della Calabria	Dipartimento di Matematica e Informatica	http://www.unical.it
54.	Università di Pisa	Dipartimento di Informatica	http://www.unipi.it
55.	Università di Pisa	Dipartimento di Ingegneria dell'Informazione	http://dip.iet.unipi.it
56.	Università Politecnica delle Marche	Dipartimento di Ingegneria dell'Informazione	http://www.univpm.it

Table 5. Informatics institutions in the Netherlands			
	University	*Department/Faculty/School/Institute*	*Web site*
1.	Radboud Universiteit Nijmegen	Onderwijsinstituut voor Informatica en Informatiekunde	http://www.ru.nl/english/research/research_institutes/vm/institute_for_5
2.	Rijksuniversiteit Groningen	Johann Bernoulli instituut	http://www.rug.nl/fmns-research/bernoulli/index
3.	Technische Universiteit Delft	Faculteit Elektrotechniek, Wiskunde en Informatica	http://www.ewi.tudelft.nl/en
4.	Technische Universiteit Eindhoven (TU/e)	Faculteit Wiskunde & Informatica	http://w3.win.tue.nl/en
5.	Universiteit Leiden	Leiden Institute of Advanced	http://www.liacs.nl

		Computer Science	
6.	Universiteit Maastricht	Department of Knowledge Engineering	http://www.maastrichtuniversity.nl/web/Schools/DKE.htm
7.	Universiteit Twente	Faculteit Elektrotechniek, Wiskunde en Informatica	http://www.utwente.nl/en/education/eemcs
8.	Universiteit Utrecht	Departement Informatica	http://www.cs.uu.nl
9.	Universiteit van Amsterdam	Instituut voor Informatica	http://www.science.uva.nl/ii/home.cfm
10.	VU Vrije Universiteit Amsterdam	Faculteit Elektrotechniek, Wiskunde en Informatica	http://www.cs.vu.nl/en/index.asp

Table 6. Informatics institutions in Switzerland

	University	*Department/Faculty/School/Institute*	*Web site*
1.	EPF Lausanne	Faculté Informatique et Communications	http://ic.epfl.ch/page-5735-fr.html
2.	ETH Zürich	Departement Informatik	http://www.inf.ethz.ch/index_DE
3.	Universität Basel	Departement Mathematik und Informatik	http://dmi.unibas.ch
4.	Universität Bern	Institut für Informatik und Angewandte Mathematik	http://www.iam.unibe.ch
5.	Université de Fribourg / Universität Freiburg	Département d'Informatique / Departement für Informatik	http://diuf.unifr.ch
6.	Université de Genève	Département d'informatique	http://cui.unige.ch/DI/index.html
7.	Université de Neuchatel	Institut d'informatique (IIUN)	http://www2.unine.ch/iiun/page-5100.html
8.	Università della Svizzera italiana	Facoltà di scienze informatiche	http://www.inf.usi.ch/it/index.htm
9.	Universität Zurich	Institut für Informatik	http://www.ifi.uzh.ch/index_de.html

Table 7. Informatics institutions in the UK

	University	*Department/Faculty/School/Institute*	*Web site*
England			
1.	Anglia Ruskin University	Department of Computing and Technology	http://www.anglia.ac.uk/ruskin/en/home/faculties/fst/departments/comptech.html
2.	Aston University	Computer Science	http://www.cs.aston.ac.uk
3.	Birmingham City University	School of Computing, Telecommunications and Networks	http://www.bcu.ac.uk/about-us/faculties/faculty-of-technology-engineering-and-the-environment
4.	Bournemouth University	School of Design, Engineering and Computing	http://dec.bournemouth.ac.uk
5.	Brunel University	School of IS, Computing and Mathematics	http://www.brunel.ac.uk/about/acad/siscm

6.	Canterbury Christ Church University	Department of Computing	http://www.canterbury.ac.uk/social-applied-sciences/computing/Home.aspx
7.	The City University	School of Informatics	http://www.city.ac.uk/informatics
8.	Coventry University	Faculty of Engineering and Computing	http://www.mis.coventry.ac.uk
9.	Cranfield University	Department of Informatics and Systems Engineering	http://www.cranfield.ac.uk/cds/departments/dise/index.html
10.	De Montfort University	School of Computer Science and Informatics	http://www.dmu.ac.uk/about-dmu/schools-and-departments/school-of-computer-science-and-informatics
11.	De Montfort University	The Institute of Creative Technologies	http://www.ioct.dmu.ac.uk
12.	Keele University	School of Computing and Mathematics	http://www.scm.keele.ac.uk
13.	Kingston University	Faculty of Science, Engineering and Computing.	http://cism.kingston.ac.uk
14.	Leeds Metropolitan University	School of Computing & Creative Technologies	http://www.leedsmet.ac.uk/aet/-computing-creative-technologies
15.	The University of Leeds	School of Computing	http://www.engineering.leeds.ac.uk/comp
16.	Liverpool Hope University	Department of Mathematics and Computer Science	http://www.hope.ac.uk/mathematicsandcomputerscience
17.	Liverpool John Moores University	School of Computing & Mathematical Sciences	http://www.cms.livjm.ac.uk
18.	London Metropolitan University	School of Computing	http://www.londonmet.ac.uk/depts/cctm
19.	London South Bank University	Computing and Informatics	http://bus.lsbu.ac.uk/courses/undergraduate/computing
20.	Birkbeck College	Department of Computer Science and Information Systems	http://www.dcs.bbk.ac.uk
21.	Goldsmiths College	Department of Computing	http://www.goldsmiths.ac.uk/computing
22.	Imperial College	Department of Computing	http://www3.imperial.ac.uk/computing
23.	King's College London	Department of Informatics	http://www.kcl.ac.uk/nms/depts/informatics/index.aspx
24.	Queen Mary and Westfield College	School of Electronic Engineering and Computer Science	http://www.dcs.qmul.ac.uk
25.	University College London	Department of Computer Science	http://www.cs.ucl.ac.uk
26.	Loughborough University	Department of Computer Science	http://www.lboro.ac.uk/departments/compsci
27.	The Manchester Metropolitan University	School of Computing, Mathematics and Digital Technology	http://www.docm.mmu.ac.uk
28.	Middlesex University	School of Engineering and Information Sciences	http://www.mdx.ac.uk/aboutus/Schools/EIS/index.aspx
29.	The University of Newcastle-upon-Tyne	Computing Science	http://www.cs.ncl.ac.uk
30.	The University of Northumbria at Newcastle	School of Computing, Engineering & Information Sciences	http://northumbria.ac.uk/sd/academic/ceis

31. The Nottingham Trent University	Computing and Technology	http://www.ntu.ac.uk/sat/about/academic_teams/comp_tech.html
32. The Open University	Faculty of Mathematics, Computing and Technology	http://www.mcs.open.ac.uk
33. Oxford Brookes University	Department of Computing and Communication Technologies	http://cct.brookes.ac.uk
34. Royal Holloway University of London	Department of Computer Science	http://www.rhul.ac.uk/computerscience/home.aspx
35. Sheffield Hallam University	Computing	http://www.shu.ac.uk/computing
36. Southampton Solent University	Technology School	http://www.solent.ac.uk/about-us/faculties/martec/technology-school.aspx
37. Staffordshire University	Faculty of Computing, Engineering and Technology	http://www.staffs.ac.uk/academic/comp_eng_tech
38. Teesside University	School of Computing	http://www-scm.tees.ac.uk
39. University of Bedfordshire	Department of Computer Science and Technology	http://www.beds.ac.uk/departments/computing
40. The University of Bath	Department of Computer Science	http://www.cs.bath.ac.uk/department
41. The University of Birmingham	School of Computer Science	http://www.cs.bham.ac.uk
42. The University of Bolton	Department of Computing and Electronic Technology	http://data.bolton.ac.uk/cet/research
43. The University of Bradford	School of Computing Informatics and Media	http://scim.brad.ac.uk
44. The University of Brighton	School of Computing, Engineering and Mathematics	http://www.brighton.ac.uk/cmis
45. The University of Bristol	Department of Computer Science	http://www.cs.bris.ac.uk
46. The University of Buckingham	Department of Applied Computing	http://www.buckingham.ac.uk/appliedcomputing
47. The University of Cambridge	Computer Laboratory	http://www.cl.cam.ac.uk
48. The University of Central Lancashire	Computing, Engineering and Physical Sciences	http://www.uclan.ac.uk/scitech/computing_engineering_physical/index.php
49. University of Chester	School of Computer Science, Mathematics and Business Computing	http://www.chester.ac.uk/csis
50. University of Derby	School of Computing and Mathematics	http://www.derby.ac.uk/computing
51. University of Durham	School of Computing Science	http://www.dur.ac.uk/computer.science
52. The University of East Anglia	School of Computing and Technology	http://www1.uea.ac.uk/cm/home/schools/sci/computing
53. The University of East London	School of Architecture, Computing and Engineering	http://www.uel.ac.uk/ace
54. The University of Essex	Department of Computing, Engineering and Mathematics	http://www.essex.ac.uk/dces
55. The University of Exeter	Faculty of Advanced Technology	http://www.secam.ex.ac.uk
56. University of Gloucestershire	School of Computing and Mathematical	http://www.glos.ac.uk/faculties/bs/Pages/de

		Sciences	fault.aspx
57.	The University of Greenwich	School of Computer Sciences	http://www.cms.gre.ac.uk
58.	University of Hertfordshire	School of Computing and Engineering	http://www.herts.ac.uk/cs
59.	The University of Huddersfield	School of Computing and Engineering	http://www.hud.ac.uk/ce
60.	The University of Hull	Computing Laboratory	http://www.net.dcs.hull.ac.uk/index.htm
61.	The University of Kent	Computing Department	http://www.cs.kent.ac.uk
62.	The University of Lancaster	School of Computing	http://www.comp.lancs.ac.uk
63.	The University of Leicester	Department of Computing and Informatics	http://www.cs.le.ac.uk
64.	The University of Lincoln	The Lincoln School of Computer Science	http://www.lincoln.ac.uk/dci
65.	The University of Liverpool	School of Computer Science	http://www.csc.liv.ac.uk
66.	The University of Manchester	School of Computing Science	http://www.cs.manchester.ac.uk
67.	The University of Northampton	School of Computing, Engineering and Information Sciences	http://www2.northampton.ac.uk/appliedsciences/appliedscience/computing
68.	The University of Nottingham	Computing Laboratory	http://www.nottingham.ac.uk/cs
69.	The University of Oxford	School of Computing	http://web.comlab.ox.ac.uk/oucl
70.	The University of Plymouth	School of Computing and Mathematics	http://www.plymouth.ac.uk/pages/view.asp?page=7491
71.	The University of Portsmouth	Department of Creative Technologies	http://www.ceetee.net
72.	The University of Portsmouth	School of Computing	http://www.port.ac.uk/departments/academic/comp
73.	The University of Reading	School of Computing Science and Engineering	http://www.sse.reading.ac.uk
74.	The University of Salford	School of Computing Science and Engineering	http://www.cse.salford.ac.uk
75.	The University of Sheffield	Electronics and Computer Science	http://www.shef.ac.uk/dcs
76.	The University of Southampton	School of Computer Science	http://www.ecs.soton.ac.uk
77.	The University of Sunderland	Department of Computing	http://www.cat.sunderland.ac.uk
78.	The University of Surrey	Department of Computing	http://www.cs.surrey.ac.uk
79.	The University of Sussex	School of Informatics	http://www.sussex.ac.uk/informatics
80.	The University of Warwick	Department of Computer Science	http://www.dcs.warwick.ac.uk
81.	University of the West of England, Bristol	Faculty of Computing and Engineering	http://www.uwe.ac.uk/cems
82.	The University of West London	School of Computing and Technology	http://www.uwl.ac.uk/computing/School_of_Computing_and_Technology.jsp
83.	The University of Westminster	School of Electronics and Computer Science	http://www.westminster.ac.uk/schools/computing

84. The University of Wolverhampton	Department of Computer Science	http://www.scit.wlv.ac.uk
85. The University of York	Department of Computer Science	http://www.cs.york.ac.uk/public.php
Wales		
86. Aberystwyth University	Department of Computer Science	http://www.aber.ac.uk/compsci/public
87. Bangor University	School of Computer Science	http://www.cs.bangor.ac.uk
88. Cardiff University	School of Computer Science & Informatics	http://www.cs.cardiff.ac.uk
89. University of Glamorgan	Computing	http://fat.glam.ac.uk/subjects/computing
90. Glyndŵr University	Computing	http://www.glyndwr.ac.uk/en/UniversityInstitutes/ArtsScienceandTechnology/Computing
91. Swansea Metropolitan University	School of Applied Computing	http://www.smu.ac.uk/index.php/potential-students/faculty-of-applied-design-and-engineering/ac
92. Swansea University	Department of Computer Science	http://www.swan.ac.uk/compsci
Scotland		
93. The University of Aberdeen	Department of Computing Science	http://www.csd.abdn.ac.uk/index.php
94. University of Abertay	School of Computing and Engineering Systems	http://www.abertay.ac.uk/studying/schools/ces
95. The University of Dundee	School of Computing	http://www.computing.dundee.ac.uk
96. Edinburgh Napier University	School of Computing Institute for Informatics and Digital Innovation	http://www.soc.napier.ac.uk http://www.iidi.napier.ac.uk/
97. The University of Edinburgh	School of Informatics	http://www.inf.ed.ac.uk
98. Glasgow Caledonian University	School of Engineering and Built Environment	http://www.caledonian.ac.uk/sec
99. The University of Glasgow	School of Computing Science	http://www.dcs.gla.ac.uk
100. Heriot-Watt University	Department of Computer Science	http://www.macs.hw.ac.uk/cs
101. The Robert Gordon University	School of Computing Science and Digital Media	http://www.rgu.ac.uk/computing
102. The University of St Andrews	School of Computer Science	http://www.cs.st-andrews.ac.uk
103. The University of Stirling	Computing Science and Mathematics	http://www.cs.stir.ac.uk
104. The University of Strathclyde	Department of Computer and Information Sciences	http://www.strath.ac.uk/cis
105. The University of the West of Scotland	School of Computing	http://www.uws.ac.uk/schools/school-of-computing
Northern Ireland		
106. The Queen's University of Belfast	School of Electronics, Electrical Engineering and Computer Science	http://www.qub.ac.uk/schools/eeecs
107. University of Ulster	Faculty of Computing and Engineering	http://www.compeng.ulster.ac.uk

5 Student enrollments and gender information

The following tables show enrollment and gender ratios at the bachelor's and master's levels in the selected countries.

Table 8 provides information on first-year students, which is particularly interesting to track for trends in enrollment resulting in part from changes in the popularity of informatics. Table 9 covers bachelor-program students, or "undergraduates" in the American terminology. Table 10 covers master-program data where available.

Any country comparisons made on the basis of these tables must **exercise caution** because of three factors: differing degree programs, explained after each table; differing notions of "informatics", in particular for mixed degrees, as discussed in Section 3; and the special situation of the UK, which as explained in 2.2 does not count polytechnics as a separate category. In the other countries surveyed, students of "universities of applied sciences", not included in the figures below, can be as numerous as or more numerous than university students counted here.

5.1 First year

Table 8 presents numbers of first year students at bachelor level.

Table 8. Students in informatics bachelor's programs (first year)										
	2008/09		2009/10		2010/11		2011/12		2012/13	
	Total	Women (%)	Total	Women (%)	Total	Women (%)	Total	Women (%)	Total	Women (%)
Denmark	530	12.1	685	11.8	779	13.7	971	13.4	1,082	16.5
Germany	11,323	19.7	11,535	19.3	12,303	19.4	16,136	19.7	NA	NA
Italy	14,738	18.9	14,631	17.7	14,551	17.9	15,404	18.9	NA	NA
Netherlands	817	9.3	891	13.0	964	11.9	1,022	11.8	1,094	13.8
Switzerland	348	12.6	356	15.6	387	14.0	396	13.1	408	10.3
UK	31,920	19.8	33,125	18.9	31,120	18.1	29,880	17.0	NA	NA

The definition of bachelor programs is the following for each country considered:
Denmark: studies aiming at a Bachelor degree [DK2].
Germany: studies aiming at a university degree (*Universitärer Abschluss*) including Bachelor*, Lizenziat/ Diplom* and Others (phasing out after the Bologna reform) [GE4]. Numbers for studies aiming at a teaching degree (*Lehramtsprüfung*) were not included. The most recent numbers were not yet available.
Italy: studies aiming at a Bachelor degree (*Laurea Triennale*), both in Science faculties (*Scienze e Tecnologie Informatiche* degree) and in Engineering faculties (*Ingegneria dell'Informazione* degree) [IT2]. The most recent numbers were not yet available.
Netherlands: studies aiming at Bachelor and *oude stijl doctoraalopleidingen* (old-style doctoral program, phasing out after the Bologna reform [NE2]).

Switzerland: studies aiming at Bachelor, *Lizenziat/Diplom* and others (phasing out after the Bologna reform) [SW4]. Numbers for studies aiming at a teaching (*Lehramtsprüfung)* were not included.

UK: numbers include studies aiming at "First Degree" and "Other Undergraduate" degree [UK4]. The UK has a unique higher-education system, with a variety of degrees at the undergraduate level and a complex system of options [UK5]. In addition, the numbers include full and part-time students (full time: attending an institution for periods amounting to at least 24 weeks within the year of study) [UK5]. The most recent numbers were not yet available.

5.2 Bachelor

Table 9 gives the data for all students enrolled in bachelor programs, the sources are the same as for table 8.

Table 9. Students in informatics bachelor's programs (all semesters)										
	2008/09		2009/10		2010/11		2011/12		2012/13	
	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)
Denmark	1,693 / 0.3	7.7	1,881 / 0.3	8.9	2,071 / 0.4	10.9	2,400 / 0.4	12.0	2,629 / 0.5	14.1
Germany	56,275 / 0.7	14.9	54,711 / 0.7	17.3	53,339 / 0.6	15.9	57,828 / 0.7	16.4	NA	NA
Italy	74,148 / 1.24	15.3	71,051 / 1.19	15.8	68,251 / 1.14	16.3	67,198 / 1.13	16.7	NA	NA
Netherlands	6,081 / 0.4	10.8	6,049 / 0.4	11.4	6,125 / 0.4	11.9	6,368 / 0.4	12.7	6,637 / 0.4	13.7
Switzerland	1,787 / 0.2	6.9	1,260 / 0.2	11.9	1,386 / 0.2	11.3	1,505 / 0.2	11.0	1,557 / 0.2	10.7
UK	74,375 / 1.2	18.4	76,900 / 1.2	17.9	76,540 / 1.2	21.9	76,590 / 1.2	16.7	NA	NA

Netherlands: unlike for other countries, data includes students enrolled at all levels (*Ingeschrevenen*) including Bachelor and the old-style doctoral program (phasing out after the Bologna reform [NE2]) as well as a Master and PhD [NE3]. Separate numbers for the distinct levels were not available (Centraal Bureau voor de Statistiek, personal communication).

Germany, Italy, and UK: the most recent numbers were not yet available.

Numbers per 1000 inhabitants were calculated using as reference the most recent data available for the national populations: Denmark (5,605,836), Germany (80,399,300), Italy (59,685,227), Netherlands (16,791,600), Switzerland (8,058,100), UK (63,181,775).

5.3 Master

Table 10 shows enrollments in master's degrees. No data was available for the Netherlands and the most recent numbers were not yet available for Germany, Italy, and the UK. Data for Italy includes master degrees both in Science faculties (*Informatica* degree) and in Engineering faculties (*Ingegneria Informatica* degree). The sources are the same as for table 8.

Table 10. Students in informatics master's programs										
	2008/09		2009/10		2010/11		2011/12		2012/13	
	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)
Denmark	1814 / 0.3	22.4	1,799 / 0.3	23.1	1,906 / 0.3	27.9	2,078 / 0.4	30.3	2419 / 0.4	31.3
Germany	5,125 / 0.06	18.6	7,000 / 0.09	17.3	9,421 / 0.12	16.1	12,221 / 0.15	16.3	NA	NA
Italy	10,700 / 0.18	14.2	10,493 / 0.18	14.3	10,023 / 0.17	14.1	9,504 / 0.16	14.0	NA	NA
Switzerland	614 / 0.08	13.5	633 / 0.08	12.5	737 / 0.09	13.0	814 / 0.1	15.2	892 / 0.1	16.5
UK	16,960 / 0.3	18.6	19,115 / 0.3	19.1	17,735 / 0.3	19.8	14,265 / 0.2	21.7	NA	NA

No hasty conclusion should be drawn from the rapid growth of master's student registrations in Germany and (less pronouncedly) Switzerland, since the transition was still in progress, during the period considered, from the older German system based on the "*Diplom*", a five-year degree, to the "Bologna" bachelor-master setup (3 + 2). Part of the growth is clearly genuine, but some of it simply reflects the growing inclusion, as years go by, of students who previously would have been in the last two years of a "*Diplom*" and hence not counted in the master's statistics, even though their concrete course of study would have been essentially the same. We have not attempted to determine the respective part of these two forms of growth, genuine and Bologna-induced.

5.4 Tentative extrapolation to the whole of Europe

It is possible to attempt a rough estimate of how the preceding measurements generalize to Europe as a whole, defined here as the member countries of the Council of Europe. The population of the countries used for this study is around 33% of the population of Europe (233,721,838 inhabitants out of 711,163,454). A simple rule of thirds gives the following (rounded) for 2011:

- Bachelor students in informatics: 642,000
- First-year students: 194,000

Unlike the carefully documented measurements of the preceding tables, these numbers cannot be taken as exhibiting any degree of precision. They do, however, suggest an order of magnitude. If they are indeed within range, we note that more Europeans are in a bachelor program than live in Toulouse, and about the same as live in Stuttgart.

Including students from the universities of applied sciences would probably double these numbers (except in the UK), bringing the number of bachelor students to the one-million range.

It is our hope that future editions of this report will make these estimates more precise by extending the scope both to other countries and to universities of applied sciences.

6 Degrees

The tables that follow present the number of degrees awarded: bachelor's in table 11; master's in table 12; doctorate's in table 13. As before, notes following each table detail the particular definitions for each country. Also as before, any comparison must take into account the difference of definitions between countries.

6.1 Bachelor's degrees

Table 11. Informatics bachelor's degrees awarded										
	2008		**2009**		**2010**		**2011**		**2012**	
	Total / per 1000 inhabitants	**Women (%)**	**Total / per 1000 inhabitants**	**Women (%)**	**Total / per 1000 inhabitants**	**Women (%)**	**Total / per 1000 inhabitants**	**Women (%)**	**Total / per 1000 inhabitants**	**Women (%)**
Denmark	170 / 0.03	7.1	223 / 0.04	3.6	273 / 0.05	4.8	327 / 0.06	9.2	311 / 0.06	10.9
Germany	9,463 / 0.12	14.8	11,089 / 0.14	14.9	12,499 / 0.16	14.1	13,680 / 0.17	15.0	NA	NA
Italy	9,900 / 0.17	17.2	9,657 / 0.16	17.0	9,221 / 0.15	17.3	8,615 / 0.14	18.9	NA	NA
Netherlands	731 / 0.04	7.9	598 / 0.04	10.2	544 / 0.03	10.7	591 / 0.04	10.0	676 / 0.04	10.2
Switzerland	335 / 0.04	8.7	170 / 0.02	5.9	187 / 0.02	9.6	179 / 0.02	9.5	NA	NA
UK	19,155 / 0.3	18.6	19,280 / 0.3	18.0	19,735 / 0.3	17.8	20,060 / 0.3	17.4	NA	NA

The qualifications expressed in previous sections apply here: degrees from the "universities of applied sciences" are not counted, but in the UK this category is subsumed by universities (see 2.2); and some of the growth shown for Germany is a statistical artifact of the transition from the 5-year "Diplom" to the bachelor-master system (see 5.3).

Germany: numbers include *Bachelor-* and *Universitärer- Abschluss* (including *Lizenziat/Diplom/Andere*, phasing out after the Bologna reform) [GE5]. Numbers for studies aiming at a teaching degree (*Lehramtsprüfung*) were not included.

Italy: numbers include *Laurea Triennale*, both in Science faculties (*Scienze e Tecnologie Informatiche* degree) and in Engineering faculties (*Ingegneria dell'Informazione* degree) degrees given under the pre-Bologna reform were not included [IT2].

Netherlands: numbers include Bachelor and *oude stijl doctoraalopleidingen* (the old style doctoral degree, phasing out after the Bologna reform [NE2]) degree [NE3].

Switzerland: numbers include *Bachelorabschlüsse* and *Lizenziate/Diplome* (phasing out after the Bologna reform). [SW5]. Numbers for studies aiming at a teaching degree (*Lehramtsprüfung*) were not included.

UK: see observations after table 8. The numbers presented are a sum of all "First Degree" and "Other Undergraduate" degrees awarded.

The most recent numbers were not yet available for Germany, Italy, Switzerland and the UK.

6.2 Master's degrees

Table 12. Informatics master's degrees awarded										
	2008		**2009**		**2010**		**2011**		**2012**	
	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)
Denmark	452 / 0.08	27.7	442 / 0.08	28.1	469 / 0.08	19.7	510 / 0.09	26.5	557 / 0.1	32.7
Germany	1,824 / 0.02	18.2	1,972 / 0.02	17.3	2,198 / 0.03	17.5	3,087 / 0.04	14.3	NA	NA
Italy	2,394 / 0.04	14.7	2,556 / 0.04	15.4	2,618 / 0.04	15.4	2,519 / 0.04	13.4	NA	NA
Netherlands	753 / 0.04	13.2	824 / 0.05	15.7	858 / 0.05	14.6	852 / 0.05	15.8	993 / 0.06	15.8
Switzerland	206 / 0.03	12.6	268 / 0.03	11.9	215 / 0.03	11.2	239 / 0.03	14.2	NA	NA
UK	6,060 / 0.1	25.4	7,670 / 0.1	23.9	9,225 / 0.2	23.4	8,345 / 0.1	21.6	NA	NA

The most recent numbers were not yet available for Germany, Italy, Switzerland and the UK. Please note the qualifications of sections 2.2 and 5.3.

6.3 Doctoral degrees

Table 13. Informatics doctoral (PhD) degrees awarded										
	2008		2009		2010		2011		2012	
	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)	Total / per 1000 inhabitants	Women (%)
Germany	695 / 0.01	14.2	719 / 0.01	14.3	832 / 0.01	13.6	902 / 0.01	12.6	NA	NA
Switzerland	65 / 0.01	10.8	77/ 0.01	22.1	100 / 0.01	10.0	96 / 0.01	17.7	NA	NA
UK	795 / 0.01	20.1	845 / 0.01	17.8	870 / 0.01	21.8	900 / 0.01	22.8	NA	NA

For the Netherlands and Denmark, numbers were not available since PhDs are reported across the entire field of "Natural Sciences" (StatBank Denmark and Centraal Bureau voor de Statistiek, personal communication). For Italy numbers were not available since the Italian data source only provides numbers per specific doctorate in each University and per cycle [IT2]. The most recent numbers were not yet available for Germany, Switzerland and the UK.

6.4 Tentative extrapolation to the whole of Europe

As discussed in section 5.4, and with the same qualifications, it is possible to attempt a rough extrapolation to all of Europe for 2011:

- Bachelor degrees in informatics: 132,000
- Master degrees: 47,000

Note that in a speech reported in [EU1], EU President Richard Bruton declared that "the number of ICT graduates in Europe has decreased from 127,000 in 2006 to 114,000 in 2009 despite the growing pervasiveness of high level ICT occupations across all economies", without giving a reference.

6.5 Relationship between supply and demand

According to a recent report from the European Commission on European Vacancy and Recruitment ICT positions as IT consultants, IT support staff, software programmers, software developers, data processing technicians, database administrators, IT project leaders are currently top bottleneck occupations, defined as occupations for which there is evidence of recruitment difficulties in whole Europe [EU2]. The situation is exacerbated by the global war for talent with regard to attract the best skills in the ICT field.

In 2012 demand for e-skills in Europe was around 255.000 greater than supply. In addition, the European Commission estimates that by 2015 the gap between demand and supply will grow – ranging from 372K to 864K – depending on the forecasting scenario [EU3].

7 Positions and Titles

The present section describes some of the main positions (job titles) available to academics, and corresponding employment details, in the countries selected as per section 2.3: France, Germany, Italy, Netherlands and Switzerland.

The information generally applies to academics of all disciplines, not just informatics, in each country.

Comparing salaries is complicated by the difference in career systems, career steps and progression between countries. This makes it particularly important to define the different titles available in the countries considered. Section 8 will present the corresponding salary levels in the corresponding countries.

7.1 A basis for multinational comparison of academic positions

Tables 14 and 15 shows the academic positions whose remuneration is described in section 8, and the approximate equivalent in the various countries considered. For professor-level positions we used as a reference the nomenclature of the American higher education system: Assistant, Associate and Full Professor.

Table 14. Position correspondence: PhDs and Postdocs		
	PhD candidate	**Postdoctoral researcher**
France	*Doctorant*	*Post-doctorant*
Germany	*Doktorand / Wissenschaftlicher Mitarbeiter*	*Postdoktoranden / Wissenschaftlicher Mitarbeiter / Oberassistent / Oberingenieur*
Italy	*Dottorando*	*Assegnista di ricerca*
Netherlands	*Promovendus*	*Onderzoeker 4 / Docent 4*
Switzerland	*Doktorand / Wissenschaftlicher Assistenz I*	*Post-Doktorand / Wissenschaftlicher Assistenz II*

In Germany and Switzerland the term "Assistent" (assistant) is used for both PhD candidates and postdocs.

Table 15. Position correspondence: Professors					
	Assistant Professor		**Associate Professor**		**Full Professor**
France	*Maître de Conférences*		*Professeur des Universités*		
Germany	*Juniorprofessor*		*Außerordentlicher Professor*		*Ordentlicher Professor*
Italy	*Ricercatore a tempo determinato*		*Professore di Seconda Fascia (Professore Associato)*		*Professore di Prima Fascia (Professore Ordinario)*
Netherlands	*Universitair Docent 1*	*Universitair Docent 2*	*Universitair Hoofddocent 1*	*Universitair Hoofddocent 2*	*Hoogleraar 1*	*Hoogleraar 2*
Switzerland[6]	*Assistenz Professor*		*Ausserordentliche Professor*		*Ordentlicher Professor*

7.2 France

The employment of PhD candidates is defined in France by a "*doctoral contract*" ruled by public law since 2009 [FR1-FR3]. It consists of a fixed-term contract for a minimum period of three years, which may be extended for a maximum of one year (usually in case of special situations such as maternity/paternity leave, long sick or accident leave, etc). The doctoral contract may define a job where only research and work for the thesis completion are involved, or include other tasks such as teaching, scientific and technical information, development of research, consultancies or expertise to companies or public authorities [FR2-FR3]. The base salary is slightly higher in the case of a contract involving complementary duties (see below). Salaries paid in research institutes or in projects involving close collaboration with industry can also vary (see below).

Postdoctoral researchers are employed in fixed-term working contracts (*contrats temporaires de chercheur*) which vary from one to three years, can be extended, but not surpass six years on the total. Funding for postdoctoral positions come from national, European or international funding agencies or projects developed with Industry.

University professors (*Maîtres de Conférences* and *Professeur des Universités)* have permanent, tenured positions including a number of levels (*classes*) [FR1, FR4-FR6]. In the statutory group of *Maîtres de Conférences* there are two levels: *classe normale* and *hors-classe*; in the statutory group of *Professeur des Universités* there are three levels: *deuxième*, *première*, and *classe exceptionnelle* [FR4-FR6].

7.3 Germany

PhD candidates in Germany are typically employed as *Wissenschaftlicher Mitarbeiter* (research associate) having a fixed-term contract at the institute of their supervisor. The funding comes from the state, National Science Foundation (DFG), EU, ministries on federal or local level, industry, foundations and other sources. Duties include working on research projects, teaching, organizing seminars or performing administrative tasks [GE6-GE8], depending in part on the source of funding. In general the working contract is for a period of three years and can be renewed for an additional maximum period of three years. Funding can also be through scholarships provided by DFG, the

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[6] German terms. French (*Professeurs Assistants*, *Professeurs Associés*, *Professeurs Ordinaries*) and Italian (*Professori Assistenti*, *Professori di Ruolo Straordinari* and *Professori di Ruolo Ordinari*) equivalents are used in the corresponding parts of Switzerland.

Alexander von Humboldt Foundation and the *Deutsche Akademische Austauschdienst* (*DAAD)* [GE6-GE8]. Scholarships are usually for no more than 3 years.

Postdoctoral researchers are also employed as *Wissenschaftlicher Mitarbeiter* (or alternative names from table 13) and have fixed-term contracts that cannot be extended for more than six years. At entry level salaries are slightly higher than for PhD positions and depend on experience and family status (see below) [GE8-GE9]. Funding programs for postdoctoral researchers also enable them to apply for funding of their own independent position as part of a grant for a research project. The position can be at a university or an independent research institute, which must provide the necessary basic equipment and facilities for the development of the research project [GE8-GE9].

Professor positions are organized in three categories: *Juniorprofessor*, *Außerordentlicher Professor* and *Ordentlicher Professor. Juniorprofessor* positions, introduced by law in 2002, are time-limited (three years), can be renewed once, and provide the opportunity to apply for a permanent position after the sixth year without passing the *Habilitation* process (which junior professors still often do). Academics in these positions, although non-permanent, do not work as research assistants for permanent professors; they have their own research group and work autonomously [GE10]. In general, there is no tenure process (although some universities offer *Juniorprofessor* positions including a tenure-track plan [GE10-GE11]), therefore at the end of his or her term a *Juniorprofessor* must apply for a new open position and go through the usual German recruitment process to reach a tenured professorship. *Außerordentlicher* and *Ordentlicher Professor* are permanent tenured positions*. Außerordentlicher Professor* has teaching duties, his/her own research group and a smaller budget when compared to *Ordentlicher Professors* who have bigger research groups and budgets and in general have a Chair (*Lehrstuhl*) [GE12].

7.4 Italy

PhD positions in Italy are funded either by national scholarships, through research grants of professors, or through industry funding programs. The contract is normally for three years and salary is fixed, not progressing along the years. Funding for more than three years can in some cases be provided through research grants. PhD candidates can have teaching and supervision duties additionally to the thesis work, in this cases they earn a slightly higher salary, which depends on the local university rules [IT3, Carlo Ghezzi, personal communication].

Postdoctoral researchers (*Assegnista di ricerca)* are employed in temporary, fixed-term, working contracts for a minimum of one year, usually two years, which can renewed for a maximum of two additional years [Carlo Ghezzi, personal communication]. Their duties include research as well teaching and students supervision [Carlo Ghezzi, personal communication].

Professor positions are organized in three categories: *Ricercatore*, *Professore di Seconda Fascia (Professore Associato)* and *Professore di Prima Fascia* (*Professore Ordinario*) .

Up to 2010, an Assistant Professor (*Ricercatore*) after three years could be confirmed to a tenured position (*Ricercatore Confermato*), without being promoted to a higher level professorship. This situation changed in 2011 [IT4] when Assistant Professor positions started to have a limited duration ("*tempo determinato*"). They are of two kinds (type A and B). "*Ricercatore a tempo determinato tipo A*" are initially appointed for three years, the contract can be extended at most once for maximum of two years. "*Ricercatore a tempo determinato tipo B*" are tenure track positions; the contract lasts at most three years, without further extensions, and can be assigned to candidates who previously had type A contracts (or similar experience nationally or abroad). After three years, type B personnel who received a national habilitation and had positive evaluation at the end of the three years, are promoted to a tenured Associate Professor (*Professore di 2^a fascia*) position [IT4, Carlo Ghezzi, personal communication].

Professore Associati and *Professore Ordinari* are since 2011 tenured positions from the initial appointment, until 2010 both types of positions were non-tenured in the first three years [IT4, Carlo Ghezzi, personal communication].

7.5 Netherlands

The Dutch academic staff structure includes the positions of *Promovendus* (PhD candidate), *Docent* (Lecturer) 1, 2, 3, and 4 (Coordinating Senior Lecturer, Senior Lecturer, Lecturer, and Junior Lecturer, respectively), and *Onderzoeker* (Researcher) 1, 2, 3, and 4 (Coordinating Senior Researcher, Senior Researcher, Research Fellow, and Junior Research Fellow, respectively) [NE4-NE6].

PhD candidates have a temporary fixed-term contract for the expected duration of the promotion process, which is in general three years.

Postdoctoral researchers at entry level are generally appointed to *Onderzoeker* 4 or *Docent* 4 positions in temporary fixed-term working contracts for a minimum of two years. The total term of the employment contract, including any subsequent contracts, should never surpass six years [NE4-NE6].

Professor positions in the current academic staff structure are: Hoogleraar 1 and 2, H1/H2 (roughly corresponding to a full professor), *Universitair Hoofddocent* 1 and 2, UHD1/UHD2 (roughly corresponding to associate professor), *Universitair Docent* 1 and 2, UD1/UD1 (roughly corresponding to assistant professor).The numbers indicate the level of the position (1 is higher than 2), which is determined by the weight of the tasks performed in the job. All are permanent tenured positions [NE4-NE6].

7.6 Switzerland

PhD candidates in Switzerland are typically employed by the universities as *Wissenschaftlicher Assistenz I* (Research Assistant I). Beyond performing research work leading to their doctorate and attending a number of courses, PhD candidates assist their supervisors in teaching and supervising undergraduate students and frequently perform internal tasks in their research groups. Contracts are temporary, renewed annually and with variable duration (in agreement with the group leader), on average three to four years, but never extending more than six years [SW6].

Postdoctoral researchers are employed by the universities as *Wissenschaftlicher Assistenz II* (Research Assistant II) or *Wissenschaftliche Mitarbeitende I* and *II* (Senior Researchers and Teaching Assistants) depending on previous experience. Duties include performing own research, teaching and supervision of students and PhD candidates as well as internal tasks in the research group. The positions are funded through the University institutes themselves or by third parties such as the Swiss National Science Foundation or international funding organizations. Contracts are fixed-term, renewed annually and with variable duration, on average two and a maximum of six years, in agreement with the group leader [SW7].

Professor positions are organized in three categories: *Assistenzprofessor*, *Ausserordentliche Professor* and *Ordentlicher Professor*[6]. Among the three categories only *Assistenzprofessor* are non-tenured positions. Many appointments include a tenure-track plan, in this case an *Assistenzprofessor* is appointed for four years, with the possibility of contract renewal for a period of maximum two years. After this period, candidates with outstanding qualifications are considered for a permanent professorship (in general *Ausserordentliche Professor*) through a direct, multi-stage tenure procedure [SW8]. Procedures for granting tenure-track positions are determined by the individual faculties. *Assistenzprofessor* positions can also be funded by a Swiss National Science Foundation (SNF) grant, but in this case the contract does not include a tenure-track plan [SW8].

8 Salaries

8.1 Salaries: overview

We now present the results for the salaries of PhD candidates and postdoctoral researchers (section 8.2, table 16) and Professors at various ranks (section 8.3, table 17).

Considerable variations exist between different countries. Possibly even more than elsewhere in this report, any comparison across countries requires care in light of the differences in career systems, position definitions (section 7) and salary systems. In addition, in Germany and Switzerland, since the figures apply at the national level, there may be significant variation between regions, institutions and seniority levels; such factors as individual contracts and bonuses can also play a role.

All salary figures presented are **earned gross monthly salaries in Euros**, rounded to the nearest integer. Important comments on the specifics of every country and how the figures were determined follow each of the two tables. We chose to report here only earned gross values, without taking into consideration the different tax systems, and therefore without reference to final net values earned by academics and the total gross costs borne by employers.

8.2 Salaries: PhD candidates and postdocs

Table 16 presents the monthly gross salaries paid to PhD candidates and postdoctoral researchers in the selected countries.

Table 16. PhD candidate and postdoctoral researcher salaries				
	PhD		Postdoc	
	Min	*Max*	*Min*	*Max*
France	1,685	2,025	2,500	2,621
Germany	3,187	3,726	3,456	4,054
Italy	1,136		1,614	2,500
Netherlands	2,042	2,612	2,379	3,755
Switzerland	4,573	5,514	5,827	6,348

France

Salaries of PhD candidates in France are in general fixed and do not progress from the beginning to the end of the doctoral contract. The minimum value in the table corresponds to the amount paid to PhD candidates developing their thesis in a university and who are fully dedicated to their research and thesis work (i.e. no teaching or additional duties). Maximum value correspond to contracts which involve not only research and thesis work but also complementary activities like teaching, scientific and technical information, development of research, consultancies or expertise to companies or public authorities [FR1]. Another variation found are PhD candidates who have contracts, and develop their research work, in industrial organization on the frame of the system called "*Conventions*

industrielles de formation par la recherché" (CIFRE). CIFRE PhDs are paid a minimum salary of 1,957 Euros [FR1]. Research institutes which employ PhD candidates also present slightly variations on the remuneration system, e.g.: INRIA pays a gross salary of 1957 Euros for the two first years, and 2058,84 for the third one [FR7]; CNRS pays 1,757 (only research and thesis work) and 2,095 (with complementary activities) [FR8].

Salaries of postdoctoral researchers slightly vary according to the institution and research project. Table 16 shows values paid to a post-doc with a contract with CNRS (2,500) [FR8] and with INRIA (2,620.84) [FR7]. Initial salaries usually remain the same until the end of the contract, but might increase in a case of contract extension [Antoine Petit, personal communication].

Working hours for both PhD candidates and postdoctoral researchers, in full time positions, are 35 hours /week.

Germany

PhD and Postdoctoral positions remuneration is defined by the *Tarifvertrag im Öffentlichen Dienst* (TV-L) [GE7, GE13-GE15 Appendix B]. In general PhD candidates have a salary within (or corresponding to a percentage of) the pay scale (*Tarif)* TV-L 13. The exact grade or level (*Stufe*) is defined based on previous experience, family situation, working hours and tasks defined by the working contract (teaching load, supervision and other duties). Students in Engineering, Computer Science and Applied Mathematics, high-demand occupations in Germany, in general earn the full rate of the respective TV-L 13 salary grade appointed, for a full time (39.83 hours/week) working contract involving teaching and supervision responsibilities [GE16].

Min and *Max* values shown in the table correspond respectively to the starting level (*Stufe 1*) and the level 3 (*Stufe 3*) of the full scale TV-L 13, considering a first and a third year PhD candidate, respectively. Please note that the initial salary might change considering the level of experience and family situation of the candidate (for all grades within the TV-L 13 scale, see Appendix B and reference GE15).

Postdoctoral researchers are often paid on the same pay scale as PhD candidates, i.e., TV-L 13, with the entry salary starting on a higher grade according to the experience and family situation. Postdoctoral researchers with special responsibilities, such as junior research group leaders, may be paid in a higher salary scale, e.g., TV-L 14, TV-L 15, TV-L 15Ü [GE16]. Working hours for a full time working contract is also 39.83 hours per week.

Min and *Max* values shown in the table correspond to a postdoctoral researcher starting at *Stufe* 1 within the full *tariff* TV-L 14 and *Stufe* 3 (for all levels within the TV-L 14, please see Appendix B and reference GE15). Note that this was an arbitrary choice since the initial salary varies according to previous experience.

Salary values presented in table 16 are from 2012 [GE15].

Italy

Salaries of PhD candidates in Italy are nationally fixed and do not progress from the beginning to the end of the doctoral contract. Since 2008 PhD salary is fixed on 1136.5 per month (on a 12 month basis), gross value for a full time contract, corresponding to 38hours/week [IT5, Carlo Ghezzi, personal communication].

Salaries of Postdoctoral researchers are defined by the professor/group leader opening the position. Initial salary cannot be lower than 19367 Euros per year, usually maximum salary does not surpass 30,000 Euros per year. Values shown on table 16 correspond to gross month salaries (calculated on a twelve month basis) for a full time (38 hours/week) position. The salary is fixed and remains the same until the end of the contract, the exact value of the initial salary depends on the researcher previous experience [Carlo Ghezzi, personal communication].

Netherlands

Academic career regulations and salaries in the Netherlands are defined by the collective agreement (CAO) of Dutch Universities, set by the Association of Universities in the Netherlands (VSNU) [NE6].

PhD candidates are employed as research/teaching assistants and paid according to the Scale P of the CAO table of salaries [NE4-NE6, Appendix B]. The initial salary corresponds to the salary grade P0 for a period of one year, at the end of this first year salary progresses automatically (with no performance assessment) to the grade P1. Each subsequent salary increase shall take place only after annual assessments [NE4-NE6]. Min and Max values shown in the above table correspond to the grades 0 and 3 within the scale P.

Postdoctoral researchers are employed as research/teaching assistants and paid according to the Scale 10 of the CAO table of salaries [Appendix B, NE4-NE6]. The exact initial salary, which will correspond to a grade within Scale 10, depends on previous relevant experience and family situation. Min and Max values shown in the table 16 correspond to the grades 0 and 12 within the Scale 10 [Appendix B].

Working hours for both PhD candidates and postdoctoral researchers, in full time positions, are 38 hours /week.

Switzerland

Salaries of PhD candidates and postdoctoral researchers are not uniform across the country; each university defines its own base values and increasing steps. *Min* and *Max* values shown in table 16 are calculated averages of gross salaries paid to a first and a third year PhD and postdoctoral researcher in a full time position (41 hours per week) and 100% employment rate at five Cantonal Universities (Basel, Bern, Geneva, Neuchatel, Zurich) and the two Federal Institutes of Technology (EPFL and ETHZ) [SW8]. Note that in general not all PhD positions correspond to a 100% employment rate, depending on the area, department, teaching and supervision duties involved, this can correspond to 75% or 50% of a full rate salary, although working hours remain at 41 hours/week. In Informatics and Engineering, considered fields of high demand in Switzerland, generally PhDs contracts correspond to a 100% position.

8.3 Salaries: Professors

Table 17 presents the monthly gross salaries paid to professors in the surveyed countries. They are only meaningful in connection with the country-specific notes that follow the table. When comparing salary across countries please bear in mind that:

- Taxation and social welfare systems are different (in some countries people contribute from their gross salary while in others contributions are paid by the state)
- Career progressions are different (some are time based, others are determined by individual and/or local negotiations, others are a mix)
- Overall salary in some countries may be higher due to optional bonuses/incentives depending on role/function

Table 17. Professor salaries						
	Assistant Professor		Associate Professor		Full Professor	
	Min	Max	Min	Max	Min	Max
Germany	3,988	3,596	4,108	4,651	4,988	5,612
Italy	2,908		4,236	6,916	6,036	8,842
Netherlands	3,195	4,970	4,428	5,920	4,904	7,142
Switzerland	9,181	12,919	10,178	14,346	11,649	16,389
	Maître de Conférences			Professeur des Universités		
France	2,102		3,801	3,047		5,390

France

Professor (*Maîtres de Conférences* and *Professeur des Universités*) salaries and career progression in France are regulated by the Ministère de l'enseignement Supérieur et de la Recherche (Ministry of Higher Education and Research). The system is strongly centralized; salaries for a given category are exactly the same across the country and in all universities and other public higher education institutions [FR9]. Working hours for a full time position are 35 hours/week.

Maîtres de Conférences positions are divided in two levels: a *classe normale* comprising eight pay grades and a *hors-classe* comprising eight pay grades [FR5, FR10]. *Professeur des Universités* positions are divided in three levels: *a deuxième classe* comprising eight pay grades; a *première classe* comprising seven pay grades and a *classe exceptionnelle* comprising five pay grades [FR6, FR10].

Min values shown in table 17 correspond to the salary paid at the beginning of the career in both categories (i.e. first pay grade at *classe normale* and *deuxième classe*, respectively) [FR10]. Max values correspond to the highest pay grade in the *classe normale* for *Maîtres de Conférences* and in the *première classe* for *Professeur des Universités* [FR10].

For *Maîtres de Conférences* the salary in the highest pay grade of the level *hors-classe* is € 4,458.97, while for *Professeur des Universités* the highest pay grade of the level *classe exceptionnelle* is € 6,111.99 [FR10].

In a given level, salary progression (moving to a higher pay grade) is awarded automatically after given periods of time, which are defined by the statutory regulations of the group. Promotion to a higher level, in the same category, on the contrary is not granted automatically for seniority, but involves a performance review process. To move between categories, from a *Maîtres de Conférences* to a *Professeur des Universités* position, requires the application to a new available position through a specific process called *concours*.

Germany

Professor salaries in Germany are since 2005 regulated by the new federal system of remuneration W (*Bundesbesoldungsordnung W*), which replaced the old C salary scheme (*Bundesbesoldungsordnung* C) [GE14, GE17-GE18]. The pay regulation W applies to professors, as well lecturers and scientific assistants, and contains the pay grades W1, W2 und W3 which apply to *Juniorprofessor*, *Außerordentlicher Professor* and *Ordentlicher Professor*, respectively [Appendix B, GE14, GE17-GE18].

In the remuneration system W the financial rewarding for seniority is replaced by a system with a base salary added by family allowances and, in case of grades W2 and W3, performance bonuses for outstanding achievements in research, teaching, promotion of young scientists and undertaking of special administrative and management functions in the university (rector, dean, chair, etc). The criteria for the payment of performance bonuses are defined independently by each state (*Bundesländer*) and university regulations, but can vary significantly among different areas and depend on contractual negotiations [GE19].

Table 17 shows the base gross salaries in the pay grades W1, W2 and W3 (as of October 2012) without any addition of bonuses or allowances. Min and Max values shown correspond to the base salaries paid in regions Berlin and Baden-Württemberg, respectively. The national averages of the base salaries in the different grades are: € 4,056.43 (W1), € 4,625.88 (W2) and € 5,604.87 (W3) Euros [Appendix B, GE20]. Working hours for a full time position are 40 hours/week.

Some further peculiarities affect the salary data for Germany. Professors have a special status ("*Beamte*") in which they do not pay for their pensions; the employer also pays for health insurance, and there is a premium for families, initially small but growing with the number of children. In addition a percentage of W2 professors, and a higher percentage of W3 professors, get a performance bonus. As a consequence, some German professors consulted for the present report consider that table 17 underestimates the actual professor salaries by 25% to 30%.

Italy

Professor salaries and career progression in Italy are regulated by the national government. The system is strongly centralized and the salaries and progression steps for the different categories are the same across the country, and in all universities or other public higher education institutions. Payment grades and progression steps are defined by the salary tables published by the government. The last revision of the salary tables dates from December 2011, after the reform of the academic career system (see Section 7.4).

Professors in Italy receive a thirteenth salary; to allow a better comparison with the other countries, the gross monthly salaries presented here were calculated dividing the annual gross salary (*annuo lordo*) by twelve (not thirteen) [Appendix B].

Salaries shown in table 17 for Assistant Professors (*Ricercatori*) consider academics taking employment after the reform, i.e. the salary is constant throughout the three-years fixed-term appointment (see Section 7.4). For Assistant Professors employed before the 2011 reform, salary grades can range from € 2,908 and € 5,423, corresponding to 35 years of seniority [IT6, Appendix B]. In the old system Assistant Professor positions were not fixed-term, after the first three years, tenure could be reached and a career as Assistant Professor established, without necessarily promotion to a higher level professorship.

Min and Max values shown in table 17 for Associate Professors (*Professori Associati*) correspond to the salary at the beginning of the career, after the 2011 reform, therefore considering a position which is tenured from the beginning of the appointment (see Section 7.4), and after 27 years of seniority in the same position [IT6, Appendix B].

Min and Max values shown in table 17 for Full Professors (*Professori Ordinari*) correspond to the salary at the beginning of the career, after the reform, and therefore considering a position which is tenured from the beginning of the appointment (see details in Section 7.4), and after 20 years of seniority in the same position [IT3, Appendix B].

For all three categories the old salary system was based on automatic salary increase every two years, in the new system instead, every three years a professor has to apply for a salary increase and will be evaluated according to rules defined by each university [IT4]. Working hours for a full time position are 38 hours/week.

Please note that the retirement ages, 35, 27 and 20 years of seniority for Assistant, Associate and Full Professor, respectively, were chosen as a reasonable reference, not necessarily all Professors will retire exactly after this amount of years in the respective positions [Enrico Nardelli, personal communication].

It is important to underline that professors in Italy receive a 13th salary, however to allow a better comparison among the different countries values shown on the table 16 for Italy were calculated dividing the annual gross values (*annuo lordo*) by twelve, and not thirteen [Appendix B].

Netherlands

Professor career regulations and salaries in Netherlands are defined by the collective agreement (CAO) of Dutch Universities set by the Association of Universities in the Netherlands (VSNU) [NE6]. Salaries scales and grades are defined by the CAO table of salaries [Appendix B, NE6]. The full-time working hours amount to 38 hours/week.

The two positions of *Universitair Docent* (UD2 and UD1) allow a career from salary scale 10 to salary scale 11 (UD2), or from salary scale 11 to salary scale 12 (UD1). The two positions of *Universitair Hoofddocent* (UHD2 and UHD1) allow a career within salary scale 13 (UHD2) and salary scale 14 (UHD1). The two positions of *Hoogleraar* (H2 and H1) allow a career from salary scale 15 to scale 16 in position H2 and scale 17 to scale 18 in position H1, respectively [NE4-NE6]. *Hoogleraar 2* are in general the regular full professor positions in Dutch universities, positions of *Hoogleraar 1* are only appointed in cases of special higher responsibilities [Jan van Leeuwen, personal communication].

Within a given scale the initially salary grade is determined by age and experience. As a rule, salary progression within the same pay scale is granted every year after an annual performance review. Promotion to a higher pay scale in the same category (e.g. from a UHD2 (scale13) to a UHD1 (scale 14) position) is not automatically granted on the sole basis of seniority. In this case a more thorough promotion process is established, to be promoted the candidate needs to perform conceptual and coordinating tasks in teaching and research that match the job profile of the higher position. Promotion to a different category (e.g. from a UHD1 to H2 position) is only possible via a new recruitment and selection procedure to fill a new vacant position [NE4-NE5]. This salary progression scheme is generally applied in the whole country, although there might be occasionally variations in different universities where professorships and different career tracks can be mapped slightly differently to the salary scales [Jan van Leeuwen, personal communication].

Switzerland

Professor salaries vary across Switzerland. Each canton defines its own base values and increasing steps; the salaries at the two Federal institutes of Technology (EPFL and ETHZ, the only two federal universities) are defined by the federal government. In the cantonal universities, salaries are defined by grades (*Lohnstufe*) in specific pay scales (*Lohnklasse*) [SW6]. At EPFL and ETH a minimum and a maximum salary is defined but there are no predefined grades and progression steps in between [SW6].

In table 17, Min and Max values are averages of minimum and maximum gross salaries paid to professors at five Cantonal Universities (Basel, Bern, Geneva, Neuchatel, Zurich) and EPFL/ETHZ in a full-time position (41 hours/week) and 100% employment rate [SW6].

9 Conclusion and outlook

The facts and figures presented in this report provide a wealth of information on European informatics education, until now not available at a comparable European basis. They show the wide diversity across countries, in particular regarding salaries but also for degrees and student enrollments.

The intent of the present work, in line with the charter of Informatics Europe, is to obtain and publish such data for Europe as a whole, not just for specific countries. For the first edition of the report, the decision was made to favor accuracy over generality. As a result, the document covers the countries for which precise and reliable data was available; the extrapolation to the rest of Europe, in the case of student numbers, is just a rough calculation that can give no more than an order of magnitude. It is the goal of Informatics Europe to continue updating this report, refining the analysis and extending it to new countries while respecting the same rules of accuracy that have been applied to this first version.

In this effort we will be highly dependent on contributions from member of the informatics community who have access to reliable sources in their respective countries. We urge them to contact the authors and provide them with the relevant sources of information.

Such input is also welcome in the case of countries already covered; the authors will be grateful for any comments on the data and sources, and any correction to errors, omissions and misunderstandings that may exist in the 2008-2012 edition. More generally, we welcome reader feedback on all aspects of this report.

Any serious policy must be based on the knowledge of facts. The European Informatics community crucially needs solid data. With the help of that community, Informatics Europe is committed to turning the collection, verification and publication of data into an ongoing activity, of which the present report is just the first iteration.

Appendix A: References and sources consulted

Denmark

DK1. Studyindenmark.dk, Danish Agency for Universities and Internationalisation, http://studyindenmark.dk/study-in-denmark/danish-higher-education-institutions/universities

DK2. StatBank Denmark. Subject: Education. All data presented is available for download (in English) under the theme "Education and Knowledge" at: http://www.statbank.dk/statbank5a/default.asp?w=1920

DK3. The Danish Education System, Danish Agency for Universities and Internationalisation, 2011.

Europe

EU1. Filling the Gaps, E-Skills and Education for Digital Jobs. Launch of the Grand Coalition for Digital Jobs. Conference Report, European Commission, April 2013.

EU2. Report for the European Commission "Anticipating the Evolution of the Supply and Demand of e-Skills in Europe (2010-2015)" Empirica and IDC Europe, December 2009. Updated forecast presented at the European e-Skills Conference on 13 December 2011 in Brussels.

EU3. Exploiting the Employment Potential of ICTs — Accompanying the document "Communication from the Commission to the European Parliament, the Council, the European Social and Economic Committee and the Committee of the Regions. Towards a Job-Rich Recovery." European Commission, April 2012.

France

FR1. Ministère de l'Enseignement Supérieur et de la Recherche: http://www.enseignementsup-recherche.gouv.fr/cid56329/les-personnels-de-la-recherche.html.

FR2. Ministère de l'Enseignement Supérieur et de la Recherche http://www.enseignementsup-recherche.gouv.fr/cid31772/plan-carrieres-mesures-pour-les-doctorants.html

FR3. Observatoire de l'emploi scientifique. L'état des lieux de l'emploi scientifique en France. Rapport 2009. Ministère de L'enseignement Supérieur et de la Recherche.

FR4. Observatoire de l'emploi scientifique. L'état des lieux de l'emploi scientifique en France. Février 2007. Ministère délégué à l'Enseignement supérieur et à la Recherche.

FR5. Ministère de l'Enseignement Supérieur et de la Recherche http://www.enseignementsup-recherche.gouv.fr/cid22657/maitres-conferences.html.

FR6. Ministère de l'Enseignement Supérieur et de la Recherche http://www.enseignementsup-recherche.gouv.fr/cid22705/professeur-des-universites.html.

FR7. INRIA recruitment web page : PhD (http://www.inria.fr/en/institute/recruitment/offers/phd/faq) and Postdoc (http://www.inria.fr/en/institute/recruitment/offers/post-doctoral-research-fellowships/faq)

FR8. CNRS employment webpage: http://www.cnrs.fr/fr/travailler/formation_recherche.htm

FR9. Thierry Chevaillier. French academics: between the professions and the civil service. Higher Education 41: 49–75, 2001.

FR10. http://www.emploitheque.org/grille-indiciaire-etat-Professeurs-des-universites-33 and http://www.emploitheque.org/grille-indiciaire-etat-Maitres-de-conferences-32

Germany

GE1. Hochschulen in Deutschland — Universitäten, Kunst- und Musikhochschulen, Fachhochschulen. HRK – Hochschulrektorenkonferenz, 2012 (http://www.hochschulkompass.de/hochschulen/download.html)

GE2. Fakultätentag Informatik der Bundesrepublik Deutschland, http://www.ft-informatik.de/

GE3. Einstieg Informatik, http://www.einstieg-informatik.de/index.php?article_id=355

GE4. Bildung und Kultur — Studierende an Hochschulen, Fachserie 11 Reihe 4.1. Wintersemester 2008/2009, Wintersemester 2009/2010, Wintersemester 2010/2011 Statistisches Bundesamt, Wiesbaden, 2008-2011.

GE5. Bildung und Kultur — Prüfungen an Hochschulen, Fachserie 11 Reihe 4.2. 2008, 2009, 2010. Statistisches Bundesamt, Wiesbaden, 2008-2010.

GE6. FAQs – Doing a doctorate in Germany, Research in Germany — Land of Ideas (The Federal Ministry of Education and Research (BMBF). DAAD Deutscher Akademischer Austauschdienst, September 2010.

GE7. Research in Germany — Land of Ideas. PhD in Germany (http://www.research-in-germany.de/info/51584/phd-in-germany.html)

GE8. Gewerkschaft Erziehung und Wissenschaft: (http://www.gew.de/Beschaeftige_in_Hochschule_und_Forschung.html)

GE9. Research in Germany — Land of Ideas. Junior Researchers & Postdocs (http://www.research-in-germany.de/info/51748/junior-researchers.html)

GE10. Gero Federkeil, Florian Buch. 2007. Fünf Jahre Juniorprofessur — Zweite CHE-Befragung zum Stand der Einführung. CHE Centrum für Hochschulentwicklung.

GE11. From postdoc to full professor: career opportunities for young researchers. Research in Germany Newsletter. Issue 19, December 2012/January 2013.

GE12. Academics.de: Bewerbung und Karrierewege: Habilitation und Professur (http://www.academics.de/wissenschaft/habilitation_46020.html)

GE13. http://wissenschaftlicher-mitarbeiter.com/category/wissenschaftliche-mitarbeiter

GE14. Der Deutsche Hochschulverband: (http://www.hochschulverband.de/cms1/infocenter.html)

GE15. http://oeffentlicher-dienst.info/tv-l/tr/2013/

GE16. RWTH Aachen University. Chair for Computational Analysis of Technical Systems. BAT and TV Salary Scale (http://www.cats.rwth-aachen.de/jobs/bat).

GE17. Gesetz zur Reform der Professorenbesoldung (Professorenbesoldungsreformgesetz – ProfBesReformG). Bundesgesetzblatt Jahrgang 2002 Teil I Nr. 11, ausgegeben zu Bonn am 22. Februar 2002.

GE18. http://www.w-besoldung.net/

GE19. Hubert Detmer, "Black Box und Mythos W, Auswertung einer DHV-Befragung", Forschung & Lehre 1/2011.

GE20. Der Deutsche Hochschulverband: Grundgehälter und Besoldungsanpassungen. Besoldungstabelle W-Besoldung mit Stand: Oktober 2012.

Italy

IT1. http://cercauniversita.cineca.it – search for university entities ("*strutture*")

IT2. Statistical Office of the Ministero dell'Istruzione, dell'Università e della Ricerca. http://statistica.miur.it/ustat/ Statistiche/IU_home.asp – searches for enrolled students ("*Iscritti*"), for bachelors/masters ("*Laureati*"), for Phd ("*Post-laurea*")

IT3. http://www.dottorato.it/adi/

IT4. Legge 30 dicembre 2010, n. 240 - Norme in materia di organizzazione delle università, di personale accademico e reclutamento, nonché delega al Governo per incentivare la qualità e l'efficienza del sistema universitario. http://www.camera.it/parlam/leggi/10240l.htm

IT5. Ministero dell'Istruzione, dell'Università e della Ricerca. Aumento dell'importo annuale lordo delle borse di dottorato di ricerca: http://attiministeriali.miur.it/anno-2008/giugno/dm-18062008-%281%29.aspx

IT6. Decreto del Presidente della Repubblica 15 dicembre 2011, n. 232 - Regolamento per la disciplina del trattamento economico dei professori e dei ricercatori universitari, a norma dell'articolo 8, commi 1 e 3 della legge 30 dicembre 2010, n. 240. http://gazzette.comune.jesi.an.it/2012/33/1.htm

Netherlands

NE1. Research Universities in The Netherlands. Association of Universities in the Netherlands (VSNU), The Hague, 2012. http://redactie.vsnu.nl/Universities/Research-universities.htm

NE2. The Higher Education Qualifications Framework in the Netherlands, a presentation for compatibility with the framework for Qualifications of the European Higher Education Area, Association of Universities in the Netherlands (VSNU), The Hague, 2008.

NE3. Centraal Bureau voor de Statistiek. Statline. *Thema: Onderwijs*. All data presented is available for download (in Dutch) at: http://statline.cbs.nl/StatWeb/dome/?LA=NL

NE4. University of Maastricht: Guidelines for the Appointment, Salary Grading and Promotion of Academic Staff, 2005

NE5. University of Utrecht: University regulation WP-FLOW II. Job profiles, careers and the rating of academic staff, 2008

NE6. Collective Labour Agreement (CAO) of Dutch Universities. 1 March 2010 — 1 January 2011. Association of Universities in the Netherlands (VSNU), The Hague, 2012.

Switzerland

SW1. Swissuniversity (http://www.swissuniversity.ch/index.htm)

SW2. SWITCH (http://www.switch.ch/edu/educ_orgs.html)

SW3. Bildung und Wissenschaft — Lage und Grösse der Universitären Hochschulen in der Schweiz, 2011. Neuchatel, 2011.

SW4. Bildung und Wissenschaft — Studierende an den universitären Hochschulen 2008/09-2010/11. Bundesamt für Statistik BFS, Neuchatel , 2009-2011.

SW5 Bildung und Wissenschaft — Abschlüsse der universitären Hochschulen 2008-2010. Bundesamt für Statistik BFS, Neuchatel , 2009-2011.

SW6.

-Practical Guide for PhD Candidates at EPFL Association du Corps Intermédiaire de l'EPFL, 2010.

-AVETH Survival Guide 3rd Edition, AVETH, 2012

-http://www.graduates.uzh.ch/index_en.html

-http://phd.epfl.ch/

SW7

-Verordnung über das wissenschaftliche Personal der Eidgenössischen Technischen Hochschule Zürich, 2011

-http://www.researchers.uzh.ch/juniorresearchers/postdoc_en.html

SW8

Universität Basel:

    -Übersicht: Personalkategorien der Universität Basel. gemäss Ordnung für das Wissenschaftliche Personal an der Universität Basel vom 22. März 2007.

-Lohntabelle gültig ab 1.1.2011.

-Personalordnung der Universität Basel, 2009.

Universität Bern:

-Personalamt des Kantons Bern. Gehaltsklassentabelle ab 01.01.2011 Kantonspersonal.

-Der Regierungsrat des Kantons Bern. Personalverordnung, 2004.

Université de Genève:

-Le Conseil d'Etat de la République et canton de Genève. Règlement sur le personnel de l'Université, 2009

-Etat de Geneve, Instruction Publique Enseignement Universitaire, Bareme Applicable Des Le 1er janvier 2011.

Université de Neuchâtel:

-Assitants Doctorants Tarifs 2011.

-Assistants Post-doctorants Tarifs 2011.

-Professeurs catégorie A (Professeur ordinaire ou extraordinaire) Tarifs 2011.

-Professeurs catégorie B (Professeur assistant ou directeur de recherche) Tarifs 2011.

Universität Zürich:

-Personalabteilung: Einreihungsrichtlinien für wissenschaftliche Funktionen, 2011.

- Forschung und Nachwuchsförderung: Wissenschaftliche Positionen an der Universität Zürich, 2011.

-http://www.researchers.uzh.ch/juniorresearchers/assistantprofessor_en.html

-Personalverordnung der Universität Zürich, 1999.

-Personalamt des Kantons Zürich. Beträge der Lohnklassen 2011.

ETH/EPFL

- Richtlinien des Präsidenten über das Assistenzprofessuren-System an der ETH Zürich, 2008

-Verordnung über das wissenschaftliche Personal der Eidgenössischen Technischen Hochschule Zürich, 2011

-Verordnung des ETH-Rates über die Professorinnen und Professoren der Eidgenössischen Technischen Hochschulen, 2011.

UK

UK1. HESA — Higher Education Statistics Agency. Students and qualifiers at UK HE institutions. Table: 2010/11 students by Institution

UK2. Council of Professors and Heads of Computing (http://www.cphc.ac.uk)

UK3. The Scottish Informatics and Computer Science Alliance (http://www.sicsa.ac.uk)

UK4. HESA — Higher Education Statistics Agency. Students and qualifiers at UK HE institutions (http://www.hesa.ac.uk/content/view/1897/706/)

UK5. HESA — Higher Education Statistics Agency. Student Definitions 2010/11 (http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=2413&Itemid=278)

Appendix B: Salary Tables

Germany

Fig.B1: Tarifvertrag im Öffentlichen Dienst (TV-L). PhD candidates and postdoctoral researchers initial salaries fall within the "Entgeltgruppe" 13.

Anlage B zum TV-L

Entgelttabelle für die Entgeltgruppen 1 bis 15
- Gültig ab 1. Januar 2012 -

Entgelt-gruppe	Grundentgelt		Entwicklungsstufen			
	Stufe 1	Stufe 2	Stufe 3	Stufe 4	Stufe 5	Stufe 6
15	3.817,29	4.232,36	4.388,68	4.943,91	5.364,37	
14	3.456,14	3.833,46	4.054,47	4.388,68	4.900,78	
13	3.186,61	3.536,99	3.725,66	4.092,21	4.598,91	
12	2.857,79	3.170,43	3.612,45	4.000,57	4.501,88	
11	2.760,76	3.057,24	3.278,25	3.612,45	4.097,60	
10	2.658,34	2.949,43	3.170,43	3.391,45	3.811,91	
9 [1]	2.351,08	2.604,42	2.733,81	3.089,58	3.369,89	[2]
8	2.200,15	2.437,33	2.545,13	2.647,56	2.760,76	2.830,84 [3]
7	2.059,99 [4]	2.281,00	2.426,55	2.534,36	2.620,61	2.696,06
6	2.022,26	2.237,88	2.345,69	2.453,50	2.523,58	2.599,04 [5]
5	1.936,01	2.140,85	2.248,67	2.351,08	2.431,94	2.485,84
4	1.838,98 [6]	2.038,44	2.173,19	2.248,67	2.324,13	2.372,64
3	1.812,03	2.006,09	2.059,99	2.146,24	2.216,32	2.275,61
2	1.671,88	1.849,76	1.903,67	1.957,57	2.081,56	2.210,93
1	Je 4 Jahre	1.488,60	1.515,55	1.547,89	1.580,24	1.661,10

Für Beschäftigte im Pflegedienst, die unter § 43 fallen

		Stufe 3	Stufe 4	Stufe 5	Stufe 6
[1]	E 9 b	2.830,84	3.003,33	3.213,56	3.413,00

[2]   3.590,89
[3]   2.873,95
[4]   2.113,90
[5]   2.658,34
[6]   1.892,90

Fig.B2: Base salaries of the federal remuneration system W (Bundesbesoldungsordnung W). Pay grades W1, W2 und W3 apply to Juniorprofessor, Außerordentlicher Professor and Ordentlicher Professor, respectively. Table provided by *Der Deutsche Hochschulverband* [GE20]

Besoldungstabelle W-Besoldung mit Stand: Oktober 2012 (Monatsgrundgehälter in Euro)

Besoldung	W 1	W 2	W 3
Bund	4.056,43	4.625,88	5.604,87
Baden-Württemberg	3.988,35*	4.650,68	5.612,29
Bayern	3.889,20	4.500,60	5.366,75
Berlin	3.596,06	4.107,90	4.988,16
Brandenburg	3.764,92	4.295,30	5.207,46
Bremen	3.816,31	4.354,02	5.278,75
Hamburg	3.869,08	4.401,56	5.317,32
Hessen	3.807,40	4.349,32	5.281,32
Mecklenburg – Vorpommern	3.816,31	4.354,02	5.278,75
Niedersachsen	3.819,99	4.358,20	5.283,84
Nordrhein – Westfalen	3.816,31	4.354,02	5.278,75
Rheinland – Pfalz	3.978,21	4.606,63	5.496,94
Saarland	3833,15 **	4.362,92	5.273,99
Sachsen	3.837,86	4.375,58	5.300,31
Sachsen – Anhalt	3.837,86	4.375,58	5.300,31
Schleswig – Holstein	3.830,36	4.367,02	5.289,94
Thüringen	3.894,55	4.423,04	5.344,33

* Bei Beamten der Besoldungsgruppe W 1 ist gemäß § 23 Besoldungsgesetz BW für die Dauer von drei Jahren nach Entstehen des Anspruchs das Grundgehalt um 4 Prozent abzusenken. Diese Besoldungsabsenkung gilt nicht für Beamte, denen spätestens am 31. Dezember 2004 Dienstbezüge im Geltungsbereich des Besoldungsgesetzes BW zugestanden haben oder denen bis zur Entstehung des Anspruchs auf Dienstbezüge die Dienstbezüge aus einem anderen Amt im Geltungsbereich des Besoldungsgesetzes BW zugestanden haben.

** Für nach dem 31.12.2010 neuberufene Juniorprofessorinnen/-professoren vermindert sich das Grundgehalt grundsätzlich um 370 Euro für die Dauer von 2 Jahren; Ausnahmen hiervon sind allerdings möglich bei einem Mangel an geeigneten Bewerbern. Die Vergütungsabsenkung gilt ferner nicht für Beamte, denen aus einem vor dem 1.1.2011 übertragenen Eingangsamt der Besoldungsgruppe A 9 – A 13 ein Anspruch auf Dienstbezüge zustand (vgl. § 3 b Abs. 1 Haushaltsbegleitgesetz 2011).

Netherlands

Fig.B3: CAO table of salaries defined by the collective agreement (CAO) of Dutch Universities set by the Association of Universities in the Netherlands (VSNU) [NE6]. Numbers valid from 2009 and still current in 2012.

Table 2.3 Salary table as from 01/01/2009

Grade	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	H2	H1	P	SA
0	1,477	1,507	1,539	1,574	1,633	1,750	1,986	2,267	2,492	2,379	3,195	3,872	4,428	4,651	5,043	5,463	5,920	6,502	4,904	5,463	2,042	
1	1,539	1,574	1,574	1,604	1,704	1,801	2,042	2,379	2,612	2,492	3,315	3,983	4,543	4,763	5,183	5,611	6,109	6,709	5,043	5,611	2,379	
2	1,604	1,633	1,633	1,668	1,801	1,928	2,154	2,492	2,744	2,612	3,422	4,095	4,651	4,904	5,321	5,763	6,303	6,921	5,183	5,763	2,492	1,801
3	1,633	1,704	1,704	1,750	1,928	2,042	2,267	2,612	2,861	2,744	3,530	4,208	4,763	5,043	5,463	5,920	6,502	7,142	5,321	5,920	2,612	1,928
4	1,668	1,750	1,801	1,864	1,986	2,099	2,324	2,682	2,977	2,861	3,636	4,315	4,904	5,183	5,611	6,109	6,709	7,371	5,463	6,109		2,099
5	1,704	1,801	1,864	1,928	2,042	2,154	2,379	2,744	3,088	2,977	3,755	4,428	5,043	5,321	5,763	6,303	6,921	7,603	5,611	6,303		
6	1,750	1,864	1,928	1,986	2,099	2,211	2,433	2,801	3,195	3,088	3,872	4,543	5,183	5,463	5,920	6,502	7,142	7,846	5,763	6,502		
7		1,928	1,986	2,042	2,154	2,267	2,492	2,861	3,315	3,195	3,983	4,651	5,321	5,611	6,109	6,709	7,371	8,096	5,920	6,709		
8			2,042	2,099	2,211	2,324	2,550	2,923	3,422	3,315	4,095	4,763	5,390	5,763	6,303	6,921	7,603	8,355	6,109	6,921		
9			2,099	2,154	2,267	2,379	2,612	2,977		3,422	4,208	4,904		5,920	6,502	7,142	7,846	8,622	6,303	7,142		
10				2,211	2,324	2,433	2,682	3,028		3,530	4,315	4,970							6,502	7,371		
11										3,636	4,374								6,709	7,603		
12										3,755									6,921	7,846		
13																			7,142	8,096		
14																				8,355		
15																				8,622		

Italy

Fig.B4.1: Salaries table for Assistant Professors (*Ricercatore Universitari*). Numbers and system progression valid after the 2011 reform [IT4].

Allegato 3 - art. 3, comma 6

Trattamento economico annuo lordo - Ricercatori a tempo determinato assunti secondo il nuovo regime

Tempo pieno

Stipendio tabellare (13 mensilità)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo
20375,31	3.868,22	10.654,53	34.898,06

Fig.B4.2: Salary table for Assistant Professors (*Ricercatore Universitari*) showing a comparison of the old system for salary progression, based on biennial increase steps and the new system based on triennial increase steps [IT4].

Allegato 1 - art. 2, comma 1

c) Rimodulazione trattamento economico annuo lordo - Ricercatori Universitari
Tempo Pieno

Progressione economica per classi e scatti biennali					Rimodulazione progressione economica per classi triennali						Importi differenziali alla transizione	
Progressione economica per classi e scatti biennali	Stipendio tabellare (13 mensilità)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo (B)	Progressione economica per classi triennali	Stipendio tabellare (13 mensilità) **alla transizione** (C)	Stipendio tabellare (13 mensilità) **a regime** (D)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo regime triennale (E)	Variazione stipendio alla transizione (A-D)	Variazione lordo alla transizione (E-B)
0	20.375,31	3.868,22	10.654,53	34.898,06	0	20.375,31	20.375,31	3.868,22	10.654,53	34.898,06	0,00	0,00
0	20.375,31	3.868,22	10.654,53	34.898,06	0	20.375,31	20.375,31	3.868,22	10.654,53	34.898,06	0,00	0,00
1	22.005,34	4.512,92	10.654,53	37.172,79	0	22.005,34	20.375,31	4.512,92	10.654,53	37.172,79	1.630,03	0,00
1	22.005,34	4.512,92	10.654,53	37.172,79	1	22.005,34	23.635,35	4.512,92	10.654,53	37.172,79	-1.630,02	0,00
2	23.635,35	4.512,92	10.654,53	38.802,80	1	23.635,35	23.635,35	4.512,92	10.654,53	38.802,80	0,00	0,00
2	23.635,35	4.512,92	10.654,53	38.802,80	1	23.635,35	23.635,35	4.512,92	10.654,53	38.802,80	0,00	0,00
3	25.265,39	5.157,62	10.654,53	41.077,54	2	25.265,39	25.265,39	5.157,62	10.654,53	41.077,54	0,00	0,00
3	25.265,39	5.157,62	10.654,53	41.077,54	2	25.265,39	25.265,39	5.157,62	10.654,53	41.077,54	0,00	0,00
4	26.895,42	5.157,62	10.654,53	42.707,57	2	26.895,42	25.265,39	5.157,62	10.654,53	42.707,57	1.630,03	0,00
4	26.895,42	5.157,62	10.654,53	42.707,57	3	26.895,42	28.525,43	5.157,62	10.654,53	42.707,57	-1.630,02	0,00
5	28.525,43	5.802,32	10.654,53	44.982,28	3	28.525,43	28.525,43	5.802,32	10.654,53	44.982,28	0,00	0,00
5	28.525,43	5.802,32	10.654,53	44.982,28	3	28.525,43	28.525,43	5.802,32	10.654,53	44.982,28	0,00	0,00
6	30.155,45	6.447,03	10.654,53	47.257,01	4	30.155,45	30.155,45	6.447,03	10.654,53	47.257,01	0,00	0,00
6	30.155,45	6.447,03	10.654,53	47.257,01	4	30.155,45	30.155,45	6.447,03	10.654,53	47.257,01	0,00	0,00
7	31.964,79	6.447,03	10.654,53	49.066,35	4	31.964,79	30.155,45	6.447,03	10.654,53	49.066,35	1.809,34	0,00
7	31.964,79	6.447,03	10.654,53	49.066,35	5	31.964,79	33.774,12	6.447,03	10.654,53	49.066,35	-1.809,33	0,00
8	33.774,12	6.447,03	10.654,53	50.875,68	5	33.774,12	33.774,12	6.447,03	10.654,53	50.875,68	0,00	0,00
8	33.774,12	6.447,03	10.654,53	50.875,68	5	33.774,12	33.774,12	6.447,03	10.654,53	50.875,68	0,00	0,00
9	35.583,44	6.447,03	10.654,53	52.685,00	6	35.583,44	35.583,44	6.447,03	10.654,53	52.685,00	0,00	0,00
9	35.583,44	6.447,03	10.654,53	52.685,00	6	35.583,44	35.583,44	6.447,03	10.654,53	52.685,00	0,00	0,00
10	37.392,78	6.447,03	10.654,53	54.494,34	6	37.392,78	35.583,44	6.447,03	10.654,53	54.494,34	1.809,34	0,00
10	37.392,78	6.447,03	10.654,53	54.494,34	7	37.392,78	39.202,09	6.447,03	10.654,53	54.494,34	-1.809,31	0,00
11	39.202,09	6.447,03	10.654,53	56.303,64	7	39.202,09	39.202,09	6.447,03	10.654,53	56.303,64	0,00	0,00
11	39.202,09	6.447,03	10.654,53	56.303,64	7	39.202,09	39.202,09	6.447,03	10.654,53	56.303,64	0,00	0,00
12	41.011,43	6.447,03	10.654,53	58.112,98	8	41.011,43	41.011,43	6.447,03	10.654,53	58.112,98	0,00	0,00
12	41.011,43	6.447,03	10.654,53	58.112,98	8	41.011,43	41.011,43	6.447,03	10.654,53	58.112,98	0,00	0,00
13	42.820,75	6.447,03	10.654,53	59.922,31	8	42.820,75	41.011,43	6.447,03	10.654,53	59.922,31	1.809,33	0,00
13	42.820,75	6.447,03	10.654,53	59.922,31	9	42.820,75	44.630,07	6.447,03	10.654,53	59.922,31	-1.809,32	0,00
14	44.630,07	6.447,03	10.654,53	61.731,63	9	44.630,07	44.630,07	6.447,03	10.654,53	61.731,63	0,00	0,00
14	44.630,07	6.447,03	10.654,53	61.731,63	9	44.630,07	44.630,07	6.447,03	10.654,53	61.731,63	0,00	0,00
14	45.745,83	6.447,03	10.654,53	62.847,39	10	45.745,83	45.745,83	6.447,03	10.654,53	62.847,39	0,00	0,00
14	45.745,83	6.447,03	10.654,53	62.847,39	10	45.745,83	45.745,83	6.447,03	10.654,53	62.847,39	0,00	0,00
14	46.861,59	6.447,03	10.654,53	63.963,15	10	46.861,59	45.745,83	6.447,03	10.654,53	63.963,15	1.115,76	0,00
14	46.861,59	6.447,03	10.654,53	63.963,15	11	46.861,59	47.977,35	6.447,03	10.654,53	63.963,15	-1.115,76	0,00
14	47.977,35	6.447,03	10.654,53	65.078,90	11	47.977,35	47.977,35	6.447,03	10.654,53	65.078,90	0,00	0,00
14	47.977,35	6.447,03	10.654,53	65.078,90	11	47.977,35	47.977,35	6.447,03	10.654,53	65.078,90	0,00	0,00
14	49.093,10	6.447,03	10.654,53	66.194,66	12	49.093,10	49.093,10	6.447,03	10.654,53	66.194,66	0,00	0,00
14	49.093,10	6.447,03	10.654,53	66.194,66	12	49.093,10	49.093,10	6.447,03	10.654,53	66.194,66	0,00	0,00
14	50.208,86	6.447,03	10.654,53	67.310,42	12	50.208,86	49.093,10	6.447,03	10.654,53	67.310,42	1.115,76	0,00
14	50.208,86	6.447,03	10.654,53	67.310,42	13	50.208,86	51.324,62	6.447,03	10.654,53	67.310,42	-1.115,76	0,00
14	51.324,62	6.447,03	10.654,53	68.426,18	13	51.324,62	51.324,62	6.447,03	10.654,53	68.426,18	0,00	0,00
14	51.324,62	6.447,03	10.654,53	68.426,18	13	51.324,62	51.324,62	6.447,03	10.654,53	68.426,18	0,00	0,00

Fig.B4.3: Salary table for Associate Professors (*Professore Associati*). Numbers and system progression valid after the 2011 reform [IT4].

Allegato 2 - art. 3, comma 2

b) Prospetto Trattamento Economico - Professori Associati (II fascia) assunti secondo il nuovo regime

Tempo Pieno

Progressione economica per classi triennali	Stipendio tabellare (13 mensilità)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo
0	33.089,44	6.447,03	11.294,95	50.831,42
0	33.089,44	6.447,03	11.294,95	50.831,42
0	33.089,44	6.447,03	11.294,95	50.831,42
1	35.371,47	7.368,04	11.294,95	54.034,47
1	35.371,47	7.368,04	11.294,95	54.034,47
1	35.371,47	7.368,04	11.294,95	54.034,47
2	39.935,55	7.982,04	11.294,95	59.212,54
2	39.935,55	7.982,04	11.294,95	59.212,54
2	39.935,55	7.982,04	11.294,95	59.212,54
3	42.217,55	9.210,04	11.294,95	62.722,55
3	42.217,55	9.210,04	11.294,95	62.722,55
3	42.217,55	9.210,04	11.294,95	62.722,55
4	47.283,68	9.210,04	11.294,95	67.788,67
4	47.283,68	9.210,04	11.294,95	67.788,67
4	47.283,68	9.210,04	11.294,95	67.788,67
5	49.816,73	9.210,04	11.294,95	70.321,72
5	49.816,73	9.210,04	11.294,95	70.321,72
5	49.816,73	9.210,04	11.294,95	70.321,72
6	54.882,82	9.210,04	11.294,95	75.387,81
6	54.882,82	9.210,04	11.294,95	75.387,81
6	54.882,82	9.210,04	11.294,95	75.387,81
7	57.415,88	9.210,04	11.294,95	77.920,87
7	57.415,88	9.210,04	11.294,95	77.920,87
7	57.415,88	9.210,04	11.294,95	77.920,87
8	62.482,00	9.210,04	11.294,95	82.986,99
8	62.482,00	9.210,04	11.294,95	82.986,99
8	62.482,00	9.210,04	11.294,95	82.986,99
9	64.044,05	9.210,04	11.294,95	84.549,04
9	64.044,05	9.210,04	11.294,95	84.549,04
9	64.044,05	9.210,04	11.294,95	84.549,04
10	67.168,14	9.210,04	11.294,95	87.673,13
10	67.168,14	9.210,04	11.294,95	87.673,13
10	67.168,14	9.210,04	11.294,95	87.673,13
11	68.730,19	9.210,04	11.294,95	89.235,18
11	68.730,19	9.210,04	11.294,95	89.235,18
11	68.730,19	9.210,04	11.294,95	89.235,18
12	71.854,28	9.210,04	11.294,95	92.359,28
12	71.854,28	9.210,04	11.294,95	92.359,28
12	71.854,28	9.210,04	11.294,95	92.359,28

Fig.B4.4: Salary tables for Associate Professors (*Professore Associati*) showing a comparison between the old system for salary progression, based on biennial increase steps and the new system, based on triennial increase steps [IT4].

Allegato 1 - art. 2, comma 1

b) Rimodulazione trattamento economico annuo lordo - Professori Associati (II fascia)

Tempo Pieno

Progressione economica per classi e scatti biennali					Rimodulazione progressione economica per classi triennali						Importi differenziali alla transizione	
Progressione economica per classi e scatti biennali	Stipendio tabellare (13 mensilità)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo (B)	Progressione economica per classi triennali	Stipendio tabellare (13 mensilità) alla transizione (C)	Stipendio tabellare (13 mensilità) a regime (D)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo regime triennale	Variazione stipendio alla transizione (A-D)	Variazione lordo alla transizione (E-B)
0	28.525,38	5.526,04	11.294,95	45.346,37	0	28.525,38	28.525,38	5.526,04	11.294,95	45.346,37	0,00	0,00
0	28.525,38	5.526,04	11.294,95	45.346,37	0	28.525,38	28.525,38	5.526,04	11.294,95	45.346,37	0,00	0,00
1	30.807,41	6.447,03	11.294,95	48.549,39	0	30.807,41	28.525,38	6.447,03	11.294,95	48.549,39	2.282,03	0,00
1	30.807,41	6.447,03	11.294,95	48.549,39	1	30.807,41	33.089,44	6.447,03	11.294,95	48.549,39	-2.282,03	0,00
2	33.089,44	6.447,03	11.294,95	50.831,42	1	33.089,44	33.089,44	6.447,03	11.294,95	50.831,42	0,00	0,00
2	33.089,44	6.447,03	11.294,95	50.831,42	1	33.089,44	33.089,44	6.447,03	11.294,95	50.831,42	0,00	0,00
3	35.371,47	7.368,04	11.294,95	54.034,47	2	35.371,47	35.371,47	7.368,04	11.294,95	54.034,47	0,00	0,00
3	35.371,47	7.368,04	11.294,95	54.034,47	2	35.371,47	35.371,47	7.368,04	11.294,95	54.034,47	0,00	0,00
4	37.653,50	7.368,04	11.294,95	56.316,50	2	37.653,50	35.371,47	7.368,04	11.294,95	56.316,50	2.282,03	0,00
4	37.653,50	7.368,04	11.294,95	56.316,50	3	37.653,50	39.935,55	7.368,04	11.294,95	56.316,50	-2.282,04	0,00
5	39.935,55	8.289,04	11.294,95	59.519,54	3	39.935,55	39.935,55	8.289,04	11.294,95	59.519,54	0,00	0,00
5	39.935,55	8.289,04	11.294,95	59.519,54	3	39.935,55	39.935,55	8.289,04	11.294,95	59.519,54	0,00	0,00
6	42.217,55	9.210,04	11.294,95	62.722,55	4	42.217,55	42.217,55	9.210,04	11.294,95	62.722,55	0,00	0,00
6	42.217,55	9.210,04	11.294,95	62.722,55	4	42.217,55	42.217,55	9.210,04	11.294,95	62.722,55	0,00	0,00
7	44.750,63	9.210,04	11.294,95	65.255,62	4	44.750,63	42.217,55	9.210,04	11.294,95	65.255,62	2.533,07	0,00
7	44.750,63	9.210,04	11.294,95	65.255,62	5	44.750,63	47.283,68	9.210,04	11.294,95	65.255,62	-2.533,05	0,00
8	47.283,68	9.210,04	11.294,95	67.788,67	5	47.283,68	47.283,68	9.210,04	11.294,95	67.788,67	0,00	0,00
8	47.283,68	9.210,04	11.294,95	67.788,67	5	47.283,68	47.283,68	9.210,04	11.294,95	67.788,67	0,00	0,00
9	49.816,73	9.210,04	11.294,95	70.321,72	6	49.816,73	49.816,73	9.210,04	11.294,95	70.321,72	0,00	0,00
9	49.816,73	9.210,04	11.294,95	70.321,72	6	49.816,73	49.816,73	9.210,04	11.294,95	70.321,72	0,00	0,00
10	52.349,79	9.210,04	11.294,95	72.854,78	6	52.349,79	49.816,73	9.210,04	11.294,95	72.854,78	2.533,06	0,00
10	52.349,79	9.210,04	11.294,95	72.854,78	7	52.349,79	54.882,82	9.210,04	11.294,95	72.854,78	-2.533,03	0,00
11	54.882,82	9.210,04	11.294,95	75.387,81	7	54.882,82	54.882,82	9.210,04	11.294,95	75.387,81	0,00	0,00
11	54.882,82	9.210,04	11.294,95	75.387,81	7	54.882,82	54.882,82	9.210,04	11.294,95	75.387,81	0,00	0,00
12	57.415,88	9.210,04	11.294,95	77.920,87	8	57.415,88	57.415,88	9.210,04	11.294,95	77.920,87	0,00	0,00
12	57.415,88	9.210,04	11.294,95	77.920,87	8	57.415,88	57.415,88	9.210,04	11.294,95	77.920,87	0,00	0,00
13	59.948,93	9.210,04	11.294,95	80.453,92	8	59.948,93	57.415,88	9.210,04	11.294,95	80.453,92	2.533,05	0,00
13	59.948,93	9.210,04	11.294,95	80.453,92	9	59.948,93	62.482,00	9.210,04	11.294,95	80.453,92	-2.533,07	0,00
14	62.482,00	9.210,04	11.294,95	82.986,99	9	62.482,00	62.482,00	9.210,04	11.294,95	82.986,99	0,00	0,00
14	62.482,00	9.210,04	11.294,95	82.986,99	9	62.482,00	62.482,00	9.210,04	11.294,95	82.986,99	0,00	0,00
14	64.044,05	9.210,04	11.294,95	84.549,04	10	64.044,05	64.044,05	9.210,04	11.294,95	84.549,04	0,00	0,00
14	64.044,05	9.210,04	11.294,95	84.549,04	10	64.044,05	64.044,05	9.210,04	11.294,95	84.549,04	0,00	0,00
14	65.606,09	9.210,04	11.294,95	86.111,09	10	65.606,09	64.044,05	9.210,04	11.294,95	86.111,09	1.562,05	0,00
14	65.606,09	9.210,04	11.294,95	86.111,09	11	65.606,09	67.168,14	9.210,04	11.294,95	86.111,09	-1.562,05	0,00
14	67.168,14	9.210,04	11.294,95	87.673,13	11	67.168,14	67.168,14	9.210,04	11.294,95	87.673,13	0,00	0,00
14	67.168,14	9.210,04	11.294,95	87.673,13	11	67.168,14	67.168,14	9.210,04	11.294,95	87.673,13	0,00	0,00
14	68.730,19	9.210,04	11.294,95	89.235,18	12	68.730,19	68.730,19	9.210,04	11.294,95	89.235,18	0,00	0,00
14	68.730,19	9.210,04	11.294,95	89.235,18	12	68.730,19	68.730,19	9.210,04	11.294,95	89.235,18	0,00	0,00
14	70.292,24	9.210,04	11.294,95	90.797,23	12	70.292,24	68.730,19	9.210,04	11.294,95	90.797,23	1.562,05	0,00
14	70.292,24	9.210,04	11.294,95	90.797,23	13	70.292,24	71.854,28	9.210,04	11.294,95	90.797,23	-1.562,05	0,00
14	71.854,28	9.210,04	11.294,95	92.359,28	13	71.854,28	71.854,28	9.210,04	11.294,95	92.359,28	0,00	0,00
14	71.854,28	9.210,04	11.294,95	92.359,28	13	71.854,28	71.854,28	9.210,04	11.294,95	92.359,28	0,00	0,00

Fig.B4.5: Salary table for Full Professors (*Professore Ordinari*). Numbers and system progression valid after the 2011 reform [IT4]

Allegato 2 - art. 3, comma 2

a) Trattamento Economico annuo lordo - Professori Ordinari (I fascia) assunti secondo il nuovo regime

Tempo Pieno

Progressione economica per classi triennali	Stipendio tabellare (13 mensilità)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo
0	49.808,74	10.525,78	12.096,12	72.430,64
0	49.808,74	10.525,78	12.096,12	72.430,64
0	49.808,74	10.525,78	12.096,12	72.430,64
1	56.235,67	11.402,92	12.096,12	79.734,71
1	56.235,67	11.402,92	12.096,12	79.734,71
1	56.235,67	11.402,92	12.096,12	79.734,71
2	59.449,13	13.157,21	12.096,12	84.702,46
2	59.449,13	13.157,21	12.096,12	84.702,46
2	59.449,13	13.157,21	12.096,12	84.702,46
3	66.583,04	13.157,21	12.096,12	91.836,37
3	66.583,04	13.157,21	12.096,12	91.836,37
3	66.583,04	13.157,21	12.096,12	91.836,37
4	70.149,99	13.157,21	12.096,12	95.403,32
4	70.149,99	13.157,21	12.096,12	95.403,32
4	70.149,99	13.157,21	12.096,12	95.403,32
5	77.283,88	13.157,21	12.096,12	102.537,21
5	77.283,88	13.157,21	12.096,12	102.537,21
5	77.283,88	13.157,21	12.096,12	102.537,21
6	80.850,82	13.157,21	12.096,12	106.104,15
6	80.850,82	13.157,21	12.096,12	106.104,15
6	80.850,82	13.157,21	12.096,12	106.104,15
7	87.984,73	13.157,21	12.096,12	113.238,06
7	87.984,73	13.157,21	12.096,12	113.238,06
7	87.984,73	13.157,21	12.096,12	113.238,06
8	90.184,35	13.157,21	12.096,12	115.437,68
8	90.184,35	13.157,21	12.096,12	115.437,68
8	90.184,35	13.157,21	12.096,12	115.437,68
9	94.583,59	13.157,21	12.096,12	119.836,92
9	94.583,59	13.157,21	12.096,12	119.836,92
9	94.583,59	13.157,21	12.096,12	119.836,92
10	96.783,21	13.157,21	12.096,12	122.036,54
10	96.783,21	13.157,21	12.096,12	122.036,54
10	96.783,21	13.157,21	12.096,12	122.036,54
11	101.182,46	13.157,21	12.096,12	126.435,79
11	101.182,46	13.157,21	12.096,12	126.435,79
11	101.182,46	13.157,21	12.096,12	126.435,79

Fig.B4.6: Salary tables for Full Professors (*Professore Ordinari)* showing a comparison between the old system for salary progression, based on biennial increase steps, and the new system, based on triennial increase steps [IT4].

Allegato 1 - art. 2, comma 1

a) Rimodulazione trattamento economico annuo lordo - Professori Ordinari (I fascia)

Tempo Pieno

Progressione economica per classi e scatti biennali					Rimodulazione progressione economica per classi triennali						Importi differenziali alla transizione	
Progressione economica per classi e scatti biennali	Stipendio tabellare (13 mensilità)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo (B)	Progressione economica per classi triennali	Stipendio tabellare (13 mensilità) **alla transizione** (C)	Stipendio tabellare (13 mensilità) **a regime** (D)	Assegno aggiuntivo (12 mensilità)	Indennità integrativa speciale (13 mensilità)	Totale annuo lordo regime triennale (E)	Variazione stipendio alla transizione (A-D)	Variazione lordo alla transizione (E-B)
0	40.168,34	7.894,33	12.096,12	60.158,79	0	40.168,34	40.168,34	7.894,33	12.096,12	60.158,79	0,00	0,00
0	40.168,34	7.894,33	12.096,12	60.158,79	0	40.168,34	40.168,34	7.894,33	12.096,12	60.158,79	0,00	0,00
1	43.381,82	9.210,04	12.096,12	64.687,98	0	43.381,82	40.168,34	9.210,04	12.096,12	64.687,98	3.213,48	0,00
1	43.381,82	9.210,04	12.096,12	64.687,98	1	43.381,82	46.595,27	9.210,04	12.096,12	64.687,98	-3.213,45	0,00
2	46.595,27	9.210,04	12.096,12	67.901,43	1	46.595,27	46.595,27	9.210,04	12.096,12	67.901,43	0,00	0,00
2	46.595,27	9.210,04	12.096,12	67.901,43	1	46.595,27	46.595,27	9.210,04	12.096,12	67.901,43	0,00	0,00
3	49.808,74	10.525,78	12.096,12	72.430,64	2	49.808,74	49.808,74	10.525,78	12.096,12	72.430,64	0,00	0,00
3	49.808,74	10.525,78	12.096,12	72.430,64	2	49.808,74	49.808,74	10.525,78	12.096,12	72.430,64	0,00	0,00
4	53.022,20	10.525,78	12.096,12	75.644,10	2	53.022,20	49.808,74	10.525,78	12.096,12	75.644,10	3.213,46	0,00
4	53.022,20	10.525,78	12.096,12	75.644,10	3	53.022,20	56.235,67	10.525,78	12.096,12	75.644,10	-3.213,47	0,00
5	56.235,67	11.841,49	12.096,12	80.173,28	3	56.235,67	56.235,67	11.841,49	12.096,12	80.173,28	0,00	0,00
5	56.235,67	11.841,49	12.096,12	80.173,28	3	56.235,67	56.235,67	11.841,49	12.096,12	80.173,28	0,00	0,00
6	59.449,13	13.157,21	12.096,12	84.702,46	4	59.449,13	59.449,13	13.157,21	12.096,12	84.702,46	0,00	0,00
6	59.449,13	13.157,21	12.096,12	84.702,46	4	59.449,13	59.449,13	13.157,21	12.096,12	84.702,46	0,00	0,00
7	63.016,08	13.157,21	12.096,12	88.269,41	4	63.016,08	59.449,13	13.157,21	12.096,12	88.269,41	3.566,95	0,00
7	63.016,08	13.157,21	12.096,12	88.269,41	5	63.016,08	66.583,04	13.157,21	12.096,12	88.269,41	-3.566,96	0,00
8	66.583,04	13.157,21	12.096,12	91.836,37	5	66.583,04	66.583,04	13.157,21	12.096,12	91.836,37	0,00	0,00
8	66.583,04	13.157,21	12.096,12	91.836,37	5	66.583,04	66.583,04	13.157,21	12.096,12	91.836,37	0,00	0,00
9	70.149,99	13.157,21	12.096,12	95.403,32	6	70.149,99	70.149,99	13.157,21	12.096,12	95.403,32	0,00	0,00
9	70.149,99	13.157,21	12.096,12	95.403,32	6	70.149,99	70.149,99	13.157,21	12.096,12	95.403,32	0,00	0,00
10	73.716,92	13.157,21	12.096,12	98.970,25	6	73.716,92	70.149,99	13.157,21	12.096,12	98.970,25	3.566,93	0,00
10	73.716,92	13.157,21	12.096,12	98.970,25	7	73.716,92	77.283,88	13.157,21	12.096,12	98.970,25	-3.566,96	0,00
11	77.283,88	13.157,21	12.096,12	102.537,21	7	77.283,88	77.283,88	13.157,21	12.096,12	102.537,21	0,00	0,00
11	77.283,88	13.157,21	12.096,12	102.537,21	7	77.283,88	77.283,88	13.157,21	12.096,12	102.537,21	0,00	0,00
12	80.850,82	13.157,21	12.096,12	106.104,15	8	80.850,82	80.850,82	13.157,21	12.096,12	106.104,15	0,00	0,00
12	80.850,82	13.157,21	12.096,12	106.104,15	8	80.850,82	80.850,82	13.157,21	12.096,12	106.104,15	0,00	0,00
13	84.417,79	13.157,21	12.096,12	109.671,12	8	84.417,79	80.850,82	13.157,21	12.096,12	109.671,12	3.566,96	0,00
13	84.417,79	13.157,21	12.096,12	109.671,12	9	84.417,79	87.984,73	13.157,21	12.096,12	109.671,12	-3.566,94	0,00
14	87.984,73	13.157,21	12.096,12	113.238,06	9	87.984,73	87.984,73	13.157,21	12.096,12	113.238,06	0,00	0,00
14	87.984,73	13.157,21	12.096,12	113.238,06	9	87.984,73	87.984,73	13.157,21	12.096,12	113.238,06	0,00	0,00
14	90.184,35	13.157,21	12.096,12	115.437,68	10	90.184,35	90.184,35	13.157,21	12.096,12	115.437,68	0,00	0,00
14	90.184,35	13.157,21	12.096,12	115.437,68	10	90.184,35	90.184,35	13.157,21	12.096,12	115.437,68	0,00	0,00
14	92.383,97	13.157,21	12.096,12	117.637,30	10	92.383,97	90.184,35	13.157,21	12.096,12	117.637,30	2.199,62	0,00
14	92.383,97	13.157,21	12.096,12	117.637,30	11	92.383,97	94.583,59	13.157,21	12.096,12	117.637,30	-2.199,62	0,00
14	94.583,59	13.157,21	12.096,12	119.836,92	11	94.583,59	94.583,59	13.157,21	12.096,12	119.836,92	0,00	0,00
14	94.583,59	13.157,21	12.096,12	119.836,92	11	94.583,59	94.583,59	13.157,21	12.096,12	119.836,92	0,00	0,00
14	96.783,21	13.157,21	12.096,12	122.036,54	12	96.783,21	96.783,21	13.157,21	12.096,12	122.036,54	0,00	0,00
14	96.783,21	13.157,21	12.096,12	122.036,54	12	96.783,21	96.783,21	13.157,21	12.096,12	122.036,54	0,00	0,00
14	98.982,83	13.157,21	12.096,12	124.236,16	12	98.982,83	96.783,21	13.157,21	12.096,12	124.236,16	2.199,62	0,00
14	98.982,83	13.157,21	12.096,12	124.236,16	13	98.982,83	101.182,46	13.157,21	12.096,12	124.236,16	-2.199,62	0,00
14	101.182,46	13.157,21	12.096,12	126.435,79	13	101.182,46	101.182,46	13.157,21	12.096,12	126.435,79	0,00	0,00
14	101.182,46	13.157,21	12.096,12	126.435,79	13	101.182,46	101.182,46	13.157,21	12.096,12	126.435,79	0,00	0,00