

PROFESSORSHIP FOR GAME COMPUTING



INFORMATION FOR APPLICANTS

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1. 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 and accomplished focus on the academic areas of social and economic sciences, law, natural sciences and engineering. The studies of Human Medicine were added in 2014. During its fifty year history, the university has achieved a national and international standing with its manifold achievements in research and teaching. The JKU is a campus-style university located north of the city of Linz. The unique campus environment provides close proximity between all disciplines. Interdisciplinary collaboration, innovative base-knowledge research, and close ties to local businesses and the business community have helped to establish its principal 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 as a 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's mission statement defines and outlines the university's basic principles for future development and its strategic concept.

A special feature of the university is the campus-style layout and easy access to all four faculties

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

on 350,000 m² of land located in a northern section in the city of Linz.

2. The Faculty of Engineering & Natural Sciences

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

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

See: <http://www.tn.jku.at> for detailed information.

3. The Academic Area of “Computer Sciences”

The individual institutes that make up the academic area of Computer Sciences (<http://informatik.jku.at>) at the Faculty of Engineering & Natural Sciences currently include:

- Institute for Application-Oriented Knowledge Processing
- Institute for Computational Perception
- Institute for Computer Architecture
- Institute of Computer Graphics
- Institute for Formal Models and Verification
- Institute for Integrated Circuits
- Institute for Machine Learning
- Institute of Networks and Security
- Institute for Pervasive Computing
- Institute of Signal Processing
- Institute for Software Systems Engineering
- Institute for Systems software
- Institute for Telecooperation

The JKU was the first university in Austria to introduce an academic degree program in computer science back in 1969. Now, over 1000 students are enrolled in computer sciences at the JKU. The Bachelor's and Master's degree programs in computer sciences enjoy international recognition, demonstrated by corresponding rankings that consistently place the academic area in a top position. In the area of research, the area of computer science features high-profile, world-class scientists who are international leaders in their respective fields (including ERC and Wittgenstein Award winners). The academic area of Computer Science at the JKU is distinguished by excellence in base-knowledge research as well as close cooperation with industrial companies.

4. Requirements for the Position “Game Computing”

The computer game industry is one of the fastest-growing IT sectors with forecasted worldwide sales of over 80 billion US dollars. New and trend-setting technologies - such as artificial intelligence and virtual & augmented reality - not only pave the way for new forms of entertainment, but also introduce completely new concepts in the areas of teaching and research. Computer Sciences at the JKU aims to supplement its academic expertise by announcing a faculty opening for a professor for Game Computing in order to cover this key trend in IT in both areas of research and teaching.

4.1. Research

The professorship position's technical focus will be on the development, design, and implementation in the area of game computing, and/or on game computing theory. Game Computing is to be understood in a broad sense, covering both practical and theoretical aspects. The emphasis can lie on base-knowledge methods as well as on specific fields of application, including:

- Game Design
- Game Development (particularly with the help of modern game engines such as Unity and Unreal)
- Procedural modeling
- Deep Learning in a Game Computing context
- Mixed Reality (Virtual Reality and Augmented Reality)
- Gamification, Serious Games, and game-based learning
- Human Computer Interfaces (non-classical user interfaces in particular)

Potential application domains include game development, the application of common game elements in a non-game context, educational games, medical diagnostics and therapeutics, computer sciences and other didactic subject areas.

The applicant's outstanding academic and scientific reputation and excellence will be given a higher priority that the academic area he/she will represent. In addition, the focus will be on opportunities and possibilities as outlined by the candidate to cooperate with various institutes in the academic area of Computer Sciences and with the JKU Faculty of Engineering & Natural Sciences.

As part of a 'free interpretation' for professorship position in Game Computing, candidates are asked to state in their letter of application which of the following concrete topics and tasks he/she would like to apply for in the event of being offered the position at the JKU.

The successful candidate will be asked to develop a research and innovation strategy that, in the medium-term, will propel the JKU to an internationally top-ranked position in research and innovation in this area of computer science. The successful candidate is expected to collaborate closely with the entire academic area of Computer Science, particularly the institutes for Computer Graphics, Pervasive Computing, Machine Learning, Computational Perception, and Telecooperation, as well as other relevant institutes and research facilities at the JKU.

The candidate's application regarding his/her qualifications in research will be considered under the following criteria:

- Research expertise in a current field in the academic area of Game Computing

- Doctorate and post-doctorate (or a comparable, internationally recognized post-doctorate qualification) preferably in a field of engineering in the research area as specified above (please include documentation)
- Academic/scientific activities at universities, academic or industrial institutions in Austria and abroad.
- Academic and scientific reputation demonstrated by high-quality publications in international, peer-reviewed journals and at conferences in the academic area with a high relevance to the fields of activity as listed in the job profile (publication list, including 5-8 of the publications you consider most important and significant), academic/scientific presentations/lectures as an invited speaker (list of invitations as a keynote speaker), cooperation efforts in Austria and abroad, activities as an editor or reviewer, number and scope of conferences organized, etc.
- International experience demonstrated through longer stays abroad, cooperation efforts with universities and research facilities abroad, as well as including and integrating international research
- Proof of having acquired appropriate research funding; organizing and taking part and/or managing research projects (function, project volume, contracting party and/or funding organization, duration, project manager and/or number of full-time employees when managing the project)
- Submit a research concept for future activities as the Professor for Game Computing at the JKU (under the classification of your previous work)

4.2. Teaching

The JKU is committed to research-led teaching. The applicant will be expected to offer courses in Computer Science in its full depth and breadth as well as lectures in his/her field of expertise. The candidate is expected to actively take part in basic education in computer sciences as well as for faculty service courses. As many of the educational degree programs at the JKU are international, the successful candidate should be proficient in English and capable of holding university-level courses and presentations in English.

The candidate's application regarding his/her qualifications in research will be considered under the following criteria:

- Didactic skills
- Experience Experience in holding university-level courses (please include a list of held courses, incl. University didactic continual education courses and activities)
- Experience supervising academic papers, such as Master's/Diploma degree theses and dissertations (include a list of supervised theses and dissertations).

4.3. Additional Requirements

The successful candidate is expected to be willing to collaborate with research institutions in Austria and abroad as well as with industrial companies. Collaboration efforts should include the objective to acquire external funding.

Pre-requisites for the position include the ability to develop and chair a department for Game Computing, a willingness to independently manage academic administrative tasks, and actively take part in university committees. In order to ensure that the organizational unit is successfully managed, in addition to key professional qualifications and management experience, the successful candidate should possess a strong professional and personal social skill set.

The candidate's application regarding his/her qualifications in research will be considered under the following criteria:

- Previous research collaboration with partners at universities in Austria and abroad.
- Qualifications and ability to manage organizational units, research projects, etc.
- Qualifications and ability to lead cooperatively, for human resource development, and the advancement of women as well as taking part in gender mainstreaming projects

4.4. Activities – Significance and Time Span

Overall, equal importance is given in the areas of research and teaching.

The workload distribution is therefore 40% teaching, 40% research and 20% for the completion of administrative tasks and institute management responsibilities. The successful candidate is also expected to actively and independently participate in administrative committees. When assessing candidate suitability for the position, this weighting will be taken into consideration.

5. Legal Contingencies

Effective as of January 1, 2004, the structure of Austrian universities has been completely re-organized. They are independently financed on the basis of a three-year service level agreement with the Austrian government, have a global budget at their disposal, and are not subject to any directives by the Austrian Federal Ministry of Science and Research.

5.1. Terms of Employment

All terms of employment, including a university professorship, are subject to the Private Sector Employees Act. A work contract between the university and the appointed professor confirms the

professor's appointment. The Salaried Employees Act and the collective agreement for university employees provide the legal framework for all related labor, social, and pension conditions. An evaluation of all teaching and research activities will be conducted after a 5-year period to assess the fulfillment of all target agreements.

5.2. Pension Regulations

5.2.1. Pension

A pension account at the Pension Insurance Company for Employees (PVA) provides the basis to calculate the amount of pension. All pension account holders are registered for annual partial credits during insurance periods in the amount of 1.78% of the annual contribution basis and these are capped at the maximum assessment basis. The sum of the partial credits is the total credits that are re-valued annually. The total credit divided by 14 equals the amount of gross monthly pension. For more information about the pension you receive directly from the state, please contact the PVA.

5.2.2. Company Pension Fund for University Professors

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

6. Salary

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 71,822.80 Euros per year (last update: 2019). Payment is allocated in 14 equal amounts, whereby two parts are special allocated payments.

The position as Professor for Game Computing provides a provision (on a voluntary basis) to agree on a salary over the minimum salary set by the collective agreement.

After a positive evaluation every six years – 4 times in total – there will be an advance to the next pay grade in accordance to the salary bracket in collective agreement for job category A1.

7. Application

Prospective applicants for the professorship position in Game Computing are requested to send the following documentation in electronic form to: application@jku.at. If documents cannot be sent in

electronic format, they are to be sent in quintuplet copy and should arrive at the Rector's office no later than one week after the end of the application deadline.

7.1. General Information

- Application form
- Letter of Intent (1 page)
- Tabular Curriculum Vitae
- Diplomas (Doctorate, Post-Doctorate/Habilitation)

7.2. Research

- Post-doctorate degree/habilitation (*venia docendi*), or a comparable, internationally recognized post-doctorate qualification
- Publication list, including 5-8 of the publications you consider most important and significant
- Academic presentations/lectures (List of invitations as an invited speaker)
- International experience demonstrated through longer stays abroad, cooperation efforts with universities and research facilities abroad, as well as including and integrating international research
- Proof of having acquired appropriate research funding; organizing and taking part and/or managing research projects (function, project volume, contracting party and/or funding organization, duration, project manager and/or number of full-time employees when managing the project)
- Submit a research concept for future activities as the Professor for Game Computing at the JKU (under the classification of your previous work)

7.3. Teaching

- List of previously held university-level courses, including a list of held courses and university didactic continual education courses and activities
- List of supervised Diploma degree theses and dissertations from the past five years

7.4. Miscellaneous

- List of previous research collaborations with partners at universities in Austria and abroad
- Qualifications and abilities to manage organizational units, research projects, etc.
- Qualifications and ability to lead cooperatively, for human resource development, and the advancement of women as well as taking part in gender mainstreaming projects

8. Information

If you have any questions in regard to the job profile, please contact Univ. Prof. Dr. Oliver Bimber (+43-732-2468-6631, oliver.bimber@jku.at).