



# Application Information for A Full Professorship in



## “Energy Efficient Analog Circuits and Systems”

**I. THE JOHANNES KEPLER UNIVERSITY LINZ (AUSTRIA)** FEHLER!  
TEXTMARKE NICHT DEFINIERT.

**II. THE FACULTY OF ENGINEERING AND NATURAL SCIENCES** FEHLER!  
TEXTMARKE NICHT DEFINIERT.

**III. THE AREA OF INFORMATION ELECTRONICS AT THE JKU** FEHLER!  
TEXTMARKE NICHT DEFINIERT.

**IV. REQUIREMENTS FOR THE POSITION “ENERGY EFFICIENT ANALOG  
CIRCUITS AND SYSTEMS”** **6**

1. **Research** .....Fehler! Textmarke nicht definiert.

2. **Teaching**.....Fehler! Textmarke nicht definiert.

3. **Additional Requirements**.....Fehler! Textmarke nicht definiert.

4. **Application Procedure** .....Fehler! Textmarke nicht definiert.

5. **Additional Information** .....Fehler! Textmarke nicht definiert.

**V. LEGAL CONTINGENCIES** FEHLER! TEXTMARKE NICHT DEFINIERT.

1. **Terms of Employment**.....Fehler! Textmarke nicht definiert.

2. **Pension Regulations**..... **11**

**VI. SALARY** FEHLER! TEXTMARKE NICHT DEFINIERT.

## I. The Johannes Kepler University Linz (Austria)

The Johannes Kepler University Linz (JKU Linz, <http://www.jku.at/>) is a young European university with an expert focus on the academic areas of social and economic sciences, law, natural sciences and engineering. During its forty year history, the university has achieved national and international status with its manifold achievements in research and teaching resulting from a unique combination of studies and research in economic and social sciences, law, natural sciences and engineering and research facilities. Interdisciplinary collaboration and close ties to local businesses and the community have helped to establish its principle direction. By upholding principles of unity in research and teaching as well as fostering advanced methods of knowledge transfer, the JKU Linz generates and provides services for the greater good of society, the business community, fine arts and culture. Core target groups include students, the scientific community as well as organizations representing private and public life.

As the largest institution of research and education in Upper Austria, and thus as a knowledge transfer center, the university contributes to the continual support and development of Upper Austria's dynamic economic region. The JKU is also actively involved in competence centers, and has developed spin-off programs that support the establishment of new companies.

The JKU has defined the principle guidelines for its future development in its profile and strategy concept.

One of the university's many unique features is the consolidation of four faculties –

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

located in a campus area comprised of 350.000 m<sup>2</sup>, north of the city of Linz.



## II. The Faculty of Engineering and Natural Sciences

The Faculty of Engineering and Natural Sciences is comprised of 58 institutes active in the following fields of base-knowledge and basic research as well as in application oriented research fields:

- Computer Sciences
- Mechatronics
- Chemistry and Polymer Engineering Technologies
- Mathematics
- Physics

The JKU's strategic objective is to become one of Europe's top-rated universities. Research excellence is a basic requirement and the JKU has decided to feature its research as "Fields of Excellence". These "Fields of Excellence" cover a broad base and focus on all of the areas in which JKU academics and scientists excel, including the areas in which they are recognized internationally and recognized for excellence in research. Interdisciplinary research at the JKU is noticeable in six distinguished fields of excellence:

- Computation in Informatics & Mathematics
- Management & Innovation
- Mechatronics and Information Processing
- Nano, Bio- & Polymer Systems: From Structure to Function
- Social Systems, Markets & Welfare States
- Business Law

The academic degree programs offered in Engineering and Natural Sciences guarantee a practice-oriented, hands-on and advanced education in:

<b>Academic Degree Programs (WS 2013/2014)</b>	<b>First Semester Enrollment</b>	<b>Enrollment Numbers in Degree Programs</b>
Mechatronics (Bachelor's/Master's Degree)	140	620
Biological Chemistry (joint university degree program with the Univ. of Budweis, Bachelor's and Master's degree programs)	42	112
Polymer Chemistry (Master's Degree)	3	4
Technical Chemistry (Bachelor's/Master's Degree)	77	285
Industrial and Chemical Engineering (WITECH)	2	48

(Master's Degree and Diploma Degree)		
Bio-Informatics (Bachelor's/Master's Degree)	20	47
Informatik (Bachelorstudium)	103	620
Computer Sciences (Bachelor's Degree)	45	47
Informatics (Master's Degree Program)	-	94
Networks and Security (Master's Degree)	-	38
Software Engineering	-	60
Pervasive Computing	-	25
Information Technology (Bachelor/Master's Degree)	56	182
Polymer Engineering Technology (Bachelor's Degree)	61	209
Management in Polymer Technologies (Master's Degree)	7	21
Polymer Technologies and Science (Master's Degree)	16	16
Technical Mathematics (Bachelor's Degree)	43	207
Computer Mathematics (Master's Degree)	3	15
Industrial Mathematics (Master's Degree)	6	34
Mathematics in Natural Sciences (Master's Degree)	3	8
Technical Physics (Bachelor's/Master's Degree and Diploma Degree)	74	335
Molecular BioSciences (Bachelor's Degree)	137	391
Molecular Biology (joint degree program with the Univ. of Salzburg, Master's Degree)	16	80
Biophysics (Master's Degree)	4	8
Nanoscience and Technology (Master's Degree)	3	10
Teacher Education Studies for higher level schools (Chemistry, Physics, Mathematics, Computer Science/CompSci Management) (Diploma degree program)	74	322
Doctorate Degree in Technical Sciences	60	530
Doctorate Degree in Natural Sciences	13	83

### III. The Area of Information Electronics at the JKU

The successful candidate for the position as professor of “Energy Efficient Analog Circuits and Systems” will be expected to strengthen research and teaching in the field of Information Electronics and take part in ‘fields of excellence’ that include “Mechatronics and Information Processing” and “Computation in Informatics and Mathematics”. The subject area of Information Electronics is currently a part of the following institutes, particularly Computer Science, Mechatronics and Physics:

- Institute of Bio-Informatics
- Institute of Computational Perception
- Institute of Computer Architecture
- Institute of Design and Control of Mechatronical Systems
- Institute of Electrical Drives and Power Electronics
- Institute of Measurement Technology
- Institute of Experimental Physics
- Institute of Formal Models and Verification
- Institute of Semiconductor and Solid State Physics
- Institute of Information Processing and Microprocessor Technology
- Institute of Integrated Circuits
- Institute of Microelectronics and Microsensors
- Institute of Communications Engineering and RF-Systems
- Institute of Pervasive Computing
- Institute of Automatic Control and Control Systems Technology
- Institute of Signal Processing
- Institute of Systems Software
- Institute of Telecooperation

## **IV. Requirements for the Position “Energy Efficient Analog Circuits and Systems”**

### **1. Research**

The position will be allocated to the Institute of Integrated Circuits. The successful candidate will be expected to contribute to strengthening and supporting the following JKU ‘fields of excellence’: “Mechatronics and Information Processing” and “Computation in Informatics and Mathematics”. The successful candidate will be expected to possess excellence in science and academics and create a demanding research program in one or more of the following areas:

- RF-CMOS circuit integration
- Integrated radio systems, especially mobile
- Hardware for energy-efficient (sensor) networks
- Mixed-signal RF circuit design
- Systems-on-chip (focus on analog design)

- Ultra low power circuit design
- Medical electronics

The successful candidate will work to complement and supplement the existing and related working fields at the institutes.

The position of a professor at the Institute for Integrated Circuits for “Integrated Circuits and System Design” will be announced simultaneously. The selected professors will each be expected to share the same infrastructure (secretary and laboratory equipment). The position is associated with the newly established department for “Energy Efficient Analog Circuits and Systems”.

The candidate’s application regarding his/her qualifications for the position will be considered under the following criteria:

1. Habilitation (*venia docendi*) - or a comparable academic post-doctorate degree - in one or more of the above mentioned areas
2. Research skills in one or more of the above mentioned areas in both base-knowledge research as well as implementing applied-oriented research results into practical applications.
3. Quality and quantity of available publications and/or patents in the area of energy efficient analog circuits and systems.
4. Active participant in the international scientific and academic community.
5. Experience at universities and/or scientific /academic research facilities or at industrial research departments in Austria and/or abroad.
6. Participation/involvement and/or management of funded industrial research project(s) and/or group(s).
7. Academic/scientific lectures and/or presentations.
8. Planned research projects in the field of energy efficient analog circuits and systems.

## **2. Teaching**

The JKU is committed to research-guided education and teaching. Teaching (which may also include multimedia forms of teaching) as stated in the advertised post includes basic and advance courses in the undergraduate and graduate programs in Information Electronics, Computer Sciences, and Mechatronics. Desired, but not required, are cooperation efforts with international universities in support of student exchange. Due to the program’s international focus, the successful candidate will be expected to hold courses and presentations in German and particularly in English

The candidate's application regarding qualifications will be based on the following criteria:

1. Experience in teaching required courses and elective courses in electrical engineering and electronics.
2. Experience in supervising academic work by students such as Diploma degree/Master's theses, as well as doctoral dissertations.
3. Any available evaluation results in the field of teaching and education.
4. Activities as a university lecturer and/or educator at other institutions in the tertiary educational sector or within an industrial environment.

### **3. Additional Requirements**

The successful candidate will be expected to collaborate with research institutions in Austria and abroad as well as collaborate with industrial companies. The collaboration efforts should also include goals to acquire external funding. The candidate will be expected to participate in activities supporting Information Electronics, the 'fields of excellence' in "Mechatronics and Information Processing" and "Computer in Informatics and Mathematics", as well as with the Faculty of Engineering & Natural Sciences at the JKU.

The successful candidate will be required to manage the department of "Energy Efficient Analog Circuits and Systems", be willing to perform administrative tasks, and - in the context of academic administration – take part in university committees.

In compliance with proposals for the advancement of women, experience in human resource development and affirmative action programs for women as well as participation in gender mainstreaming projects will be considered. If available, please submit relevant documentation with the application.

In addition to key content qualifications and to ensure the department is run professionally, the successful candidate is expected to possess efficient and competent social skill sets.

The candidate's application regarding qualification will be based on the following criteria:

1. Research cooperation with the industrial sector and business community.
2. Experience in managing an organizational unit.
3. Experience in managing staff.



4. Professional experience in the industrial sector
5. Experience in independent self-management and administration
6. Experience in personnel development and support policies for the advancement of women

#### **4. Application Procedure**

Prospective applicants for the professorship in “Energy Efficient Analog Circuits and Systems” are requested to send the following documentation *in electronic format only* to: [bewerbung@jku.at](mailto:bewerbung@jku.at):

1. Letter of Motivation
2. Application form
3. Current CV
4. Diplomas (Doctorate Degree, Post-Doctorate Degree)

#### **Research**

1. Proof of habilitation degree (*venia docendi*), or comparable (internationally recognized) post-doctorate degree.
2. List of publications listed according to monographs, refereed journal articles, refereed conference proceedings, refereed workshop contributions and other publications and list of patents.
3. The five most important publications in full text (please attach as a separate document).
4. List of academic/scientific presentations as an invited speaker.
5. List of activities at universities and/or academic or industrial research facilities in Austria or abroad (provide name of institution, type of activities, duration).
6. List of participation and involvement in, and/or management of funded and industrial research projects or groups (please provide information on your function, project volume, client(s) and/or funders, duration, project manager and/or number of project team members in full-time equivalent as project manager).
7. Exposé on planned research projects (3-5 pages maximum).
8. Activities as a journal editor and memberships on editorial boards as well as activities organizing conferences as a member of a program or organizational committee.
9. Reviewer activities for journals, conference and research projects.

## 10. Awards and prizes.

### Teaching

1. Previous teaching experience list of all held/co-supervised courses (course title(s), scope, course type, year).
2. List of formerly supervised/co-supervised dissertations (name of the doctoral candidate, topic, year, if applicable, the name of the first supervisor).
3. List of formerly supervised/co-supervised Diploma degree theses and/or Master's degree theses (topic, year).
4. If available, evaluation results in the area of teaching (course, year).
5. List of activities as a lecturer/educator at a university or other institutions in the tertiary educational sector, or in an industrial environment in Austria or abroad.

### Miscellaneous

1. International, subject-related experience.
2. Experience in managing an organizational unit (provide information on function and duration).
3. Experience in managing staff.
4. Proof of professional activities at industrial companies (provide information on function and duration).
5. Experience in independent academic management (activities, duration).
6. Experience in staff development and policies for the advancement of women.
7. Additional activities and skills.

## 5. Additional Information

If you have any questions, please contact Univ. Prof. Dr. Andreas Stelzer: +43 (732) 2468-6371, [andreas.stelzer@jku.at](mailto:andreas.stelzer@jku.at).

## V. Legal Contingencies

The Universities Act 2002, effective as of January 1, 2004, completely re-organized the structure of Austrian universities.

[http://www.bmwf.gv.at/fileadmin/user\\_upload/wissenschaft/recht/englisch/E\\_UG.pdf](http://www.bmwf.gv.at/fileadmin/user_upload/wissenschaft/recht/englisch/E_UG.pdf):

Austrian universities are now independent, publicly authorized institutions possessing full legal capacity of an enterprise-like structure. They are independently financed on the basis of a three-year service level agreement with the Austrian state government,

have a global budget at their disposal, and are not subject to any directives from the Austrian Federal Ministry of Science and Research.

## **1. Terms of Employment**

As of 1 January 2004, all terms of employment, including a professorship, are subject to the Salaried Employees Act. The appointment as a university professor therefore represents employment by work contract with the university. The legal framework for this contract is provided by the Salaried Employees Act with regulations governing labor laws, social welfare laws and pension laws along with the Collective Agreement which will be concluded.

In compliance with the Universities Act 2002 and the Collective Agreement for employees, university professors are covered by increased protection against dismissal.

## **1. Pension Regulations**

### **a. Pension**

In keeping with the employment law categorization for a private employee, the claim to pension benefits is calculated according to the general Austrian regulations for private employees. This provides for a maximum assessment basis of € 4,440 (as of 1 January 2013) for the payment of pension fund contributions and the calculation of the maximum possible claim to pension benefits. The actual claim to pension benefits depends on various preconditions (reaching a certain age, minimum number of months insured, calculation period, total number of years insured) and cannot be estimated for this reason.

### **b. Company Pension Fund for University Professors**

In compliance with the Universities Act 2002, a special pension scheme is provided for university professors and has been agreed upon in a Collective Agreement. Since October 1, 2011, the contribution payment made by the university is 10% for the set minimum salary. Voluntary salary payments agreed upon aside from the collective agreement minimum salary are not a part of the base calculation of the contribution payments.

## **VI. Salary**

Since the reform of employment law for university faculty in 2001, there is a flat salary regulation (with the exception of the salary increase that is to be agreed upon annually between the Collective Agreement partners). In addition, merit premiums can be allocated by the rector for a limited period of time, for instance on the basis of special burdens or achievements. The amount of the minimum salary for Group A 1 (professorship) has been determined in the collective agreement for university employees and is a gross annual salary of 63, 996.80 Euros per year. Payment is allocated in 14 equal amounts, whereby two parts are special allocated payments.

Agreements for an amount over the minimum salary set by the collective agreement can be concretely finalized in an employment contract.

The position as Professor for “Energy Efficient Analog Circuits and Systems” provides a provision (on a voluntary basis) to agree on a salary over the minimum salary set by the collective agreement. Independent of the current position (current salary), the amount of the gross annual salary (collective agreement minimum salary plus voluntary additional amount) can be between €70,000 to €90,000.

The net amount will depend on personal factors; as a guideline it can be assumed that a gross annual salary of €80,000 will be an annual net amount of approximately €50,000.