

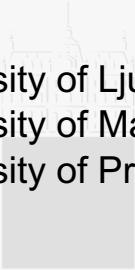
University education

in Slovenia



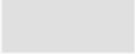
University education in Slovenia

Public:



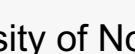
University of Ljubljana
University of Maribor
University of Primorska

Private:



University of Nova Gorica
University of Novo mesto

International:



Alma Mater Europea
Euro-Mediterranean University



established 1919
students 40000

> CENTENARY OF THE FOUNDATION OF THE UNIVERSITY OF LJUBLJANA

UNILJ > University > 100 years UL

UNIVERSITY

Mission, values and vision

Strategy

Code of ethics

Organization, legal framework and reports

Quality

University in numbers

Projects

Personal Data Protection

STUDY

EXTRACURRICULAR ACTIVITIES

RESEARCH AND DEVELOPMENT

DOCTORAL SCHOOL

INTERNATIONAL COOPERATION AND EXCHANGE

COOPERATION WITH ECONOMY AND SOCIETY

ACADEMIES AND FACULTIES

REPOSITORY



news from
the university

01.04.2019 Summer Schools of the University of Ljubljana

01.04.2019 Symposium Systems Medicine in Clinical Practice

01.04.2019 Outstanding success of our students at the international competition in France

25.03.2019 Honorary Doctor of the University of Ljubljana and Nobel laureate F. Duncan M. Haldane became a Slovenian

19.03.2019 Call for enrolment into second cycle master study programmes in the academic year 2019/2020

news archive

ABOUT

▼ About

- ▼ A Tradition of Education in Maribor
- ▼ University Bodies
- ▼ Leadership
- ▼ Rector

Mission and Vision

University Members

Staff directory

Document Center

Media center

Infrastructure

About





University

About

[Members of the University](#)

[Mission and objectives](#)

[SVIZ UP](#)

[Domov](#) / [University](#) / [About](#)

About the University of Primorska

established 2003
students 6000

BEGINNINGS

The establishment of the University of Primorska in 2003 created an autonomous academic route for the region that intellectuals and the wider coastal community had longed for since the post-war years. From the beginning, UP's goal has been to grow and strive for excellence.

The mission of the University of Primorska is to carry out education and scientific research in a professional and creative manner and to support the balanced development of Slovenia in the region, Europe, and globally. Its activities are in line with the national programme for higher education, the national research and development programme, strategic documents of the Republic of Slovenia, and guidelines for the development of a common European higher education and research area, with a particular emphasis on the Mediterranean region.





University

Study

Research

e-UNG

Search

established 2006
students 800





Home

Fakulteta



Faculty of
Economics and
Informatics



Faculty of Business
and Management
Sciences Novo
mesto



Faculty of Health
Sciences Novo
mesto



Faculty of
mechanical
engineering

Home > Home



UNIVERZA V NOVEM MESTU

University of Novo mesto

University of Novo mesto

[Na Loko 2](#)

8000 Novo mesto

Tel: 07 / 393 00 10

Fax: 07 / 393 00 13

News

**Razpis za podiplomski
študij 2014/15**

Links

[Nacionalna agencija](#)

[Republike Slovenije za](#)

[kakovost v visokem šolstvu](#)

[Ministrstvo za
izobraževanje, znanost,
kulturno in šport](#)

University of Ljubljana



University of Ljubljana

- Established in **1919** with **5** member faculties
- At present the University of Ljubljana consists of **23** faculties and **3** arts academies
- **Study fields:** Art, Fine Arts, Natural Science, Technology and Engineering, Social Sciences, Humanities, Medicine, Health Sciences, Sport



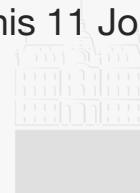
University of Ljubljana

- Comprehensive, research oriented University
- **38.762** students
- **5.898** employees
- An annual budget of **316,3** mio €



Degree programmes 2018/2019

- **157** Bachelor and Single-cycle master degree programmes (6 ENG)
- **195** Master degree programmes (among this 11 Joint degree programmes and 42 ENG)
- **21** Doctoral degree programmes



Degree structure

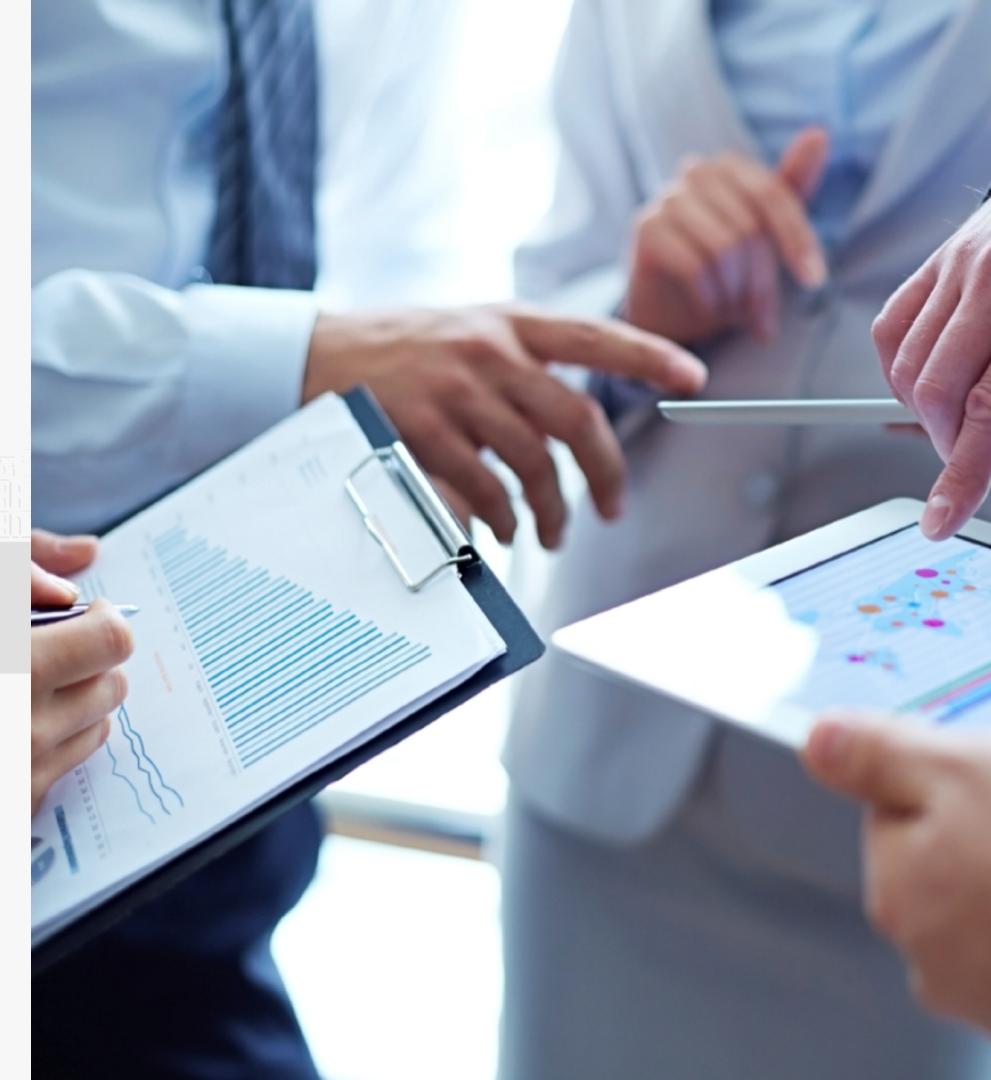
3 + 2 + 3

4 + 1 + 3

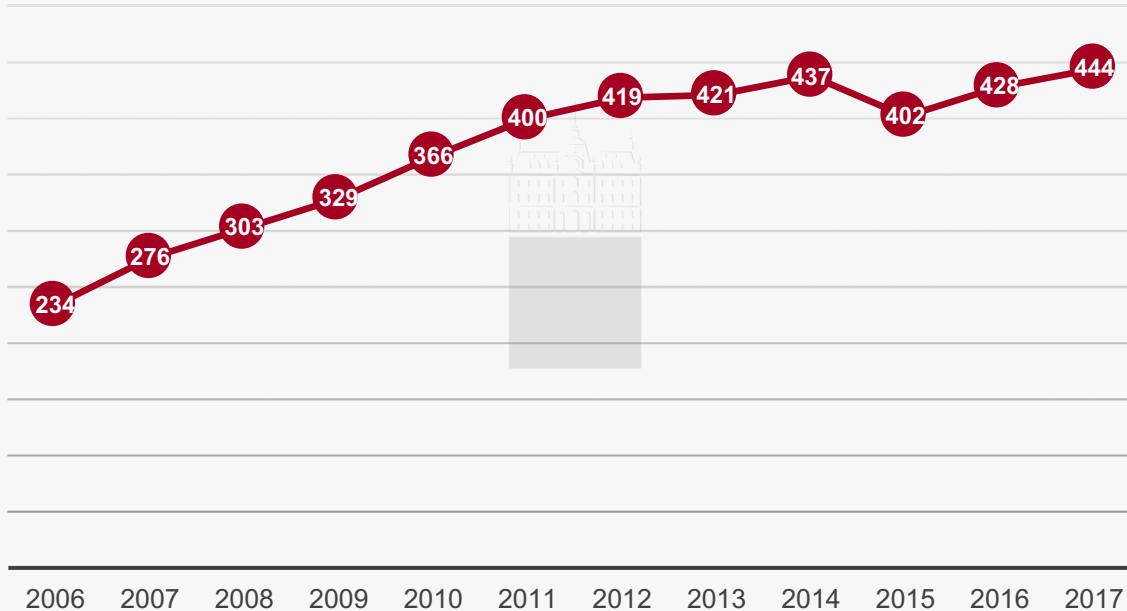
5 - 6 + 3

Research focus

- **4105** registered researchers
- **308** young researchers
- **132** long-term research programmes
- **377** research projects
- Every teacher is expected
to be involved in research

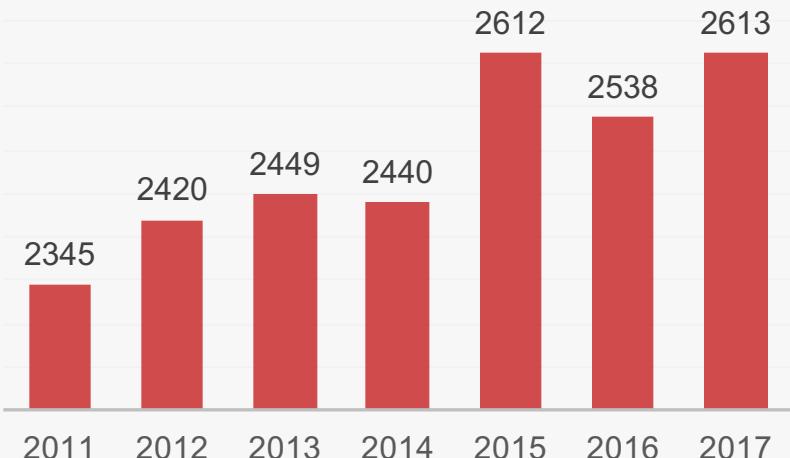


EU Projects 2006-2017

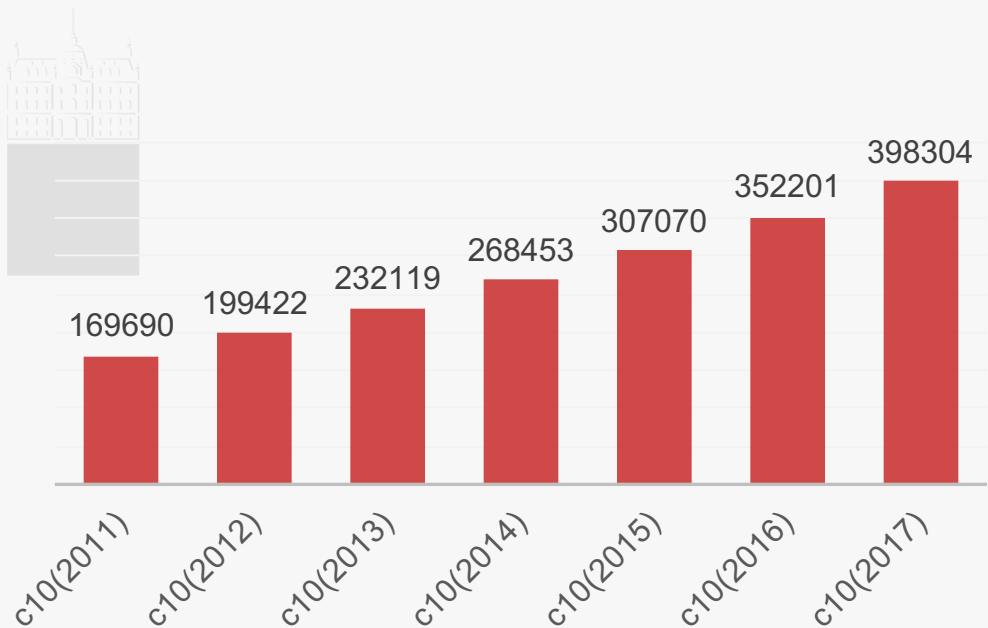


Publications

Number of publications
registered in WoS



Citations of publications
doubled in 5 years



International partnerships

Agreements:

- 8 strategic partnerships
- 98 central agreements
- 2285 departmental agreements
(among this 1896 Erasmus)

Areas of cooperation:

- Exchange of students and staff
- Joint research activities and projects
- Joint conferences, seminars, workshops, symposia etc.
- Joint courses and / or curricula



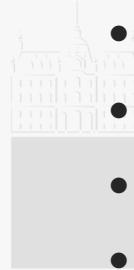
World coverage

Direct Cooperation with Business and Society

- **639** applied projects in all science and professional areas
- **308** young researchers
- **694** guest speakers from business
- **549** guest speakers from different applied research institutions
- **31** accredited life-long learning programmes
- **172** other forms of life-long learning with 4731 attendees
- **131** projects of students in cooperation with employers as a part of degree programmes
- Theses (all study levels) in cooperation with business and public sector institutions

University networks

- Utrecht Network (MAUI, AEN)
- UNICA- Institutional Network of the Universities from Capitals of Europe
- Rector's conference: Alpe – Jadran
- EUA - European University Association
- CEEPUS - Central European exchange programme for University Studies
- CEI - Central European Initiative University Network
- SAR- Scholars at Risk
- Western Balkans Platform
- CELSA
- The GUILD

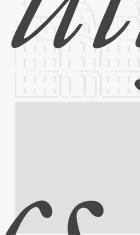


Rankings

- Shanghai Academic Ranking of World Universities: **401-500 (Physics 151-200)**
- University Ranking by Academic Performance (URAP): **314**
- QS: **651-700**
- Webometrics: **325**



Faculty of



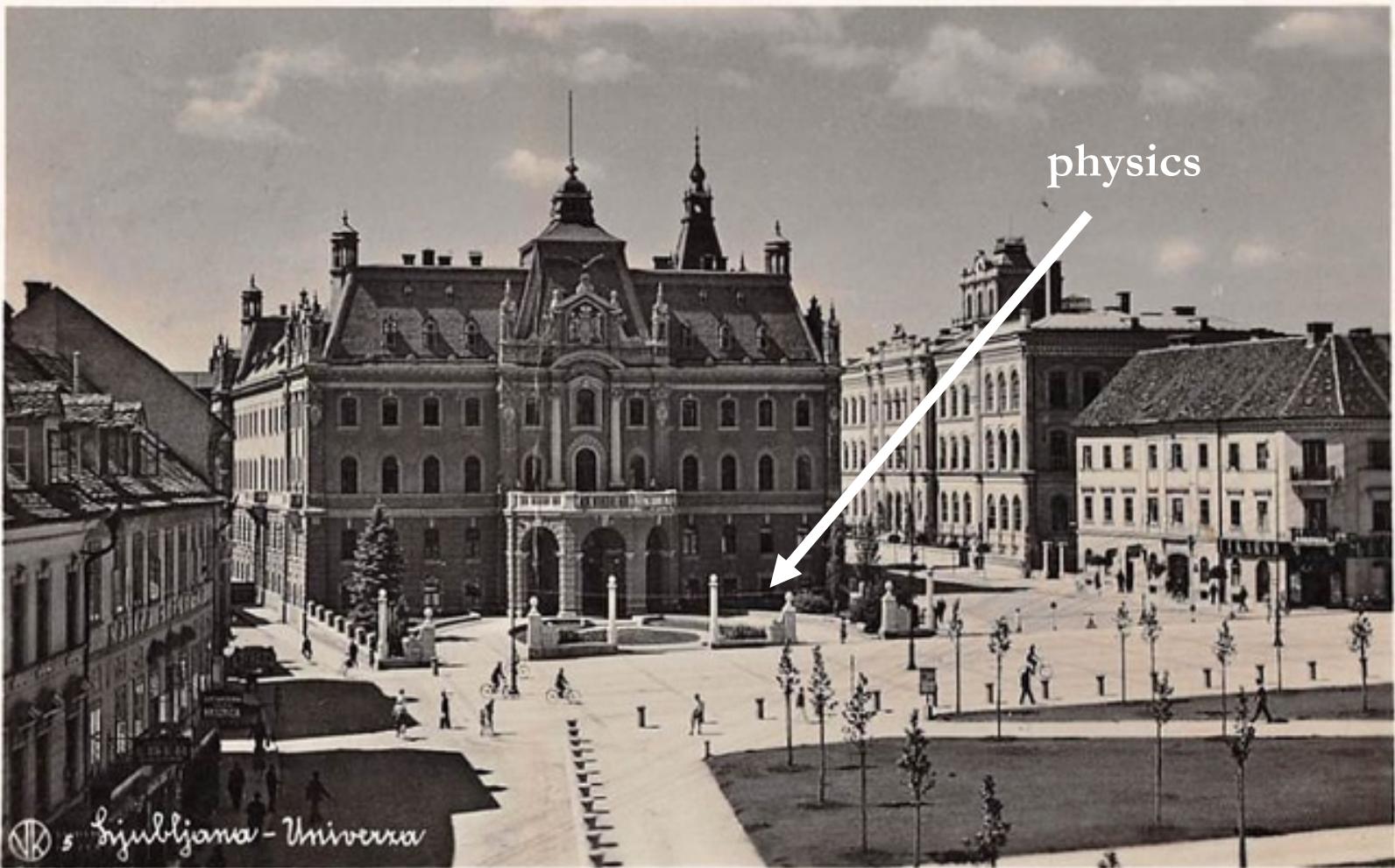
Mathematics and Physics

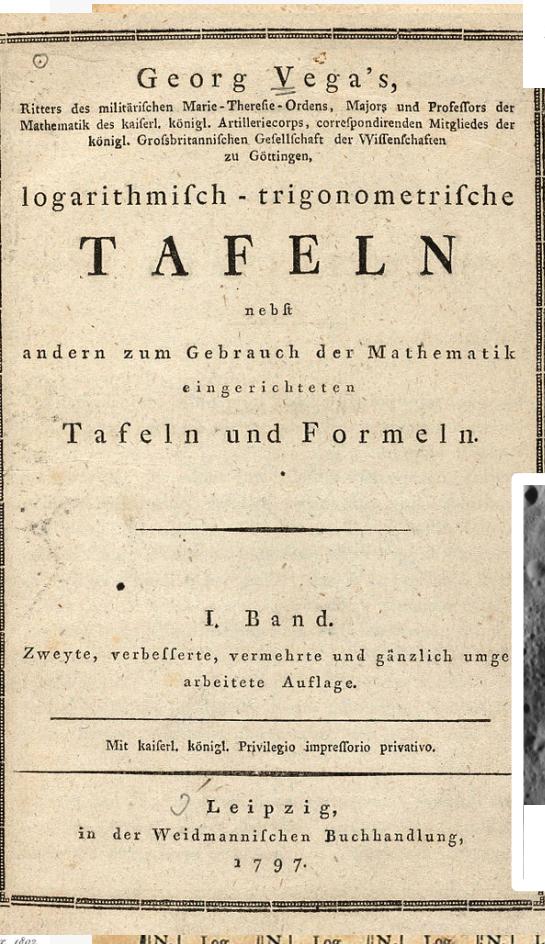


University of Ljubljana 1919 ...



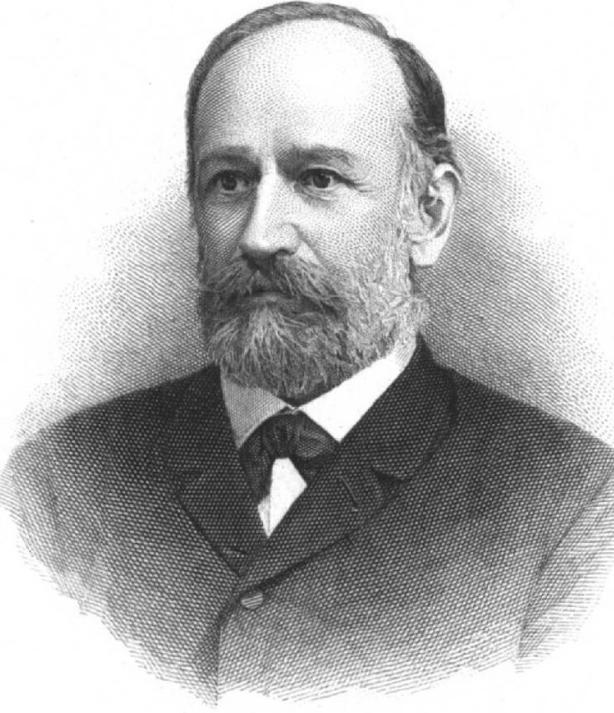
NO. 5 Ljubljana - Universia





"Tabula logarithmorum vulgarium", 1797

N.	Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.	N.	Log.
913	2. 301 0500	200	2. 303 1951	201	2. 305 3514	202	2. 307 4960	203	2. 309 6302	204	2. 311 7637
1426	2. 309 6302	205	2. 313 8672	206	2. 315 9703	207	2. 318 0633	208	2. 320 1463	209	2. 322 2193
1914	2. 313 8672	209	2. 315 9703	210	2. 318 0633	211	2. 322 2193	212	2. 323 3359	213	2. 324 3796
207	2. 318 0633	212	2. 323 3359	213	2. 324 3796	214	2. 324 4138	215	2. 324 4535	216	2. 324 4538
317	2. 322 2193	216	2. 324 4538	217	2. 325 4597	218	2. 328 4505	219	2. 340 4441	220	2. 342 4227
426	2. 323 3359	217	2. 325 4597	219	2. 340 4441	221	2. 344 3933	215	2. 332 4385	216	2. 334 4538
511	2. 324 3796	218	2. 328 4505	220	2. 342 4227	221	2. 344 3933	213	2. 334 4538	214	2. 334 4538
571	2. 328 4505	220	2. 342 4227	221	2. 344 3933	222	2. 344 3933	212	2. 323 3359	213	2. 324 3796
971	2. 340 4441	221	2. 344 3933	222	2. 344 3933	223	2. 344 3933	211	2. 322 2193	212	2. 323 3359
1200	2. 342 4227	222	2. 344 3933	223	2. 344 3933	224	2. 344 3933	210	2. 321 7539	211	2. 324 2825
1259	2. 344 3933	223	2. 344 3933	224	2. 344 3933	225	2. 346 4402	205	2. 348 2998	206	2. 348 2998
1350	2. 344 3933	224	2. 344 3933	225	2. 346 4402	226	2. 348 2998	206	2. 348 2998	207	2. 348 2998
1876	2. 344 3933	225	2. 346 4402	226	2. 348 2998	227	2. 349 9331	207	2. 348 2998	208	2. 348 2998
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1093	2. 344 3933	230	2. 350 1500	231	2. 351 2979	232	2. 352 4979	212	2. 351 2979	213	2. 352 4979
1867	2. 344 3933	231	2. 351 2979	232	2. 352 4979	233	2. 353 4979	213	2. 351 2979	214	2. 353 4979
1489	2. 344 3933	232	2. 351 2979	233	2. 352 4979	234	2. 353 4979	214	2. 351 2979	215	2. 353 4979
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226	2. 344 3933	239	2. 358 4979	240	2. 359 4979	241	2. 360 4979	221	2. 358 4979	222	2. 360 4979
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277	2. 344 3933	290	2. 409 4979	2							



Stefan–Boltzmann law

From Wikipedia, the free encyclopedia

See also: [Black body](#), [Black body radiation](#), [Planck's law](#), and [Thermal radiation](#)

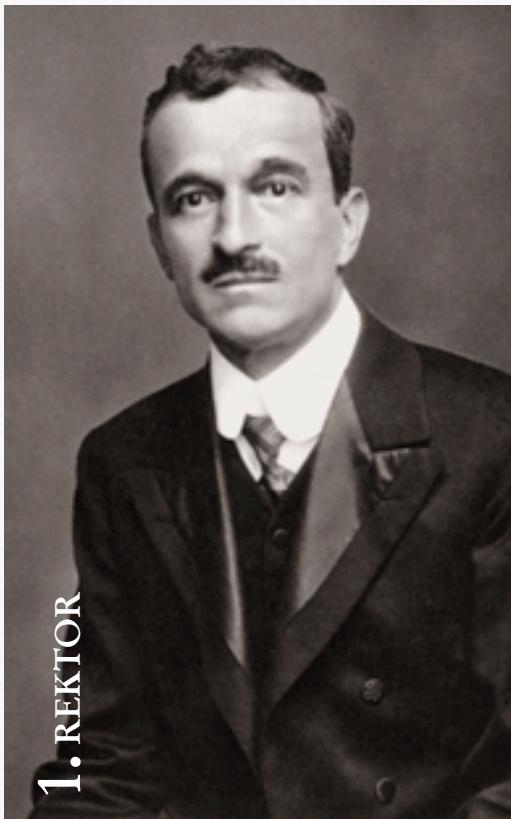
The **Stefan–Boltzmann law** describes the power radiated from a **black body** in terms of its **temperature**. Specifically, the Stefan–Boltzmann law states that the total energy radiated per unit **surface area** of a **black body** across **all wavelengths** per unit time (also known as the black-body *radiant emittance* or *radiant exitance*), j^* , is directly **proportional** to the fourth power of the black body's **thermodynamic temperature** T :

$$j^* = \sigma T^4.$$

The **constant of proportionality** σ , called the **Stefan–Boltzmann constant** derives from other known **constants of nature**. The value of the constant is

$$\sigma = \frac{2\pi^5 k^4}{15c^2 h^3} = 5.670373 \times 10^{-8} \text{ W m}^{-2}\text{K}^{-4},$$

Jožef Stefan (1835-1893), professor of physics an rector of University of Vienna



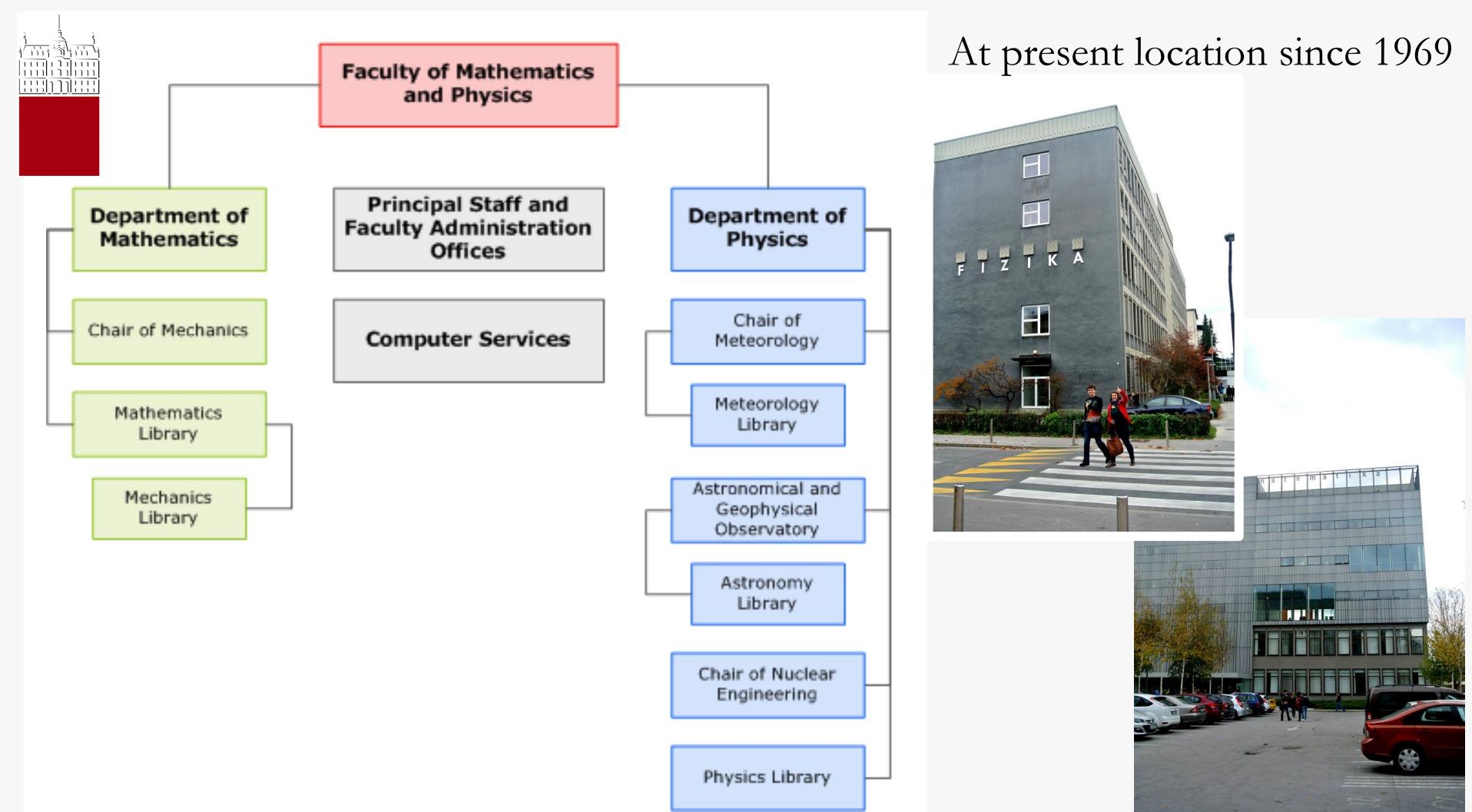
1. REKTOR

the 1st rector of University of Ljubljana
Josip Plemelj (1873-1967)
professor of mathematics

solved Hilbert's twenty-first problem,
derived Plemelj equality, ..., ...

The image shows two mathematical equations engraved on a dark, textured surface. The top equation is the Cauchy integral formula for the derivative: $\frac{1}{2\pi i} \int \frac{f(\zeta) - f(z)}{\zeta - z} d\zeta = 0$. The bottom equation is the Plemelj formula: $\frac{1}{2\pi i} \int \frac{f(\zeta) - f(z)}{\zeta - z} d\zeta + f(z) = C$, where C is a constant.

<http://statues.vanderkrogt.net>





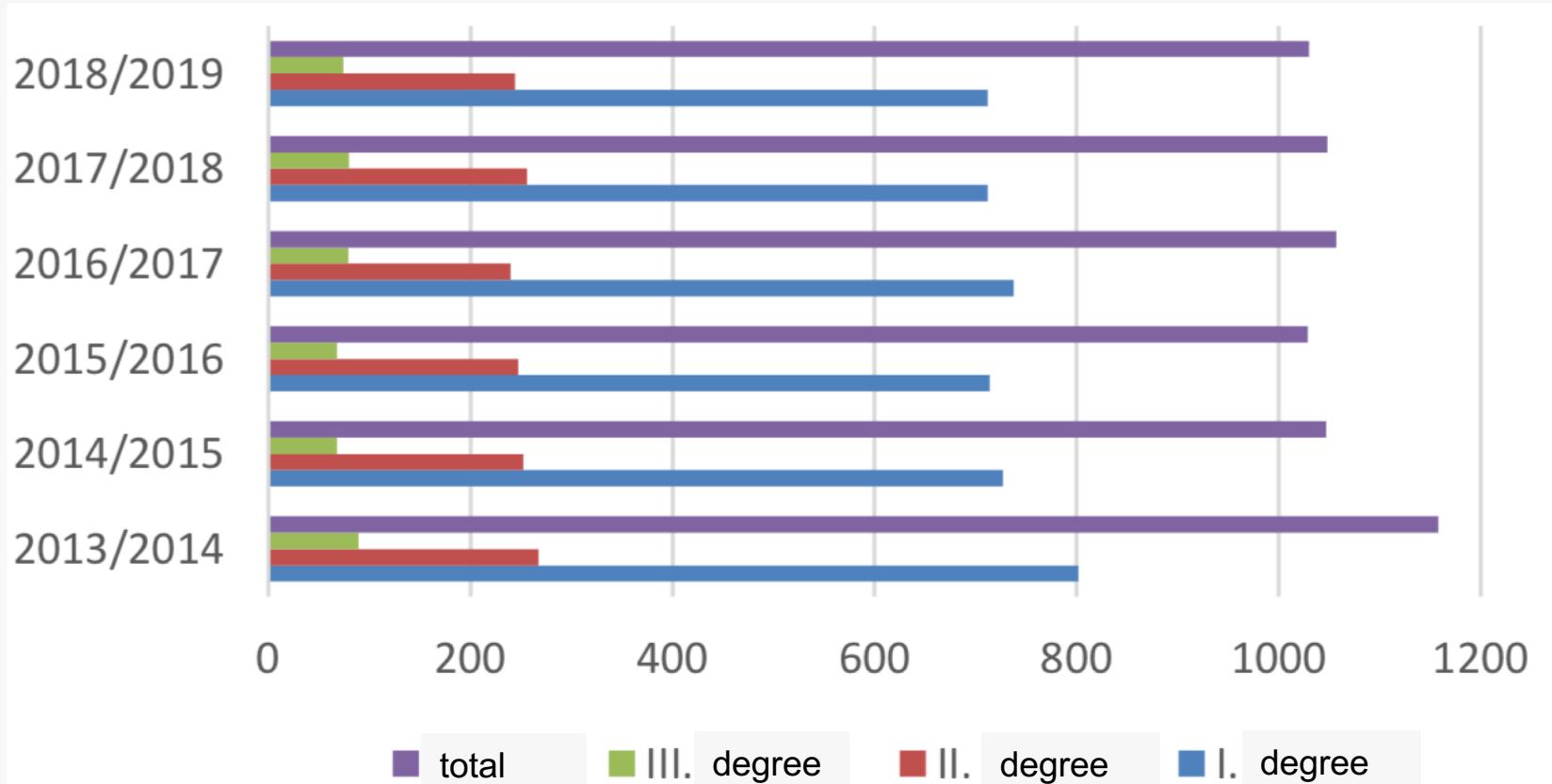
Faculty *of Mathematics and physics*

students: 738 (1st degree)
240 (2nd)
79 (3rd)

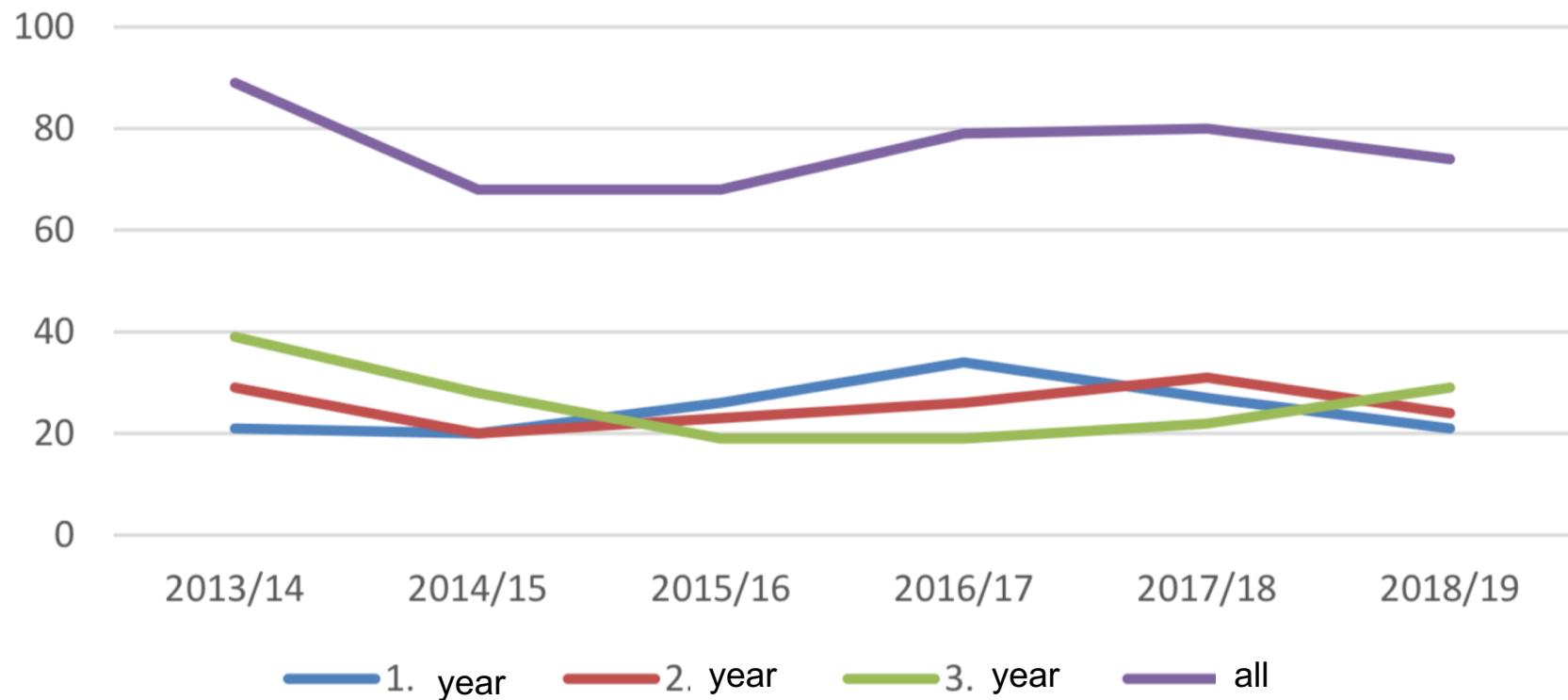
teaching: 118
research: 62
support: 41



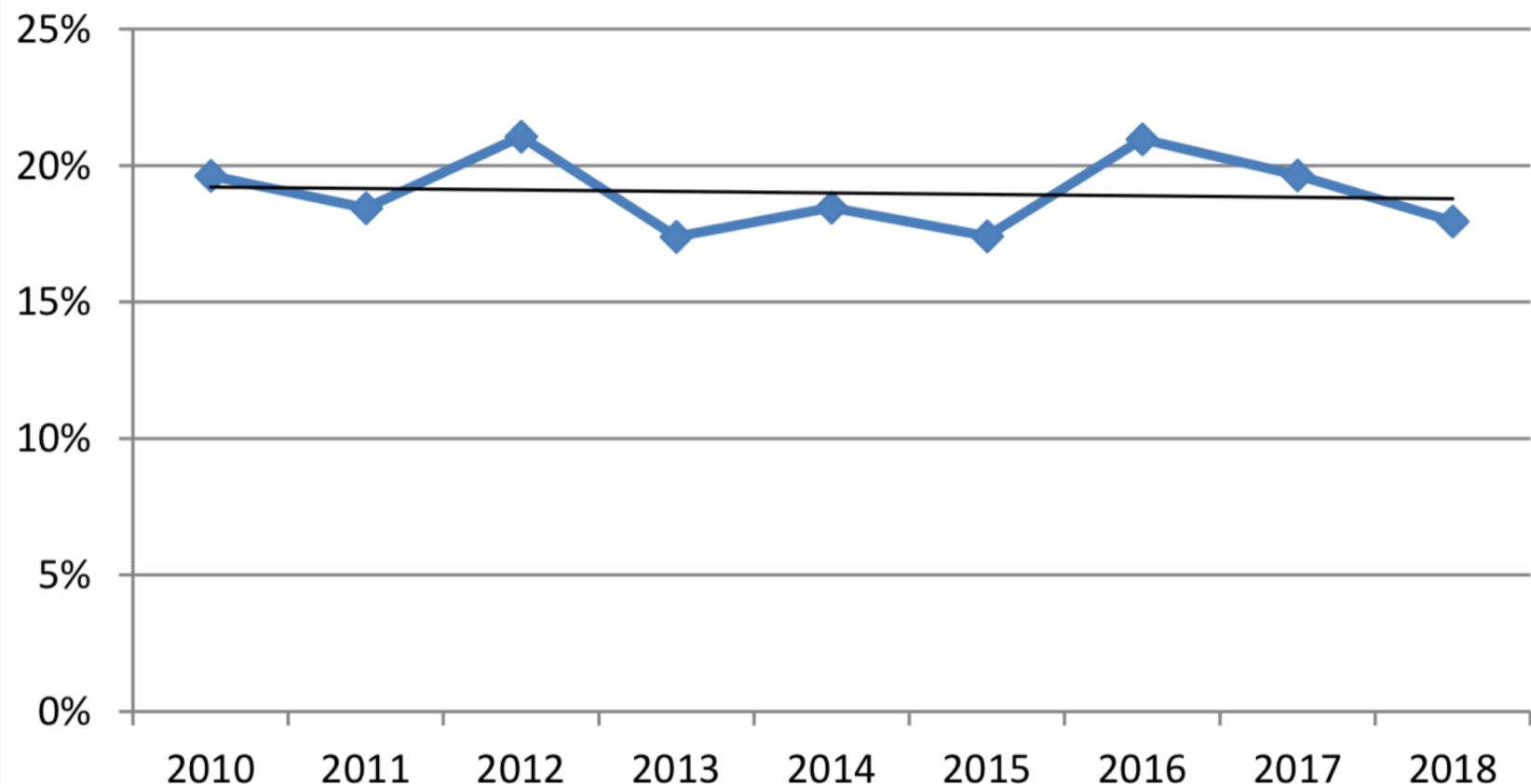
Number of students



PhD study



no. of FMF publications / no. of university publications



Department of Physics



Study programs in physics

First cycle degrees

- Physics (3 years, 180 ECTS)
- Techniques of Measurement in Physics (3 years, 180 ECTS)

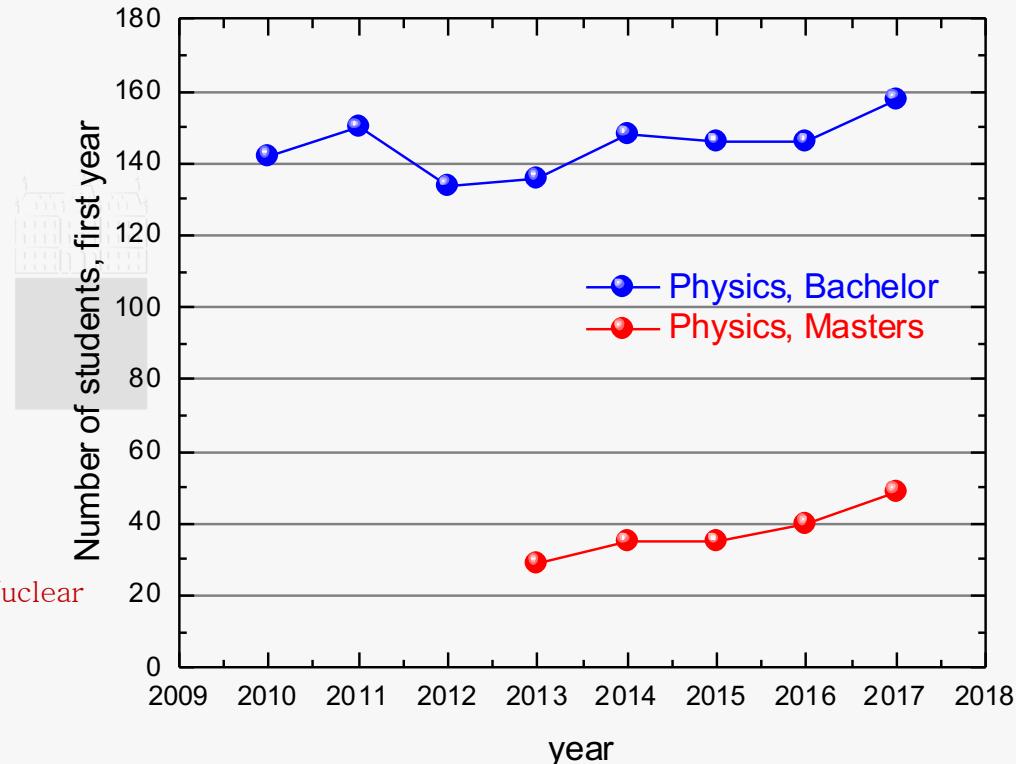
Second cycle degrees

- Physics (2 years, 120 ECTS)
- Nuclear Engineering (2 years, 120 ECTS)
- Medical Physics (2 years, 120 ECTS)
- Physics Education (2 years, 120 ECTS)

Third cycle degrees

- Mathematics and Physics, study path Physics (3 years, 180 ECTS), modules Physics, Physics Education, Meteorology, Nuclear Engineering

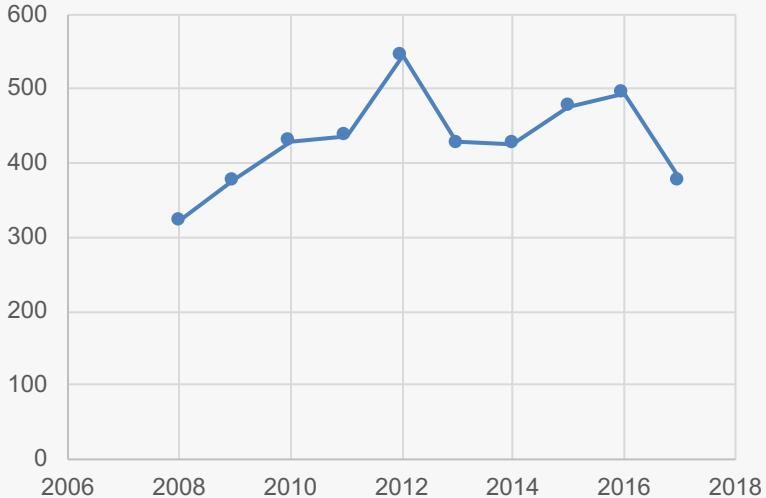
Number of Students, first year, Study Program Physics



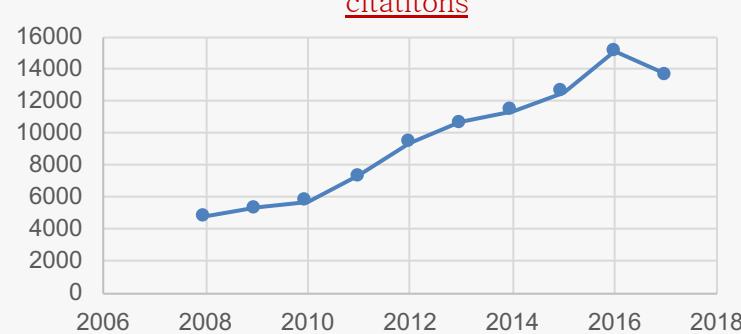


Reserach excellence – high profile publications

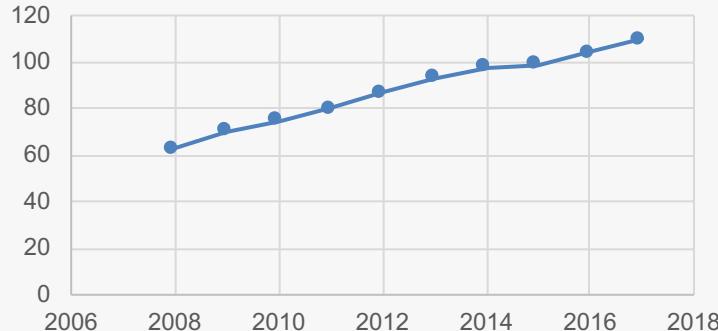
Number of papers in Web of Science



citatitons



h





Reserach excellence – collaboration

Jožef Stefan Institute, Ljubljana

National Institute of Chemistry, Ljubljana

Slovenian Environment Agency, Ljubljana



European Organization for Nuclear Research (CERN), Geneva

Astronomical Observatory of Padova (INAF), Padova

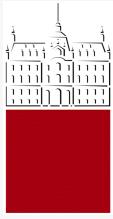
Elettra Synchrotron, Trieste

High Energy Research organization (KEK), Tsukuba

Los Alamos National Laboratory, Los Alamos

The European Synchrotron (ESRF), Grenoble

European Space Agency (ESA)



Experimental High Energy Physics @ Faculty of Mathematics and Physics (FMF)



- Collaboration between Jozef Stefan Institute (JSI), University of Ljubljana (FMF), University of Maribor, University of Nova Gorica
- Experimental Particle Physics group at JSI:
 - 17 staff (full or part time) → 4 Prof., 1 Assoc. Prof. @ FMF (full time)
 - 6 PhD students → all studying @ FMF
- Activities: **Atlas experiment @ Large Hadron Collider (CERN, Geneva)**
 - search for physics beyond the Standard Model @ Energy Frontier
 - dark photon searches, Majorana-type leptons, Seesaw type mechanisms,...
 - administrative/organizational duties
 - Computing resources manager, Distributed computing manager, MC production manager...

Belle / Belle II experiment @ SuperKEKB (KEK, Tsukuba)

- search for physics beyond the Standard Model @ Intensity Frontier
 - physics of charm hadrons, CPV in B/D meson decays, Lepton Flavor universality,...
 - administrative/organizational duties

Spokesperson, Technical coordinator, Physics coordinator, detector group convener...

Detector development @ JSI

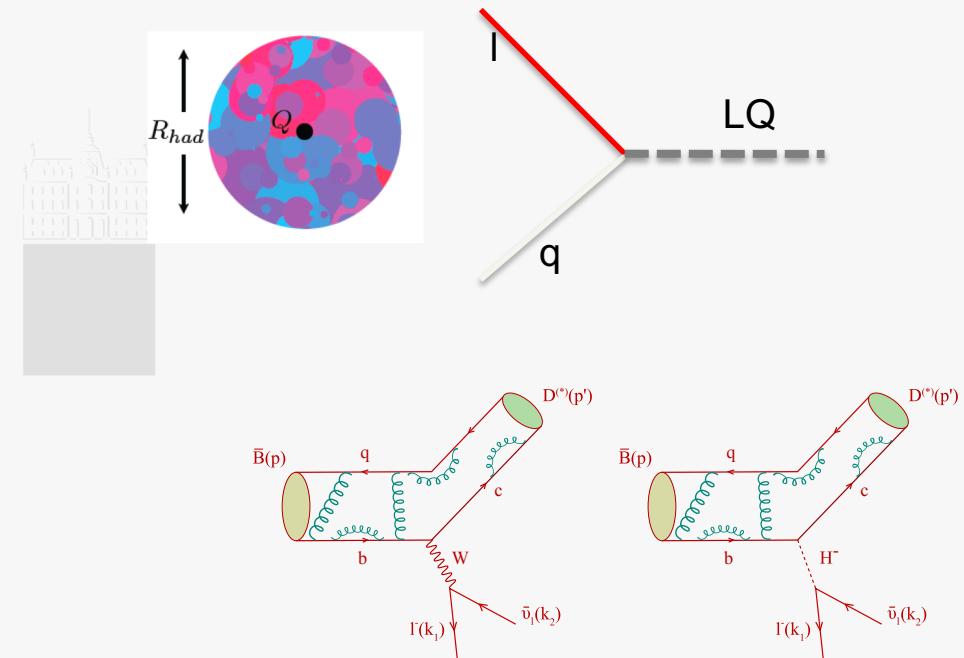
- Silicon detectors, Cherenkov detectors
- Detectors for medical applications



Particle physics

High energy phenomenology

- Search for Physics beyond Standard Model
- B meson decays
- B meson anomalies in B charged current decays and neutral currents decays
- Questioning Lepton Flavour Universality violation
- Neutrino masses
- Model of New Physics: Leptoquark
- Signatures of New Physics at Large Hadron Collider





Hadronic physics

Investigation of nucleons and light nuclei by EM probes

- * Involvement in experiments at *three major facilities*: Jefferson Lab (Newport News, USA), MAMI (Mainz), GSI/FAIR (Darmstadt)
- * Exploiting *polarization degrees of freedom* (polarized beams and targets, recoil polarimetry)
- * Recent *physics focus points*:
Electromagnetic and spin structure of ${}^3\text{He}$
Initial-State Radiation technique to determine the proton radius
(the “proton radius puzzle”)
Elastic form-factor modification in nuclear medium
Wide-angle Compton scattering

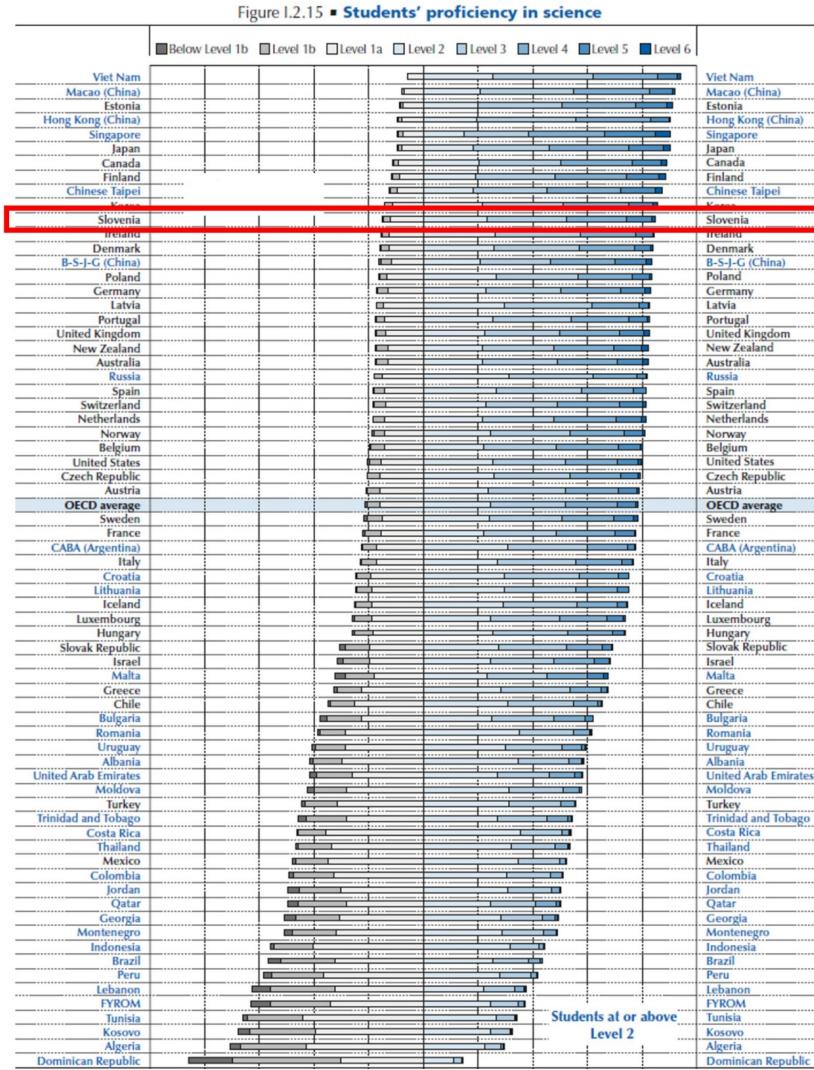


Physics in high school

PISA 2015: Students' proficiency in science

Students age 15
(1st year in high-
school)

Slovenia

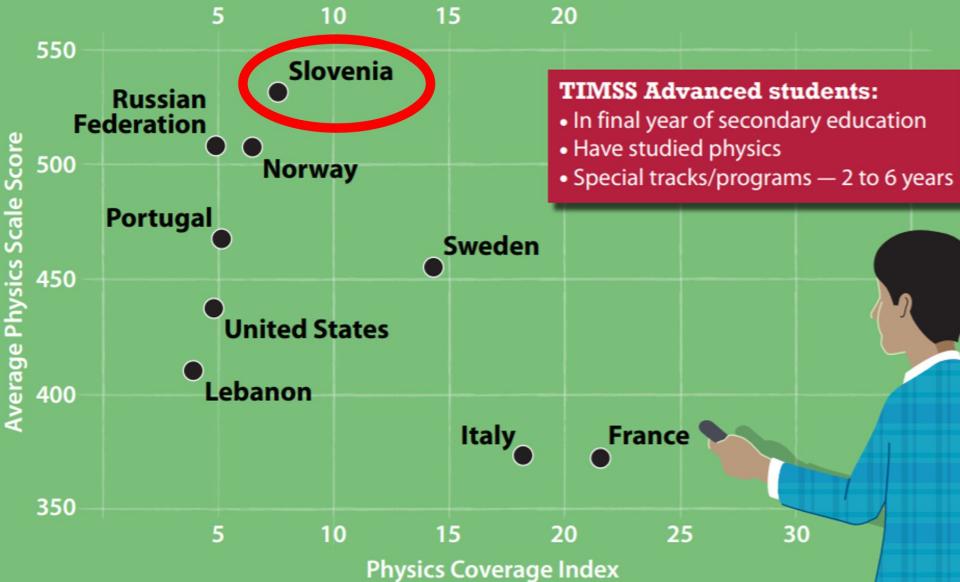


TIMSS Advanced: Students in the final year of high-school (age 18-19)

PHYSICS
TIMSS
Advanced
2015

International Achievement in Physics

Average Physics Achievement by Physics Coverage Index*



*The TIMSS Advanced Physics Coverage Index quantifies the differences across countries in the percentage of students enrolled in advanced programs/tracks.

Thank you for your attention!



