



Applicant Information/Job Profile for the Professorship in



“Applied Physics”

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I. Johannes Kepler University Linz (Austria)

Johannes Kepler University Linz (JKU Linz, <http://www.jku.at/>) is a contemporary European university with core competencies in Social Sciences, Economics and Business, Law, and Engineering and Natural Sciences. JKU Linz has established itself as a respected institution at both national and international levels through diverse research and teaching achievements in the above-mentioned fields during its forty-year history. Strong interdisciplinary cooperation and close relations to business, government and the community determine JKU's basic orientation. The university provides services which have significant impact on society, business and culture through the acquisition and transfer of knowledge and technical expertise in the afore-mentioned disciplines, while adhering to standards which uphold a strong accord between research and teaching. The university's main target groups are students, the scientific community as well as private and public organizations.

As the largest research and education institution in Upper Austria, and a major knowledge transfer center, the university contributes to sustaining and further developing Upper Austria's dynamic economic region. The university is an impulse center for science and society and its centers of competence develop spin-off programs that foster the creation of new companies.

JKU has established guidelines for its future development in its mission statement (<http://www.jku.at/leitbild/>) and in its strategic concept (<http://strategie.jku.at/>).

One unique feature which contributes to JKU's continuing success is the centralization into three Faculties –

- Faculty of Social Sciences, Economics and Business
- Faculty of Law
- Faculty of Engineering and Natural Sciences

The large campus comprises 350.000 m² of land in a northern suburb of Linz.



II. The Faculty of Engineering and Natural Sciences

The Faculty of Engineering and Natural Sciences (<http://www.tn.jku.at/>) consists of 51 institutes, that complete both fundamental and applied research in the following fields of research:

- Computer Science
- Mechatronics
- Technical Chemistry
- Technical Mathematics
- Technical Physics

The Faculty of Engineering and Natural Sciences concentrates on the following areas of excellence:

- Chemical Design and Process Development
- Computational Science and Engineering
- Mechatronics
- Nanoscience and Nanotechnology
- Pervasive Computing

Additional developmental foci include:

- Biosystem Analysis
- Information Technology

The Faculty of Engineering and Natural Sciences engages in the following interdisciplinary focus of excellence

- Information and Communications Systems

Including the interdisciplinary developmental areas

- Gender Studies
- Social and Intercultural Competence

The study programs in Engineering and Natural Sciences guarantee a modern education focused on practical experience and training in:

Study Programs (2007-2008)	Number of registered (first year of studies, rounded off)	Number of registered (total students, rounded off)
Computer Science (Bachelor and Master Programs - Diplom Program will be terminated)	110	960
Mechatronics (Bachelors Program - Diplom Program will be terminated)	130	640
Technical Mathematics (Bachelor and Master Program - Diplom Program to be terminated)	100	310
Technical Physics (Bachelor Program – Diplom Program to be terminated)	60	310
Technical Chemistry (Diplom Program)	40	150
Biological Chemistry (inter-university Study Program with the University of Budweis, Bachelor	30	30

Program)		
Industrial Engineering – Technical Chemistry (WITECH) (Diplom Program)	40	150
Teacher Training Program for Secondary Schools (Chemistry, Physics, Mathematics, Computer Science/Information Technology Management) (Diplom Program)	30	230
Molecular Biology (interuniversitäres Studium mit der Universität Salzburg, Bachelor and Master Program)	50	150
Doctoral Program in Technical Sciences	110	370
Doctoral Program in Natural Sciences	10	35

III. The Department of Physics

Physics in the Faculty of Engineering and Natural Sciences includes the following fields:

- **Applied Physics** (<http://www.applphys.jku.at/>)
- **Biophysics**
- **Experimental Physics** (with Departments of “Atomic Physics and Surface Science”, “Soft Matter Physics” and “Didactics of Physics“)
- **Semiconductor and Solid State Physics** (with Departments of “Semiconductor Physics” and “Solid State Physics“)
- **Theoretical Physics** (with Departments of “Condensed Matter Theory“ and “Many-Particle Systems“)

IV. Requirements for the Professorship in “Applied Physics”

1. Research

The position to be filled is in the Institute of Applied Physics. Research emphasis in one of the following fields is desired:

- Functional Materials with Application Potential, for instance, multiferroic oxides
- Applications of Laser or Low-Temperature Plasmas for Nanotechnology
- Plasmonics
- Solid State Quantum Optics

The successful applicant should ideally be involved in one of the areas of excellence or developmental foci related to Physics as mentioned under point II above, especially Nanoscience and Nanotechnology.

The assessment of qualifications will mainly be based on the following criteria:

1. Research competence in at least one of the afore-mentioned areas in the field of fundamental research, including experience in the implementation of research results for practical use. The applicant’s competencies should enhance and further develop the research activities in the field of Physics.
2. A post-doctoral lecturing qualification or a comparable qualification of equivalent status in the field of Experimental Physics or related fields (provide documentation thereof).
3. A solid, scientific reputation, proven by high quality publications (provide publications list and an additional list with 5 to 8 of your most important publications) patents issued, scientific presentation history (provide a list of conferences where you were an invited speaker), national and international cooperations, activities as a reviewer, organization of conferences and similar events.
4. International experience, proven by extensive research or study stays abroad or through cooperations with foreign universities and research institutions.
5. Collaboration in or management of research projects including industrial cooperations (provide your function, project volume, funding institution, duration, project leader or if applicant was the project leader, please list number of project co-workers in full time positions)
6. Planned research projects in the afore-mentioned research fields (provide a short concept)

2. Teaching

JKU is dedicated to teaching guided by research. The applicant shall offer courses which cover the broad spectrum of fields in Experimental Physics, as well as offer lectures in their specific area of expertise.

Participation in cooperation projects with foreign universities is desired. Due to the internationalization of education, courses and lectures are expected to be offered in both German and English.

The assessment of teaching qualifications will be based on the following criteria:

1. The ability to hold courses which cover the full spectrum of mandatory coursework in Experimental Physics (provide list of previously held lectures).
2. Experience in the supervision of diplom and master's thesis work and doctoral dissertations (provide list of diploma theses and dissertations previously supervised).

3. Additional Requirements

Applicants should demonstrate readiness to cooperate with national and international research institutions as well as to collaborate with industrial companies. These collaborations should also target the acquisition of third-party funding.

Willingness to undertake administrative tasks is also expected.

According to the plan for the support of women in the workforce, experience in personnel development and support of women, as well as participation in gender mainstreaming projects are also relevant qualification criteria. Corresponding documentation should be provided if available.

V. Documentation for the Application

Applicants for the Professorship in “Applied Physics“ are requested to submit the required documentation (including the application form, “Formblatt”). All documentation is to be submitted exclusively in electronic format to bewerbung@jku.at. If the documents cannot be sent electronically via email, they are to be sent in original with quintuplet copy. The application should arrive in the rector’s office no later than one week subsequent to the application deadline.

General

1. Letter of Motivation
2. Curriculum Vitae
3. Credentials (doctoral degree certificates, post-doctoral teaching certification)
4. Application Form (“Formblatt” found on-line)

Research

Please see requested attachments under point IV/1, which will be used in the assessment of qualifications.

Teaching

Please see requested attachments under point IV/2, which will be used in the assessment of qualifications.

Other

Please see requested attachments under point IV/3.

VI. Staff, Facilities and Budget

1. Staff

Current Available of Staff:

1 University Professor

Additional scientific staff:

3 scientific colleagues	(100%)
1 scientific colleague	(50%)

Non-scientific staff:

1 Secretary	(100%)
1 Technician	(100%)
1 Electrician	(100%)
1 Mechanic	(100%)
2 Trainees	(100%)

In the future, the non-scientific areas will be reorganized in order to pool the support provided.

2. Facilities

The Institute of Applied Physics has an ample number of rooms at its disposal.

3. Budget

The Institute has an annual budget of about 20,000 euros in 2008 to cover running operational expenses (office expenditures, telephone and travel expenses)

The allocation of additional financial support may be obtained, based on applications sent to the rector's office, or as the case may be, in the framework of special programs of the Austrian State Government.

VII. Legal Framework

In effect as of January 1, 2004, Austrian university entities have been subjected to fundamental reorganization through the 2002 University Act (<http://www.unigesetz.at/>):

Since that time, universities are independent institutions with complete legal capacity within the public legal system and with a structure akin to corporations. They are financed on the basis of three-year contracts with the Austrian state government; they have a general budget at their disposal and are not subject to directives from the Austrian Federal Ministry of Science and Research.

1. Terms of Employment

As of 1 January 2004, all terms of employment including professorships are subject to the Private Salaried Employee Act.

Appointment as a university professor constitutes conclusion of an employment contract with the university. The legal framework for this contract is the Private Salaried Employee Act, and its accordant stipulations concerning labor, social security benefits and pension, as well as the collective employment contract which still needs to be concluded.

According to the 2002 University Act, university professors benefit from increased protection against dismissal (§ 113 UG 2002).

2. Current Retirement and Pension Rights

a. Retirement Pension

The pension entitlement is calculated on the basis of general Austrian regulations for private salaried employees in accordance with employment law classifications for private salaried employees. In this regard, a maximum contribution assessment ceiling in the amount of 3,930.00 euros (as on 1 January 2008) will apply to pension contribution payments. This ceiling also applies to the calculation of the highest achievable pension entitlement. The actual pension entitlement is dependent upon various preconditions (attainment of a certain age, existence of a minimum number of months insured, calculation period, total number of years insured) and can therefore only be properly estimated on an individual basis.

b. Organizational Pension Fund for University Professors

According to the 2002 University Act, a special pension settlement is anticipated for university professors, which is to be covered under the collective wage agreement. No collective wage agreement regulation is in place at this time.

VIII. Salary

Since the employment law reform for university instructors in 2001, a completely flat remuneration system has been applicable (with the exception of annual salary increases which were agreed upon between collective agreement partners). In addition, the rector's office can pay out performance-related bonuses for a limited period of time, for example, based on special burdens (workload) and/or achievements. The amount of the salary is subject to negotiation.

An annual gross salary of 70,000 to 95,000 euros is planned for the Professorship in "Applied Physics", which is contingent on the applicant's current position (present salary).

Net income will depend on each individual's circumstances, but an annual gross salary of 82,500 euros will approximately amount to a net salary of 50,000 euros.

**Announcement of a Faculty Opening at Johannes Kepler University
Linz in the School of Engineering and Natural Sciences - Full
Professor in Applied Physics (permanent employment contract in
accordance with the Austrian University Act of 2002, §94 Abs. 2 Z 1
UG 2002)**

The Faculty of Engineering and Natural Sciences at Johannes Kepler University Linz invites outstanding individuals to apply for a faculty position in

**Applied Physics
Full Professor
Permanent employment contract in accordance with the Austrian
University Act of 2002**

We would like to fill the above-mentioned position as soon as possible.

The incumbent professor shall combine excellence in teaching with an exceptional background in research, which will enable the full development of this field of study at JKU. Explicit requirements for this position are documented in a [job profile](#).

The applicant for this position should have extensive experience in one of these fields: Functional Materials with Application Potential, Applications of Lasers or Low-temperature Plasmas for Nanotechnology, Plasmonics, Solid State Quantum Optics.

In addition to exceptional competencies in the field of fundamental research, readiness to collaborate with domestic and international industrial corporations and research institutes is expected. Further cooperation in core competencies and focal points of excellence in fields related to Physics is desired, especially in Nanoscience and Nanotechnology. Proportionate involvement in teaching all of the various study courses in the field of Physics (Bachelor/Master's Teacher Education Programs) in German and English as well as self-management is expected.

Applicants shall have completed their university studies and hold a post-doctoral lecturing qualification ("Habilitation") in Experimental Physics or related fields, or have an internationally recognized qualification of equivalent status in that area.

Johannes Kepler University Linz is striving to increase the contingent of women in their academic workforce and especially encourage qualified women to apply for this position. If applicants are equally qualified, women will be given preference for this assignment.

Those interested in the position are requested to send in their complete application in adherence to the stated criteria in the job profile, together with the requested documentation, and the short application sheet ("Formblatt" found on-line) before midnight on 1 December 2008 (Central European Time). The application form and all other documentation should be sent exclusively per email to the Rector of Johannes Kepler University Linz (bewerbung@jku.at). If documents cannot be sent in electronic format, they are to be sent in original with quintuplet copy and should arrive in the rector's office no later than one week after the end of the application deadline.

Rector Prof. Dr. Richard Hagelauer
Johannes Kepler University
A-4040 Linz, Austria.

 [Information for applicants for a professorship in the "Applied Physics"](#)

 [Informationen für Bewerber/innen um die Professur "Angewandte Physik"](#)

 [Formblatt für die Professur "Angewandte Physik"](#)