

# RTI-ENDOWED PROFESSORSHIPS 2024

## ARTIFICIAL INTELLIGENCE IN HEALTH SCIENCES

**VERSION: 1.0**

**DATE: 16.05.2024**

**CALL DOCUMENT**

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## I INTRODUCTION

By awarding **RTI Endowed Professorships**, research structures and competencies at Lower Austrian colleges and universities will be strengthened and specific research topics will be sustainably established in the fields of action of the RTI Strategy Lower Austria 2027.

### KEY POINTS

<b>Field of action</b>	Digitalization, intelligent production and materials
<b>Thematic focus</b>	Artificial intelligence in health sciences
<b>Total funding</b>	€ 1.500.000,--
<b>Funding for project</b>	€ 1.500.000,-- (1 Endowed professorship)
<b>Funding rate</b>	90% of the eligible costs
<b>Duration</b>	5 or 6 years
<b>Submission</b>	From 16.05.2024 to 04.10.2024 (12 pm)
<b>Submission platform</b>	<a href="https://calls.einreichsystem.at/">https://calls.einreichsystem.at/</a>
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## 2 THEMATIC FOCUS

**Artificial intelligence (AI)** was defined as early as the 1950s by John McCarthy as "*the science and engineering of making intelligent machines*".<sup>1</sup> Today, AI primarily refers to the ability of computers or computer-controlled robots to perform certain tasks that are usually associated with human intelligence.<sup>2</sup>

Artificial intelligence thus refers to replica of intelligence that is oriented towards the abilities of humans.<sup>3</sup> The applications are based on **algorithms** to imitate functions that are actually attributed to the human brain.<sup>4</sup> These functions include logical actions, the discovery of meanings or the ability to generalize or learn from the past.<sup>5</sup>

Various algorithms are used to mimic these functions, the most well-known type of structured data being called **machine learning algorithms**. The algorithms are in turn divided into different types depending on the area of application. **Neural networks** are particularly suitable for deep learning – a **subfield of machine learning**<sup>6</sup> - as deep learning models can process large amounts of (unstructured) data and neural networks are scalable, so they can – at least potentially – achieve high complexity.

However, despite the immense progress in this area, as well as the ongoing scaling and also the expansion of the speed and memory capacities of the executing computers, the programs still do not have the flexibility of the human brain, have less overview of broader knowledge contexts and cannot apply everyday knowledge or nuances of social practices.<sup>7</sup>

Since current AI applications (assistance systems, etc.) primarily use algorithms to recognize patterns in data and deliver results based on them, they are also referred to as "**weak AI**", while the concept of "**strong AI**" is being worked on. However, a realization does not yet seem to be within reach.<sup>8</sup>

Nevertheless, numerous innovative areas of application of **AI in healthcare are already emerging**.<sup>9</sup>

As part of the **RTI Endowed Professorship 2024**, future innovation areas of artificial intelligence in health sciences (such as AI in medical imaging or in the analysis of complex medical data, in precision medicine or diagnostics as well as in laboratory automation, drug and medical device development, AI-supported robotics and telemedicine, or in hospital or process management) should aim to advance the field from **new research and development approaches to disruptive innovations**. In doing so, it is essential to explore the **medical** and **technical potentials** as well as the **challenges**, taking into account the **societal** and **ethical risks**.

<sup>1</sup> Akshar Joshi/Gautam Mishra (2010): Artificial intelligence. In: Proceedings of the International Conference and Workshop on Emerging Trends in Technology (ICWET '10). Association for Computing Machinery, New York, 1023. <https://doi.org/10.1145/1741906.1742236>

<sup>2</sup> <https://hai.stanford.edu/sites/default/files/2023-03/AI-Key-Terms-Glossary-Definition.pdf>

<sup>3</sup> <https://ki.thus.de/thematic/stark-vs-shbache-ki-law-definition/>

<sup>4</sup> <https://www.heise.de/ratgeber/Kuenstliche-Intelligenz-Was-steckt-hinter-dem-Hype-7192364.html>

<sup>5</sup> <https://www.britannica.com/technology/artificial-intelligence>

<sup>6</sup> A neural network works like a large number of computers, analyzing data based on patterns. The more data available and the more intensive the training of the neural network, the more likely connections are to be strengthened or weakened, which in turn has an impact on decision-making or predictions. Through this training, network learns and the AI becomes more precise with each data point (<https://www.heise.de/ratgeber/Kuenstliche-Intelligenz-Was-steckt-hinter-dem-Hype-7192364.html>)

<sup>7</sup> <https://www.britannica.com/technology/artificial-intelligence>

<sup>8</sup> <https://ki.thus.de/thematic/stark-vs-shbache-ki-law-definition/>

<sup>9</sup> [https://www.parlament.gv.at/dokument/fachinfos/zukunftsthemen/093\\_ki-diagnose.pdf](https://www.parlament.gv.at/dokument/fachinfos/zukunftsthemen/093_ki-diagnose.pdf)

## 3 OBJECTIVES

Within the framework of this call, the establishment and expansion of an endowed professorship will be funded. The FTI Endowed Professorship contributes to the following **objectives of the funding instrument**:

- Outstanding research and teaching is established and deepened.
- Knowledge transfer from research to teaching is promoted and takes place actively.
- The international visibility of the research group and the profile of the RTI location will be increased.
- Dissemination, public relations work and science communication take place in a targeted and sustainable manner.
- Institutional cooperation is being expanded and deepened.
- The endowed professorship contributes to solving social, economic, ecological and/or technological challenges.
- The topics of the endowed professorship will be sustainably established and anchored at a Lower Austrian institution.

## 4 PROCEDURES

### 4.1 SUBMISSION

RTI calls are calls for proposals that are open for a particular topic and timeframe. The language of the application is English and this applies to all parts of the application. Submission is possible from **16.05.2024** to **04.10.2024, 12.00 noon** via the GFF (<https://calls.einreichsystem.at/>) submission system.

### 4.2 EX-ANTE EVALUATION

#### EVALUATION PROCEDURES AND PROJECT SELECTION

All applications submitted by the deadline will first be checked by the GFF to ensure that the formal criteria are met (see point 7.1).

The GFF then assembles a jury of independent external experts and invites reviewers.

For each project application, three expert reviews are prepared on the basis of the defined review criteria (see point 7.2).

In a final jury meeting, a funding recommendation is made on the basis of the expert reviews and the assessments of the jury members.

#### DECISION ON FUNDING

The GFF Supervisory Board decides on the funding on the basis of the jury's recommendation.

### 4.3 FUNDING PERIOD

#### FUNDING AGREEMENT

The funding agreement is concluded between GFF and the funding recipient on the basis of the legal bases applicable to this call (see point 11).

#### PROJECT START

The project must start no later than twelve months after signing the funding agreement. In justified exceptional cases, this deadline can be extended after consultation with the GFF and by submitting a written (informal) application.

#### REPORTING

Three months after the start of the endowed professorship, a research plan for the entire funding period is submitted to the GFF.

Annual reports (based on a project year) are prepared and submitted by the funding recipients in the GFF (<https://calls.einreichsystem.at/>) submission system.

#### FUNDING RATES

The funding rates are paid out annually in advance, with 10% of the total funding being kept and transferred after the final report has been reviewed.

#### COMPLETION

The project is formally completed after the final report has been submitted through the GFF submission system (<https://calls.einreichsystem.at/>) and after it has been reviewed and the final payment has been completed.

### 4.4 INTERIM AND EX-POST EVALUATION

In the third year of the endowed professorship, an (financial and general progress) review will take place by a third party commissioned by the funding agency.

As part of an announced **ex-post evaluation** (audit), the funding agency or third parties commissioned by it will check the intended use of the funding funds with regard to their intended purpose.

## 5 REQUIREMENTS

### 5.1 ELIGIBLE INSTITUTIONS

- **The lead partner** can only be a university or a university of applied sciences located in Lower Austria.
  - The endowed professorship must be located at a location in Lower Austria.
  - Submission is limited to two proposals per lead partner.

- Cooperation (optional): **The project partner** can only be university, a university of applied sciences or non-university research institution located in Austria.

### 5.2 COOPERATION (OPTIONAL)

- Applications for the call can be submitted either by a single eligible institution (lead partner) or **optionally** as a cooperation (see 5.1).
- In the case of a cooperation, at least **50% of the funding** must be allocated at the **lead partner** and thus at a **location in Lower Austria**. The allocation of the project in Lower Austria has to be visible in all communication and dissemination activities.
- Before the project-start, a **consortium agreement**, which regulates the internal relationship of the cooperation, has to be submitted to the funding agency.
- Cooperation with or support from other (non-eligible) institutions (e.g. industrial partner) can be presented by **means of a letter of intent (LOI)**.

### 5.3 COMPOSITION OF THE TEAM

The endowed professorship is made up of the endowed professor and the scientific/technical staff. The application must describe the planned structural composition of the team and the planned appointment procedure of the endowed professor.

The endowed professor to be appointed must have a **completed PhD degree** followed by **least 5 years of relevant experience** in the field of research.

When appointing the endowed professorship and the scientific and technical staff, equal opportunities and diversity must be taken into account. The application must also describe which measures have been taken or are planned by the participating institutions to ensure equal opportunities and diversity in their organisation.

### 5.4 USE OF FUNDING IN LOWER AUSTRIA

Since the funding is provided by the federal state of Lower Austria, the use of the majority of the funding in Lower Austria (>50%) is a basic condition. This also applies in the case of a cooperative RTI endowed professorship, where the eligible costs (see 6.4) – i.e. the personnel costs for the endowed professor as well as for the scientific or technical staff and the overheads – must be budgeted, documented and accounted for on a pro rata basis.

### 5.5 OTHER

A fully completed and signed proposal is a mandatory for the application to be considered in the evaluation process.

**Failure to meet one or more of these requirements may lead to the exclusion of the proposal during the formal review and thus before the expert review.**

## 6 FINANCIAL FRAMEWORK

### 6.1 TYPE OF FUNDING

The funding is a grant. The maximum funding intensity is **90% of the eligible costs**.

### 6.2 DURATION

The duration of the funded project is either **5 or 6 years**. Cost-neutral project extensions are possible in justified cases and must be applied for separately at the funding agency (GFF).

### 6.3 AMOUNT OF FUNDING

The maximum funding for the project is € 1.500.000,--.

### 6.4 ELIGIBLE COSTS

In accordance with the principles of economy, efficiency and effectiveness, expenditure is only eligible for funding to the extent that its nature and amount are necessary and appropriate to achieve the purpose of the funding. Inappropriate calculations can be a reason for rejection despite the excellence of the funding application. Costs in the following categories are **eligible**:

#### PERSONNEL COSTS

- Direct personnel costs of the **endowed professor**
  - The actual personnel costs are subsidized by the maximum contribution basis without a cap.
- Direct personnel costs for **academic and technical staff**
  - The calculation of eligible personnel costs is based on the planned or actual gross personnel costs plus a lump sum of 30% for ancillary wage costs (AWC).
  - The actual personnel costs are subsidized up to the maximum contribution basis determined annually by the responsible Federal Ministry (Example: Maximum contribution basis 2024 = € 6,060 / month; max. eligible personnel costs per person = € 6,060 x 14 = € 84,840 (exkl. LNK))

#### OVERHEADS

- **Overheads** can only be funded as a lump sum of 25% on the eligible direct and project-relevant personnel costs.
- The overheads cover, among other things:
  - Rental and operating costs
  - Office supplies
  - Administrative staff costs
  - Material costs and other costs, such as test and consumables (up to the limit of low-value assets)



## 6.5 COST ACCOUNTING

The intended use of the funding must be recorded in the reporting system (see GFF [Cost Guide](#)) and in financial audits and interim evaluation by third parties (financial controls).

As part of the reporting system, this proof is provided by structured cost center statements or document lists. As part of the financial audit, cost center statements or document lists are checked on the basis of these.

# 7 REVIEW CRITERIA

## 7.1 FORMAL REVIEW

- Completeness of the application
- Fulfilment of the requirements under point 5
- Fulfilment of the financial framework under point 6

## 7.2 EXPERT REVIEW

The evaluation is based on a point system by external independent experts. The assessment is carried out on the basis of three main criteria (K1-3), each of which is divided into several sub-criteria.

The maximum number of points for an assessment is 15 points. The actual score is made up of the points awarded for each of the three main criteria. The maximum number of points per main criterion is 5 points (3 \* max. 5 points = max. 15 points). The actual number of points per main criterion is in turn determined from the points of the corresponding sub-criteria, for which a maximum of 5 points can also be awarded each. The points for the main criteria are calculated from the arithmetic average of the sub-criteria, which in turn results in the maximum number of points.

The following main and sub-criteria are used for assessment:

- **Excellence [K1]**
  - Originality and innovation
  - Relevance and international connectivity
  - Connectivity to existing fields of strength
- **Implementation [K2]**
  - Quality and efficiency concept
  - Financial and resource planning
  - Institutional framework
  - Structure of the team and quality of the appointment procedure
- **Impact [K3]**
  - Effect on the research location
  - Effect on the educational location
  - Societal / economic / ecological / technological impact

## 8 OBLIGATIONS

The funding recipients are obliged to **observe** the following points:

- Economical, economical, expedient and transparent use of funds.
- Keeping separate and comprehensive records to prove the implementation of the funded project and retaining the records and receipts during and at least for ten years after the end of the project, unless there are any further legal provisions.
- Keeping an adequate accounting system.
- Submission of appropriate interim and final reports to the funding agency, in accordance with the timetable and reporting structure submitted by it.
- Enabling audits and evaluations by the funding agency and third parties commissioned by it, as well as an obligation to provide relevant information in the context of the interim and ex-post evaluations.
- Timely reporting of all important events relevant to the implementation of the funded project.
- Provision of information for the public relations work of the funding agency.
- Establishing the visibility of the funding agency and the province of Lower Austria as a funding provider for websites, publications and events in connection with the funded activity (the use of the logos and the funding acknowledgement is regulated in the project contract).
- Compliance with the [Universal Declaration of Human Rights](#), the [Sustainable Development Goals \(SDGs\) of the United Nations \(UN\)](#) and the further strategic embedding of the [RTI Strategy Lower Austria 2021 – 2027](#).

## 9 SUSPENSION AND RECLAIM OF FUNDING

With regard to the reduction, evaluation and reclaim of funding, the provisions of §13 of [the Guidelines for Funding under the Lower Austrian Cultural Promotion Act 1996 in the area of science, research and tertiary education](#) apply.

In addition, the following points can lead to a suspension and reclaim of the funding:

- The project was not started in time within one year of the signature of the funding agreement without the consent of the funding body.
- The purpose or composition of the endowed professorship has been changed without the express approval of the funding agency.

## 10 DATA PROTECTION

### 10.1 CONTROLLER UNDER THE GDPR

The Gesellschaft für Forschungsförderung Niederösterreich M.B.H., A-3100 St. Pölten, Hypogasse 1, 1st floor, T: +43 2742 27570-0, E: [office@gff-noe.at](mailto:office@gff-noe.at) (GFF) is responsible for the processing of your personal data in connection with your funding application in accordance with Article 7 (7) GDPR.

### 10.2 PURPOSE AND LEGAL BASIS OF DATA PROCESSING

In order to process and fulfill the funding application, GFF processes the following personal data about you: Name and professional contact details of the contact person of the institutions of the funding applicants; Names, professional contact details and CVs of the scientific director and the project partners; Names and contact details of other scientific or technical staff.

The legal basis for this data processing is the performance of the contract in accordance with Art. 6 (1) (b) GDPR so that GFF can process and fulfill your funding application.

### 10.3 STORAGE PERIOD

GFF will store your personal data until your funding application has been fully processed (from submission to termination of the funding agreement, including any necessary data transfer to the Province of Lower Austria, external experts and examiners, insofar as this is necessary to fulfil the funding application).

In addition, GFF will only store your personal data to the extent necessary to comply with statutory retention obligations or to pursue or defend against legal claims.

### 10.4 DATA RECIPIENTS

We will transfer your personal data to the following third parties if this is necessary to fulfil your funding application:

- Province of Lower Austria
- External reviewers
- External examiners

In addition, GFF uses processors who process the data on their behalf. The processors may only process the data provided to them in accordance with our instructions and to perform services for us. GFF contractually obliges these processors to ensure the confidentiality and security of the personal data processed in the context of the order.

### 10.5 YOUR RIGHTS UNDER THE GDPR

You have the following rights vis-à-vis GFF as a controller under the GDPR: (i) information (Art. 15 GDPR); (ii) rectification (Art. 16 GDPR); (iii) erasure (Art. 17 GDPR); (iv) restriction of processing (Art. 18 GDPR); (v) objection (Art. 21 GDPR); (vi) data portability (Art. 20 GDPR); (vii) Complaint to the competent supervisory authority (Art. 77 GDPR), whereby in Austria the data protection authority ([www.dsb.gv.at](http://www.dsb.gv.at)) is competent.

## II LEGAL BASIS

- [Lower Austrian Cultural Promotion Act 1996](#)
- [Guidelines for funding under the Lower Austrian Cultural Promotion Act 1996 in the area of science, research and tertiary education](#)

The legal basis and the call document do not give rise to a legal entitlement to the granting of funding. The place of jurisdiction in all disputes arising from the granting of funding is the Regional Court of St. Pölten.

This call document will come into force on **16.05.2024** and applies to funding applications in the call "**RTI Endowed Professorships 2024**". Changes and any updated versions will be published on the website of the GFF submission system (<https://calls.einreichsystem.at/>).