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Guiding Principles for Doctoral Researchers at the Weizenbaum Institute for the Networked Society

As at: 29 November 2021

Editorial preface

The Guiding Principles for Doctoral Researchers at the Weizenbaum Institute (WI) formulate basic principles and conditions for working on doctoral dissertations at the Institute. A separate, closely related document contains support guidelines for doctoral researchers (referred to in the following as Support Guidelines) with complementary, practical advice for doctoral researchers and their support staff at the WI.

Although the many offers, opportunities and regulations (in particular doctoral regulations) of the network partners always take precedence, these Guiding Principles aim to make recommendations and suggestions to (a) provide orientation for all doctoral researchers at the WI, (b) make use of synergies within the network, (c) create a uniform research context at the Institute, and (d) offer the best possible framework for promoting interdisciplinary and evidence-based research for the networked society – including through international collaboration and knowledge transfer between sectors.

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Tasks and objectives of the Guiding Principles for Doctoral Researchers at the Weizenbaum Institute

KEY PRINCIPLES

A dissertation at the WI is aligned with the key principles of our institution: openness, participation, transfer, diversity and an international orientation. These Guiding Principles link the doctoral phase with the core values and strategic orientation of the Institute in order to strengthen the structure of the Weizenbaum research culture and give it broad foundations.

WORKING STRUC-TURE

In terms of working structure, the WI has research fields, research groups and cross-cutting research areas. In line with the Institute's Mission Statement, sustainability and self-determination form an overarching bracket above the core topic areas to "contribute to individual and social self-determination (...) for the long term" and to serve the common good within the meaning of the UN's Sustainable Development Goals.

INTERDISCIPLIN-ARITY

As well as being firmly anchored in the Berlin-Brandenburg university and research landscape, a key characteristic of the WI is that it is a place for interdisciplinary research. Digitalisation, which forms the subject of the research projects at the WI, often calls for interdisciplinary approaches. These Guiding Principles address this issue, describe specific attributes of research work at the Institute and formulate recommendations for working successfully across disciplinary boundaries.

MAIN AUDIENCE

\ The Guiding Principles and the Support Guidelines are aimed primarily at the doctoral researchers at the WI and, by way of information and orientation, at associated researchers and all doctoral support staff.

ADDED VALUE

The Guiding Principles help structure the doctoral phase, with high added value both for the institutional profile of the WI and for its attractiveness as a workplace for outstanding researchers.

Principles of doctoral research work at the Weizenbaum Institute

With regard to the research work carried out by doctoral researchers at the WI, six principles are of central importance. They are closely linked to the Institute's Mission Statement and the Guidelines for Research Groups: participation, openness, transfer, interdisciplinarity, international orientation and diversity.

Participation

PARTICIPATORY RESEARCH

... in research

Research projects and the development of the WI's research agenda are designed to be participative processes. Within the scientific community, participative research starts in the collaborative working relationships within the Institute's individual research groups. Beyond this, we strive at our Institute for broad, transdisciplinary social involvement, which is reflected in event formats like the Weizenbaum Forum, participative scientific methodologies and inclusive data-collection methods (citizen science). Other forms of participation, such as public surgeries and close consultation with civil society actors in the topic-finding and development process (see also "Transfer") are desirable. The aim is to communicate information about WI research to society and also to stimulate and strengthen research through ideas emanating from society.

PARTICIPATORY INSTITUTIONAL CULTURE

... at the Weizenbaum Institute

At the Institute, it goes without saying that all employees are involved in shaping it from a participative perspective. The Scientific Council is the central body for the participation process. All Institute members are represented here and can discuss the organisation's structure and further development. In addition, there are institutionalised opportunities for discussion for the various peer groups that are used for networking and to organise the representation of interests. In addition, surveys are regularly carried out across the Institute by employees or the administrative office to assess staff satisfaction, needs and further development suggestions and so that the future design of the Institute and strategy can be based on the findings.

Every doctoral researcher has the opportunity to get involved in the participatory processes and to play a role as a representative of this group in the various committees and topic-specific working groups. This kind of engagement should not be seen purely as a representation of interests, but rather offers a wide range of options for shaping the Institute's development in strategic areas. Self-government activities should be discussed with or mentioned to the relevant support staff (doctoral sup-

port staff, Principal Investigators, research group leaders; for terminology see also the Support Guidelines, under "Supporting doctorates"). It is recommended that any significant workload resulting from these activities should be offset by limiting other activities of less relevance to the doctorate accordingly, by mutual agreement.

Openness

KEY TENETS OF OPEN RESEARCH Open research is a hallmark of our day-to-day work at the WI. It is our declared aim to conduct excellent, open basic research that generates and uses open data and content. By default, access to and use, modification and sharing of research outputs should be as free and open as possible (see OD). As a publicly financed institution, the WI is committed to the idea that the research results obtained represent a barrier and cost-free common good of society and its constituent parts (see UNESCO 2021).

In this area, and in the following aspects, the WI implements relevant recommendations, guiding principles and rules of good scientific practice and of the key German and European research funding bodies (see especially DFG 2019; BMBF 2016; EC-2012).

OPEN ACCESS

In line with the relevant doctoral regulations, we recommend publishing quality-controlled papers openly with suitable journals, series and publishers. To assess scientific outputs, the WI encourages the use of appropriate quantitative and qualitative criteriaat the individual publication level, taking into account relevant traditions within the field. Where possible, these aspects should also be applied to other open research outputs, e.g. research data, research software, review activities (open peer review), etc.

RESEARCH ASSESSMENT To play an active role in shaping the current shift towards open research, when evaluating research outputs, the Institute is committed to taking account of and recognising open research activities in line with the individual's career and experience levels (see e.g. DORA 2012; TUM 2014; Ghent 2016; Tampere 2019). It is therefore suggested that those involved (especially Principal Investigators and research group leaders) make use of multidimensional, transparent, innovative, robust, flexible and fair performance criteria and adequately recognise open research activities in their overall assessments (see also DORA 2012; EUA 2018; SE 2020).

For the design of individual publication strategies as a central component of academic careers, we advise doctoral researchers to consult with their Principal Investigators and research group leaders. The following main instruments are available at the WI to implement the stated aims in the areas mentioned:

INSTRUMENTS FOR OPEN RESEARCH AT THE WT

- \ Targeted support for open access publications and open methodologies, tools and research software, and teaching about them in professional development measures
- Raising awareness of open data and open research process options in individual and group projects
- \ sing innovative, open formats for the development and subsequent open distribution of scientific results (e.g. through exhibitions, bar camps, hack-/thinkathons and MOOCs) and providing support for co-creation with civil society and economic actors (e.g. in open labs, maker spaces and blockchain nights) on the basis of open, public-benefit exploitation models
- \ The Weizenbaum Library as a powerful infrastructure for open research
- \ Weizenbaum Cloud and software as tools/a repository for collaborative research and coding projects

Transfer

KEY TENETS

... to society, the business sector, policymakers, the cultural arena

Transferring research to society, the business sector and policymakers is another hall-mark of the WI. We regard transfer as an iterative and participative process that is not achieved through one-off activities or events, and does not wait until the research is finished before it starts. Instead, transfer means circular and 'multidirectional' translational processes between science, (civil) society, policymakers, the cultural arena, the media and the business sector (BUA 2019, [2]).

RECOMMENDATIONS

We recommend that doctoral researchers at the WI make their research visible to the public, society, the cultural arena, policymakers, the media and the business sector. The idea here is not primarily to try out all conceivable forms of transfer activity, but rather to consciously shape the elements of one's own actions in various transfer fields and, where relevant, to develop a profile of where and how one's own research work has social, cultural, political etc. relevance and can develop an impact. In this way, doctoral researchers can gain transfer skills through research work conducted at the WI and try them out in practical transfer activities. The WI offers doctoral researchers a wide range of support options for transfer activities (contact: Johanna Hampf). The following transfer formats are currently the main ones at the WI::

FORMATS

- \ Professional development options for developing transfer skills
- \ Weizenbaum Forum
- \ Weizenbaum Conference
- \ Berlin Science Week
- \ Weizenbaum Assembly at the Chaos Communication Congress

- \ Various collaborative formats, e.g. with the Federal Agency for Civic Education and its local counterparts
- \ Cooperation on position statements and commentaries for political stakeholders
- \ Roundtable formats for political stakeholders
- \ Weizenbaum Film Night

TRANSFER THROUGH

... to university teaching

A special aspect of transfer is academic teaching. WI staff generally do not have any direct teaching duties. However, particularly for doctoral researchers who want a university career, it is important to get to grips with higher education teaching and gain teaching experience early on.

To make it easier for doctoral researchers to offer university teaching, support staff in particular are requested to facilitate contacts with faculties and to advise on developing seminar topics and plans. The participation of staff in the higher education programmes of the partner universities is also recommended. Especially for the first class taught by a doctoral researcher, we encourage exploring the option of co-teaching (i.e. a joint class taught with an experienced lecturer) and/or co-supervising Bachelor's and Master's dissertations.

The participation of doctoral researchers in teaching is generally characterised by a proactive approach and voluntary involvement. There are no plans to make teaching or teaching support a mandatory part of work at the WI. We also recommend that doctoral researchers do not teach more than one large class in a calendar year, to avoid neglecting the other WI-associated tasks.

Interdisciplinarity

KEY TENETS

Interdisciplinarity, a central feature of working at the WI, emerges from the research focus and Institute structure. Interdisciplinary work is specifically promoted and developed in all work contexts – but without neglecting the main discipline(s) – particularly in terms of doctorates. The level of (optional) interdisciplinarity in doctoral projects will depend on how the topic under investigation is designed in terms of method and content. Any tension between a strict disciplinary research focus in individual projects and interdisciplinary collaborative projects can be addressed in the relevant research groups.

CHALLENGES AND OPPORTUNITIES

The Institute and all its officers explicitly recognise that interdisciplinary work presents a major challenge, especially in early career stages. The Institute's officers are

aware that interdisciplinary research activities require comprehensive initial training and time and are demanding in terms of methodology, and that the academic job market for university research and teaching is still usually organised along traditional disciplinary lines (see also Wissenschaftsrat 2020, 66-67). Successful interdisciplinary work therefore requires extra support and facilitation, e.g. in relation to developing suitable publication strategies. Regular advisory sessions, where relevant support staff (Principal Investigators and research group leaders) pass on their experience are an important part of doctorates at the WI. A central aspect of these discussions involves approaching the topics being investigated in ways that are specific to the discipline in question, so as to provide an evidence base for interdisciplinary activities at the Institute and shape the career paths of the doctoral researchers in a long-term perspective.

SPACES FOR IN-TERDISCIPLINAR-ITY Beyond group work, interdisciplinary conversations take place at the WI in specific event and discussion contexts. The following formats in particular are places were interdisciplinary thinking and practice are communicated and developed:

- Cross-cutting research areas: The WI's cross-cutting research areas are currently investigating three issues: Autonomous Systems and Self-Determination (contact: Florian Butollo, Florian Eyert, Florian Irgmaier, Rainer Rehak), Security and Transparency (contact: Martin Florian, Lena Ulbricht, Sonja Schimmler) and Digitalisation and Sustainability (contact: Stefan Ullrich, Rainer Rehak, Andrea Hamm). Anyone interested in further information or in taking part can contact the named individuals.
- Research Day: Since 2021, the Research Day takes place twice a year and offers a platform for discussion and networking within the Institute. The focus is on presenting new research findings, testing interdisciplinary methodologies, and open forums to pave the way for new research questions and projects. Topics concerning the general development of the Institute, such as good scientific practice in the digital age, are also dealt with from time to time (contact: Julian Vuorimäki).
- Retreats: Retreats take place at research group level and within the various peer groups at regular intervals (usually annually). In-depth discussions about disciplinary boundaries and joint work on interdisciplinary group projects form the core of the retreats.
- Brown bag lunches and workshops: Brown bag lunches were introduced as an informal discussion format shortly after the Institute was established. In future, they will be restricted to doctoral researchers and incorporate experimental presentation forms, e.g. talks on methodical errors, intellectual dead ends etc.
- Workshops: The wide range of internal workshops specifically teach the basics of the disciplines and subject areas covered by the Institute. Workshops can be instigated or run by the doctoral researchers themselves. In addition, some are developed by the administrative office of the WI, and doctoral researchers are invited to communicate their needs to the relevant colleagues in the administrative office.
- Another option for practising interdisciplinarity in some cases can be to select a suitable second support person.

International orientation

KEY TENETS

Today, science and research in almost all countries are characterised by high levels of networking and collaboration across national borders. The interdisciplinary digitalisation research at the WI is perhaps particularly focused on global collaboration and discussion.

For doctoral researchers (and postdocs), the WI Guidelines for Research Groups mention, among other things, the provision of financial and technical resources and support for spending time abroad and networking within the research community (Weizenbaum-Institut 2019, 3). Doctoral researchers can – sometimes in consultation with the Principal Investigators and research group leaders – make use of existing instruments and formats for networking, particularly the Fellow Programme, collaborations involving leadership staff, the Global Network of Internet and Society Research Centers and the annual Weizenbaum Conference (contact: staff member responsible for international activities). In addition, the following recommendations apply:

RECOMMENDATIONS AND BEST PRAC-TICE

- We encourage doctoral researchers to network internationally by taking part in relevant international conferences and by spending time conducting research abroad. We recommend discussing longer trips abroad with the relevant support staff sufficiently far in advance (usually six months in advance for visits lasting more than three months).
- \ The WI Fellow Programme offers the opportunity to make contact with and, where relevant, to collaborate with researchers from the same or related fields on site in Berlin. Doctoral researchers can get involved in this programme and also prepare their own research trips.
- Because of the international makeup of its staff, the WI has two main working languages: German and English. There is an inclusivity requirement, i.e. people should collectively and as the situation requires select the language used so as to avoid excluding participants as far as possible.
- Official documents are made available in both languages, where possible. The inclusivity requirement also applies to internal forms of information, e.g. event announcements and professional training courses organised with external instructors.
- \ For a doctoral researcher's own international networking and career planning, it can be advisable to select a second dissertation support person from a different country. In addition, dissertations can be written and submitted in other languages, where the support situation and the relevant doctoral regulations allow.
- We also strongly recommend that doctoral researchers publish scientific papers in both German- and English-language or other open, quality-assured, excellent journals, in order to strengthen the doctoral researcher's profile in the international research landscape.

Diversity

KEY TENETS

At the WI we pursue the interrelated aims of equal opportunities and freedom from discrimination. Both aims have their roots in the Institute's <u>Mission Statement</u>, where they are based on the requirement to "work together in an inclusive and respectful way". Work-life balance is also covered in this area.

As well as complying with relevant legislation, like the General Act on Equal Treatment (AGG), the principles of freedom from discrimination and of equal opportunities mean, among other things, engaging actively with the social makeup of one's own workforce and, where necessary, developing measures to improve equal opportunities. In the area of gender diversity, similar data can be collected and activities developed to achieve a more balanced gender ratio (including gender-diverse individuals) among doctoral researchers.

GOALS, MEASURES, CONTACTS

At the WI, diversity is both an integral part of the lived culture at the Institute and a guiding ideal that informs strategy and management processes and guidelines. In this area – as in the areas already covered (e.g. transfer and openness) – we are guided by the best practices of our network partners. Particularly worth mentioning here is the Diversity Strategy of Technische Universität Berlin.

- The WI promotes equal opportunities and research, even in family breakup situations, within the available resources and in line with the requirement to practise fairness to all employees. As a basic principle, for instance, parental leave and family care responsibilities should not have any (long-term) negative impacts on an individual's research activity or employment relationship at the Institute or on their future career. Within the framework of the legislation and the requirements of the awarding authorities, the WI is also guided in this area by the DFG's recommendations on funding practice (see also Sommer et al. 2018).
- When developing professional development or mentoring provisions, the WI pays particular attention to the needs of female and nonbinary doctoral researchers. In addition, professional development training on diversity aspects should be offered as needed, to close any gaps in the network partners' event portfolio.
- Regular discussion on diversity-related topics and the development of any measures takes place in the Diversity working group. Participation in the working group is open to all employees (contact: Lena Ulbricht).
- Finally, at the WI we are aware of our responsibility in particularly stressful situations and crises. In the ongoing coronavirus pandemic, we are striving, among other things, to absorb any undesirable consequences for doctoral projects as needed. Research projects that have already started and made progress should be brought to a successful conclusion where possible. Here we are also guided by the advice of the DFG's Joint Committee.

Conditions of doctoral research work at the Weizenbaum Institute

CAREER DEVELOPMENT AS A STRATEGIC TASK OF THE INSTI- Promoting academic talent and scientific careers is a central aim of the WI. There is an emphasis on doctorates because the doctorate is the main gateway to an academic career and is the most common academic qualification achieved at the WI in collaboration with the network partner institutions and other organisations. In terms of working and funding conditions, at the WI we strive to create attractive, fair, transparent and, where possible, uniform employment conditions for doctoral researchers and, by this means and others, to attract the brightest minds in digitalisation research (see also JA 2020; DFG 2021a). This document aims to contribute to the further professionalisation and, where appropriate, the further standardisation of academic personnel development (see UniNetzPE 2015; Beadle et al. 2019; Hasgall et al. 2019; Vurgun et. al. 2019), while preserving the variety of individual life and career paths in the research sector.

PARTICULARITIES AND GOALS OF A DISSERTATION AT THE WI Research work at the WI in the context of a dissertation at the network institutions or other organisations differs from other common forms of doctorate, such as an independent doctorate or working under a professor. The demands on doctoral researchers at the WI are high: research work at the Institute should be, above all, technically excellent and should, where this makes sense and is possible, develop interdisciplinary innovation potential as a contribution to the overall multidisciplinary profile of the Institute. It is in this area of conflicting priorities that the WI projects take place. The Institute's network structure and young age result in a culture of encouragement and participation, as well as agile structures that call for and support personal initiative and personal responsibility. The doctoral researchers are closely supported by Principal Investigators, research group leaders and, where available, external experts.

A dissertation at the WI is currently not set up as a structured doctoral programme in the narrower sense. Rather, it is primarily characterised by collaboration in the individual research groups, with the research group leaders and Principal Investigators, and in cross-cutting research areas. In addition, there are currently – as required and depending on the fit of the dissertation – bottom-up initiatives and collaborations with non-government organisations, or other cross-sectoral activities that can be set up and continually expanded based on individual research interests. Everyone involved is aware of the associated opportunities (e.g. scope for collaborative projects) and challenges (e.g. time needed to organise and carry out joint projects). These are considered in joint discussions and are taken into account when scheduling individual dissertation projects. Finally, the WI connects with existing and emerging initiatives of its network partners, such as the Graduate Studies Support Programme of the Berlin University Alliance, and contributes its own experience and skills to them. The increasing, successful development of permanent structures at the WI – including through these Guiding Principles and similar measures – creates conditions for establishing a systematic, participative and needs-oriented curriculum for doctoral researchers at the Institute in the future.

Doctorate, research group, cross-cutting research areas

FOCUSSING ON THE DISSERTATION

Working on a dissertation to achieve a doctoral degree is the main task of doctoral researchers working at the WI and is their main contribution to research. The doctoral researcher is always embedded in a research group in a suitable subject area. In addition, there are opportunities for discussion with other doctoral researchers, the research group leader(s) and the Principal Investigators involved.

RESEARCH GROUPS AS SOUNDING BOARDS The research group is a sounding board for one's own scientific activities and provides a first platform for interdisciplinary discussion and research work. It should be emphasised that the workload associated with one's own involvement in the research group can be variable, but must be clearly defined. In this context, phases of intensive group work should be followed by phases of intensive dissertation work. Generally, we recommend ensuring that there are important synergies between the project work in the research group and the individual doctoral work right from the start.

CROSS-CUTTING RESEARCH AREAS FOR BROAD, TRANS-DISCIPLINARY CHALLENGES The cross-cutting research areas (Autonomous Systems and Self-Determination; Security and Transparency; and Digitalisation and Sustainability) present a second Institute-wide platform for interdisciplinary networking and project work. Optional and even ad-hoc involvement in these is possible and welcome at any time. Involvement in a cross-cutting research topic can come about because of the added value it offers for the doctoral researcher's own research work, through curiosity or other broader motivating factors. At the same time, a single doctoral project can also advance a relevant cross-cutting research area considerably if the topic is aligned with it. Finally, it should be emphasised that the reason the WI offers such stable and comparatively extensive support to doctoral researchers is precisely because it aims to support interdisciplinary research work and scientific work beyond established disciplinary boundaries (see also Bundesbericht 2021, 115-117, 132-138; DFG 2021b, c).

Support, expert discussions and career development

CRITICAL SUCCESS FACTORS: ADVICE AND SUPPORT Advice and support at the WI take place on several levels, enabling a range of perspectives on a research career or alternative career paths based on the individual's work. The research group offers direct contact with at least one Principal Investigator and one research group leader at the WI. Doctoral researchers can find practical support here that is relevant to everyday life and research, supplemented by regular peer group and expert discussions to ensure the progress of their own work and career development (see Support Guidelines for more details).

Work culture and wellbeing

KEY TENETS

The physical health and mental wellbeing of doctoral researchers are preconditions for successful research work. At the WI, we are aware of our responsibility and duty of care for our employees – researchers in general, and early-career scientists in particular.

Working conditions and career development activities at the Institute therefore consider the holistic needs of researchers, where possible, and support them so that they can reach their full academic and creative potential. The WI's approach to dealing with its most valuable resource – the people who work here – is characterised by reliability, courtesy, transparency, fellowship and a willingness to engage in dialogue among everyone involved (especially researchers, management level and administration).

PRIORITISING QUALITY

The WI attempts to supplement problematic incentive systems for the evaluation of researchers (ones that are focused purely on quantitative performance criteria) with innovative measures in the area of open research, and to develop these further (see above under "Openness" for more details, and Nature 2019; DFG 2021a). In addition, we follow the principle that family care and childcare obligations and other extraordinary stressful situations, like the coronavirus pandemic, should not result in disadvantages for continuing or completing research work at the Institute (see above under "Diversity" for more details).

PROTECTING AGAINST ABUSE

Abuse of power, sexual harassment and other forms of disrespect or discrimination are not tolerated at the WI. Depending on the circumstances, Principal Investigators, research group leaders and confidential counsellors at the Institute, or ombudspersons at the network partner organisations and/or administrative office staff (Network Coordination team) can be approached in confidence to find solutions (see Support Guidelines for the relevant contact details).

Background information about the Weizenbaum Institute

- The WI is a joint project funded by the German Federal Ministry of Education and Research (BMBF) and is based in Berlin and Brandenburg. The network partners are Fraunhofer FOKUS, Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin, Berlin University of the Arts, the University of Potsdam and the WZB Berlin Social Science Center.
- The Institute is currently in its second development phase (2021/22). The associated and subsequent evaluations and funding applications play a key role in the continuous development of the Guiding Principles and any resulting structural measures to shape the doctoral process. Relevant recommendations from past evaluation reports (2020) have been taken into account in this document.
- The WI conducts interdisciplinary and basic research into the transformation of society through digitalisation, and develops formative options for policymakers, the business sector and civil society. Academic training and support for employees are core tasks of the WI.

Further information and literature

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