

Science, Values, and Institutions

Workshop

4 – 5 November 2025

Bergische Universität Wuppertal

Senatssaal (K.11.07)

Program, Abstracts, and Local Information

Science, Values, and Institutions Program

4 – 5 November 2025

Bergische Universität Wuppertal, Senatssaal (K.11.07)

4th of November

Institutional Foundations & Epistemic Sustainability

9:30-10:15

Hanne Andersen (Copenhagen) – *The Multiple Roles of Universities as Epistemic Institutions*

10:20-11:05

Chrysostomos Mantzavinos (Athens) – *The Constitution of Science*

Inequality and the Reproduction of Elites

11:20-12:05

Juliana Gutiérrez Valderrama (Bogotá) – *Institutions, Scientific Assessment, and Values Amidst Inequality*

12:10-12:55

Gabriele Badano (York) – *What Are the Limits of Contestation?*

Proposals for Organizing Science

14:30-15:15

Stephen John (Cambridge) – *Revolutionary Anarchy as the Only Response to the Values in Science Problem*

15:20-16:05

Ezgi Sertler (Orem, Utah) – *Exploring Institutional Epistemology*

Institutional Dynamics and Value Management

16:20-17:05

Kärin Nickelsen (Munich) – *Collaboration, Competition, Coordination: The Role of Institutions in Early Genome Research*

17:10-17:55

Julie Jebeile (Bern) – *Value Formation and Management in Climate Research Institutions*

5th of November

The Role of Institutions for Scientific Standards and Practices

9:30-10:15

Stéphanie Ruphy (Paris) – *How Evaluation Agencies Can Help (or Hinder) Responsible Science*

10:20-11:05

Kevin Elliott (East Lansing) – *Institutionalizing Values and Science: The Strengths of Standardization in Troubled Times*

Institutions, Risks, and Agenda Setting

11:20-12:05

Anna Leuschner (Wuppertal) – *From Denialism to Demoralization: New Strategies against Climate Protection and Their Institutional Effects*

12:10-12:55

Boaz Miller (Safed) – *What Is Known to the State of California?*

Science, Institutions, and the Public

14:25-15:10

T.Y. Branch (Hannover) – *Science Centers and Museums: Navigating Organizational Roles and Institutional Values*

15:15-16:00

Tanja Rechnitzer (Hannover) – *Bridging Institutions: Organizations in Science Communication*

17:00-17:45

Closing Discussion

MICHIGAN STATE
UNIVERSITY

IZWT

Interdisziplinäres Zentrum
für Wissenschafts-
und Technikforschung
www.izwt.de



BERGISCHE
UNIVERSITÄT
WUPPERTAL

Organization: Kevin Elliott (MSU) and Anna Leuschner (BUW)
Contact: skraft@uni-wuppertal.de

Abstracts

(authors' names in alphabetical order)

Hanne Andersen

The Multiple Roles of Universities as Epistemic Institutions: Producing, Disseminating, Maintaining and Transmitting Scientific Knowledge, Skills and Competencies

Traditionally, universities as institutions have primarily been the objects of study for scholars from history, sociology, political science and higher education research. However, universities are epistemic institutions engaged in producing, maintaining and disseminating knowledge. As such, they are also relevant objects of study for philosophers of science, especially those engaged in some of the more practice- or policy-oriented research directions that have emerged within recent decades, such as philosophy of science in practice, socially engaged philosophy of science, socially relevant philosophy of/in science, integrated history and philosophy of science, or history and philosophy of science engaged in teaching and education.

In this talk, I shall address the multiple roles of universities as epistemic institutions engaged in producing new knowledge at the research front, disseminating newly produced knowledge and enabling its application in wider settings, maintaining the growing body of knowledge in its entirety and preserving it for posterity, and training new generations to continue these multiple epistemic tasks of producing, disseminating, applying, maintaining and preserving knowledge.

On this basis, I shall revisit the traditional Humboldtian ideals of the research university. I shall argue during the two centuries that have passed since these ideals were first developed, the epistemic enterprises of research and education have developed profoundly, and in ways that call for important updates of the Humboldtian ideals. In particular, I shall focus on how universities serve not only the epistemic aims of producing new knowledge and disseminating it to current generations, but also of maintaining knowledge for posterity and enabling future generations to locate and reactivate knowledge already produced, and I shall analyze in which ways the growth of science calls for revisions of long held ideals.

Gabriele Badano

What Are the Limits of Contestation? Challenging the new Orthodoxy about Values in Science

In recent years, the normative literature about values in science has taken a clear political turn. The main question has become, what values should scientists draw on in their capacity as citizens, belonging in a broader political community that is ideally meant to govern itself? This political turn has gone hand in hand with the ascendance of the 'democratic alignment' view of which values should influence science, dictating that scientists should use the values that are most widely shared among the democratic public.

The dominance of this view is now being challenged in a way that appears to be ushering in a *political* political turn. Echoing some classic themes of 'realist' political theory, characterised by the idea that the discipline has steered too far away from the realities of politics, these critics of democratic alignment stress how pervasive value disagreement is in our societies and how certain value perspectives might owe much of their spread to the sheer power of the elite groups that hold them. Accordingly, it is important that different communities of scientists hold on to different value judgements as part of a process of mutual contestation that might happen either within or without formal political institutions.

Drawing on existing critiques of similarly 'agonistic' and 'systemic' strands in the deliberative democratic literature at large, I aim to challenge this emerging orthodoxy, suggesting that its core views should be heavily caveated. Indeed, the contestation view lets scientists too easily off the hook for their handling of values. Also, it places too much trust in the ability of the broader system to bring into equilibrium the particularistic attitudes of competing scientists. Finally, at a philosophical level, it steers too far away from the spirit of the original question of what values should guide science.

T. Y. Branch

Science Centers and Museums: Navigating Organizational Roles and Institutional Values

In an era where the boundaries between science and society are increasingly porous, philosophers of science are turning their gaze toward institutions as conduits of information. These institutions—those engaged in the production, utilization, and communication of scientific knowledge—play a complex role in shaping the relationship between the scientific community and diverse publics. Among them, science centers and science museums play a special role, each striving to make science more publicly accessible. Yet, beneath their shared mission lies a tapestry of subtle distinctions that set them apart, particularly in the cultivation and expression of values.

The terms ‘science centre’ and ‘science museum’ are regularly used interchangeably. The casual conflation arises from their overlapping goals, particularly their commitment to public engagement with science. However, the degree to which these entities embody institutional characteristics and function as organizations varies significantly. Here, the term "institution" refers to the enduring norms, values, and structured practices that are designed to last for decades, if not centuries. In contrast, "organizations" can be understood as groups of individuals united by a common purpose, typically working toward their objectives within a shorter time frame.

This exploration will illuminate how research, education, temporality, operational structure, and goals delineate the differences between science centers and science museums. By examining these features, we can uncover the nuanced ways in which values are both selected and employed within these entities, revealing both similarities and divergences. Ultimately, this discussion will advocate for the inclusion of science centers and museums in the broader conversation about value management in the philosophy of science.

To ground this analysis, I will look to several entities in Germany: the Deutsches Museum (Munich), the Stiftung Deutsches Technikmuseum (Berlin) and Odysseum (Köln). Though the comparisons will note institutional and organizational differences, my aim is not to declare one type of establishment superior to the other in terms of public engagement. Instead, I seek to show how the richness of these spaces can be helpful for appreciating what institutions are, how they can be distinguished from colloquially similar concepts like organizations, and why an understanding of values is crucial to navigating the landscape of public science communication.

Kevin Elliott

Institutionalizing Values and Science: The Strengths of Standardization in Troubled Times

Philosophers working on the topic of values and science increasingly recognize that they should investigate not only the value-laden choices made by individual scientists but also the value-laden practices associated with scientific organizations and institutions. This talk contributes to this effort to “institutionalize” the literature on values and science by exploring how the creation of standardized practices for data collection, analysis, interpretation, and communication support some values while detracting from others. It argues that the benefits of standardization are particularly salient in our present social context as we grapple with widespread polarization, misinformation, and corruption. The talk will also highlight how attending to standardized practices in science can shed new light on theoretical debates in the values-and-science literature about the goals of value management and the nature of the value-free ideal.

Institutions, Scientific Assessment, and Values amidst Inequality

After widely rejecting the value free-ideal of science, philosophers have developed normative frameworks for addressing the presence of values and conceiving criteria to distinguish “good” from “bad” science (Biddle & Leuschner, 2015; Douglas, 2009; Intemann, 2015; Longino, 2002). Though valuable and useful, these proposals do not pertain to a crucial aspect of scientific institutions which, I argue, shapes many dimensions of scientific practice: research evaluation. Most philosophical frameworks in the science and values literature rely on imaginaries of what “good science” should look like. Paradoxically, there is not much discussion regarding (i) how scientific institutions assess the quality of scientific practice and its products, (ii) what and whose values pervade these evaluation systems and criteria, and (iii) their epistemic and social consequences.

Resnik and Elliott (2023)’s norm-based approach moves forward in addressing this gap. According to them, a promising solution to this “new demarcation problem” (Holman & Wilholt, 2022) is to concentrate on whether researchers comply with epistemic and ethical norms “constitutive of good science” (p. 273). The authors acknowledge that such norms are context-dependent and enforced through institutional measures. Nevertheless, they do not consider how to address demarcation and assessment conflicts resulting from unequal contexts and institutional infrastructures.

Building on Resnik and Elliott’s proposal, I will examine these imaginaries of “good science,” how they are enforced within scientific institutions through evaluation systems, and the epistemic oppression that results from them, due to knowledge asymmetries in global science. I aim to show that dominant evaluation systems risk fostering epistemic centralization (Rodríguez Medina & Harding, 2025), i.e., the concentration of resources and knowledge infrastructures in rich contexts, since these are defined as the standard of “good science.” In this way, the values and interests of privileged contexts are justified and reinforced in global science. Therefore, to adopt Resnik and Elliott’s norm-based approach, we must revise the norms we consider “constitutive of good science,” their institutional implementation, and whether they reproduce inequalities or, on the contrary, foster epistemic decentralization.

References

- Biddle, J. B., & Leuschner, A. (2015). Climate skepticism and the manufacture of doubt: Can dissent in science be epistemically detrimental? *European Journal for Philosophy of Science*, 5(3), 261-278.
- Douglas, H. E. (2009). *Science, Policy, and the Value-Free Ideal*. University of Pittsburgh Press.
- Holman, B., & Wilholt, T. (2022). The new demarcation problem. *Studies in History and Philosophy of Science*, 91, 211-220.
- Intemann, K. (2015). Distinguishing between legitimate and illegitimate values in climate modeling. *European Journal for Philosophy of Science*, 5(2), 217-232.
- Longino, H. E. (2002). *The Fate of Knowledge*. Princeton University Press.
- Resnik, D. B., & Elliott, K. C. (2023). Science, Values, and the New Demarcation Problem. *Journal for General Philosophy of Science*
- Rodríguez Medina, L., & Harding, S. (2025). Epistemic Decentralizing: Distributed Agency in a Context of Knowledge Asymmetries. En L. Rodríguez Medina & S. Harding (Eds.), *Decentralizing Knowledges* (pp. 1-27). Duke University Press.

Julie Jebeile

Value Formation and Management in Climate Research Institutions

Abstract tba

Stephen John

Revolutionary Anarchy as the Only Response to the Values in Science Problem: The Argument from Scientific Institutionalisation

This paper starts by outlining what it calls "the social epistemic problem of values in science". The problem is simple. There is a tension between the claim that scientific work is "value-laden", and two social-epistemic platitudes: first, that policymakers should defer to scientists' factual claims; second, that private individuals should defer to scientists' factual claims. In turn, it distinguishes three possible responses to this problem: conservatism (which denies that science is value-laden, hence saving the platitudes); moderate revisionism (which argues that some changes to scientific practice can save the platitudes); and revolutionary anarchy (which gives up on the platitudes). I argue that, given the tension only requires a very weak sense of "value-laden" science, conservatism is untenable.

In the second part of the paper, I suggest a novel interpretation of the tension: it follows from the fact that scientists do not merely find out about the world, but do so as members of various sorts of social and epistemic institutions. In turn, these institutions require adherence to conventions, where adherence leads to the sorts of evaluative misalignments which generate the tension. Importantly, this can happen even when the institutions' sole goals are epistemic.

What follows from this analysis? Tentatively, I suggest that it generates an argument for revolutionary anarchy; if institutionalisation is necessary for epistemically productive scientific activity, but also creates misalignments, then it is impossible to tweak scientific work in ways which save the platitudes. The fact that science is institutionalised is a reason to be revolutionary anarchists about the values in science problem.

Ezgi Sertler

Exploring Institutional Epistemology

tba

Anna Leuschner

From Denialism to Demoralization: New Strategies against Climate Protection and Their Institutional Effects

Despite overwhelming scientific evidence on the causes, dynamics, and consequences of anthropogenic climate change, political responses remain inadequate. As agnotology has shown, this is due in no small part to the deliberate production of doubt about the credibility of climate science by industrial and political lobbying groups. However, in recent years, the classical strategy of denying scientific findings has been increasingly replaced by new strategies of demoralization. As Elabbar (2024) argues, the aim is no longer empirical ignorance, but rather the creation of paralysis and distraction, eventually leading to political inaction.

In this talk, I will briefly address the classical denial and doubt strategies, which were primarily deployed by fossil fuel industries and political actors. I will then turn to the new tactics, which are by now relatively well understood: individualizing responsibility, promoting non-transformative solutions, exaggerating the costs of climate action, and spreading “doomism.”

I will then explore the institutional effects of these new strategies. Funding organizations create incentive structures through their funding schemes, universities set research priorities, and media reinforce these agendas. As a result, research foci shift: while some topics are preferentially funded and investigated, others are neglected.

It appears that the evolution of priorities in climate research correlates with the objectives of these new strategies. Climate resilience research, for example, has expanded significantly over the past two decades, increasingly focusing on adaptation-oriented solutions. While this is undoubtedly important as a response to ongoing climate change, it also risks reinforcing existing structures. Similar dynamics can be observed in areas such as hydrogen research and geoengineering.

I conclude with the thesis that the new strategies undermining climate policy, which have replaced classical denialism, are no less effective—particularly due to their influence on scientifically relevant institutions. However, this is an exploratory finding that needs further research into how these strategies shape climate science and knowledge on climate change.

Chrysostomos Mantzavinos

The Constitution of Science

How can science be protected, by whom and at what level? If science is valued positively as the incubator of the most successful solutions to representational problems of reality as well as the basis of the most effective interventions in the natural and social world, then its constitutional foundations must be protected. The presentation will develop a specific normative outlook on science by introducing the idea of a ‘Constitution of Science’. Scientific activities are special kinds of epistemic problem-solving activities unfolding in an institutional context. The scientific enterprise is a social process unfolding within an intricate institutional framework that structures the daily activities of scientists and shapes their outcomes. Those institutions of science which are of the highest generality make up the ‘Constitution of Science’ and are of fundamental importance for channelling the scientific process effectively. I will offer a radical reorientation of the discussion on the role of values in science. My approach narrows the divide between the traditional philosophy of science which elaborates on the standards defining science as a truth-seeking enterprise, and the sociological, economic and political outlook of science which emphasizes the contingent nature of the enterprise. At the end I will propose five principles that should be adopted in order for science to be protected. The presentation will be based on my new book *The Constitution of Science*, Cambridge University Press, 2024.

Boaz Miller

What Is Known to the State of California?

California Proposition 65 requires products containing certain substances to bear the warning: “This product can expose you to chemicals which are known to the State of California to cause cancer.” This warning is puzzling. How can a substance be known in the State of California to cause cancer but not elsewhere? Does it cause cancer or doesn’t it? The warning is not meant to imply that California has access to secret evidence unavailable to others. Existing accounts of group knowledge, which focus on group ontology, fail to capture what is salient in this case: California’s distinctive weighing of inductive risks. The state considers the error of labeling a noncarcinogenic substance as carcinogenic less severe than failing to warn about a real carcinogen, and accordingly lowers its threshold of evidence. I present a social theory of knowledge that is consonant with mainstream epistemology but is also well-equipped to explain such cases. I further identify five modes of interaction between social and epistemic elements, and argue that at least three are manifested in the Proposition 65 example.

Kärin Nickelsen

Collaboration, Competition, Coordination: The Role of Institutions in Early Genome Research

This paper examines an episode in the history of life sciences to learn more about the role of institutions in “value management”: the context of early genome research around 1990, when the sequencing of entire genomes, even the human genome, became a realistic option. However, the methods were so slow and cumbersome that this could only be achieved through concerted action, and the Human Genome Project (HGP, 1990-2003) was set up to organise a joint effort. It is best known for the dramatic turn of events when Craig Venter left the collective and launched a competing project. This was widely seen as a violation of basic scientific norms, but the tension between the need for collaboration and the desire to monopolise both scientific glory and potential economic gain was present in the HGP from the outset. The paper presents some examples of how this tension manifested itself, explore the HGP’s responses, and puts forward some hypotheses about the role of different types of “institutions” in this context.

Tanja Rechnitzer

Bridging Institutions: Organizations in Science Communication

Much of science communication is mediated in one way or another by organizations that shape the actions, interactions, and communication of scientists, journalists, and other media and communication professionals, as well as their respective target audiences. Organizational structures and requirements also influence the way scientific information is presented.

This talk examines the role of organizations that connect the institutions of science and journalism. It draws on communication research and sociology, including an organizational sociological analysis by Rödder, who distinguishes between independent organizations, such as the Science Media Center, as well as sub-organizations such as the science desk as part of a newspaper or the university press office as part of a scientific organization. By treating science and journalism as distinct institutions with their own norms and values, we can better understand how intermediary organizations facilitate communication and face challenges arising from conflicting norms.

These organizations take on multiple functions. For example, they translate, contextualize, and critically evaluate scientific findings for different audiences; shape how journalists and experts connect and interact; and seek to manage how research is disseminated to the public. More broadly, they mediate the shift from science-specific to media-specific perspectives by framing and presenting scientific information in ways that reflect the priorities of other social domains.

However, their roles raise important philosophical questions about the strengths and limitations of institutionalized trust and value management in science communication. On the one hand, organizations like Science Media Centers and university press offices can stabilize relationships between scientists and journalists, improve access to expertise, and help align scientific information with societal needs. On the other hand, they may centralize authority, introduce new gatekeeping mechanisms, and narrow the diversity of perspectives that reach the public.

In this talk, I will explore how focusing on organizations illuminates value tensions inherent in science communication, and discuss implications for philosophy of science's understanding of institutional roles in managing science-society relations.

Stéphanie Ruphy

How Evaluation Agencies Can Help (or Hinder) Responsible Science

The institutions that carry out assessment of the performance of research systems may vary from one country to another in terms of their status and missions, but they share a crucial, sometimes underestimated, prescriptive role on scientific practices. By embodying both standards and values internal to scientific communities and standards and values of other components of society, they are at the forefront of conflicting expectations toward science.

By drawing on my 4-year experience as a member of the governing board of the French national research evaluation agency, I will first describe the various dimensions of the prescriptive role of evaluation agencies, and then investigate to what extent they can help, or hinder, the development of science that better meets the needs and interests of all citizens of a society.

Local Information

About Wuppertal

Wuppertal is constructed right into the surrounding hills. As a result, it is sometimes confusing to find your way due to the different levels of the city, even within buildings; for example, inside the university: you take the elevator to the eighth floor, walk down a corridor to the end and suddenly find yourself at a ground-level exit. It's similar at the train station, and gmaps is not really helpful with this "issue." For this reason, I provide you here with some local information.



Bergische Universität

Hotels

I recommend especially these two hotels:

1. Vienna House

Auf dem Johannisberg 1
42103 Wuppertal

In case you enjoy swimming, there is a large and nice public swimming pool next to your hotel, the *Schwimmoper*:

<https://www.wuppertal.de/tourismus-freizeit/baeder/schwimmoper.php>

2. Spark by Hilton

Döppersberg 50
42103 Wuppertal

From the hotels to the university, it's a 25-30 minutes up-hill walk (see maps below), or you take the:

Public transport

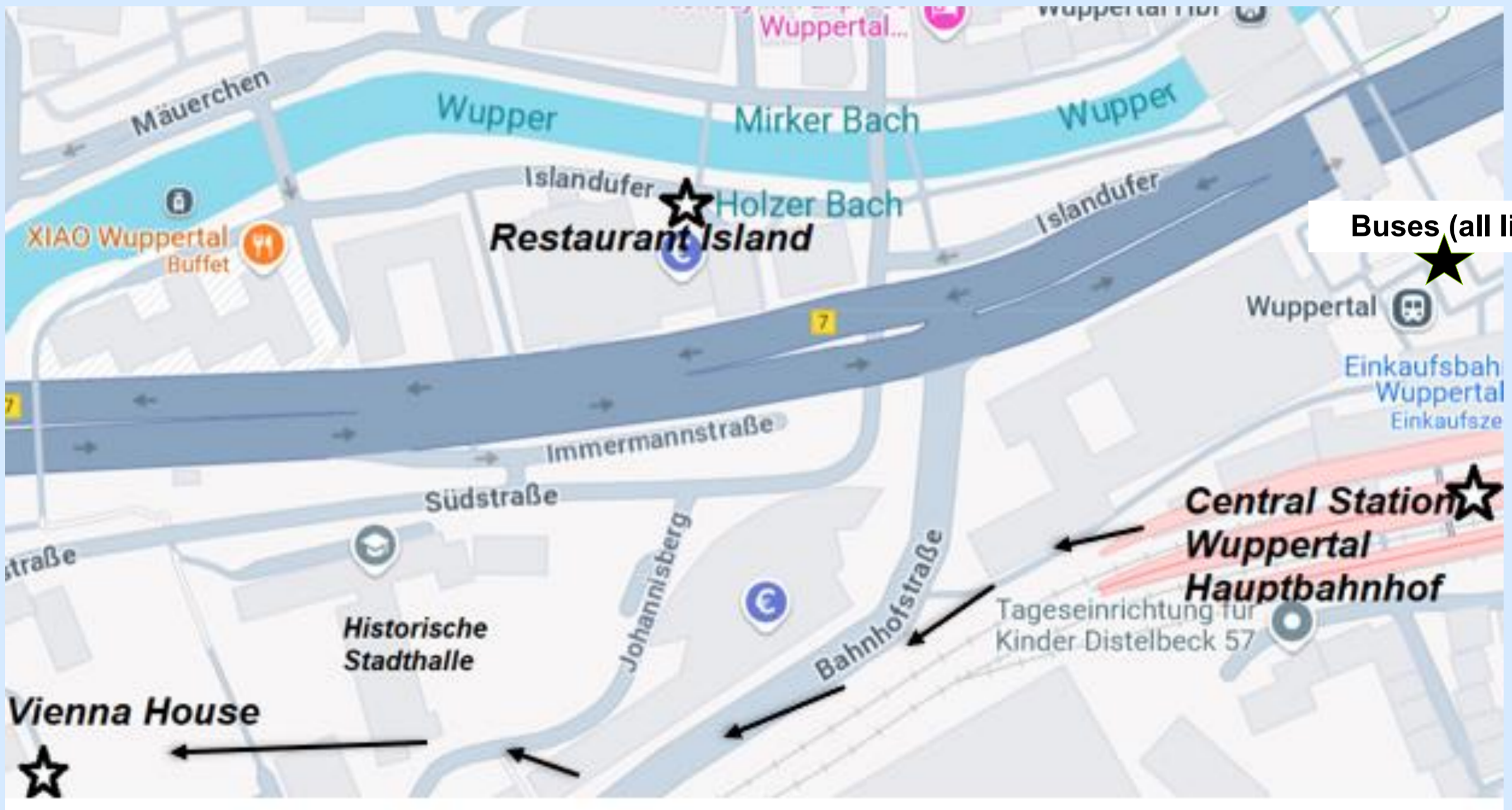
You can take the bus lines "Uni-Express," "E-Bus 860," 603, 615, 625 and 645. The bus stops at the university are "Universität" or "Uni-Halle."

Tickets

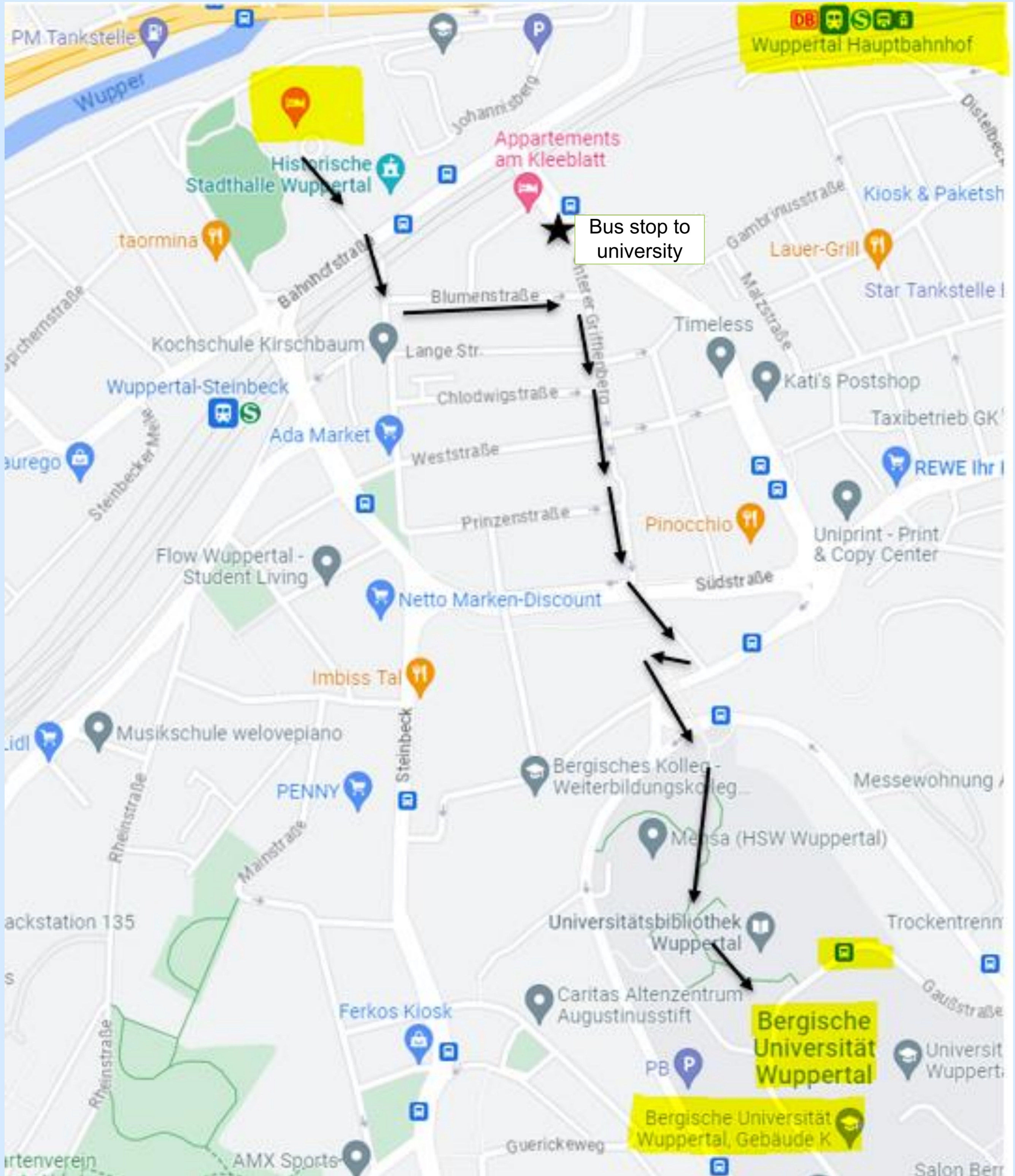
You can buy tickets from the bus driver (cash payment) or via the DB App, which I recommend to install on your cell phone for your visit in Germany: <https://www.bahn.de/service/mobile/db-navigator>

From the DB App you can buy tickets for all public transport services in Germany and you can find your connections, also for local public transportation.

If you want to walk from the main station to the Vienna House (10 minutes), go to platform 1 and turn to the left; there is a passage where you can go straight to the Bahnhofstraße (follow the black arrows). Don't go downstairs to the station hall, it's the wrong level.



If you want to walk from Vienna House to the Campus:



Campus Map

