

Authors' Biographies

Frank Bauer enquires into methods and ontologies of computational design and manufacturing in interdisciplinary and experimental formats. Since 2023, he holds the Professorship of Digital Fabrication at the University of Applied Sciences Erfurt, embedding and probing building workflows and technologies in industry. His ongoing dissertation engineers operative, instrumental, and material extensions of digital modelling and making processes in computational art production. Further teaching efforts are situated between the MA Open Design at Humboldt-Universität zu Berlin and Universidad de Buenos Aires, the BA/MA Architecture programs and research-based MA Design & Computation at Universität der Künste Berlin and Technische Universität Berlin, as well as the Design for Manufacture MArch at The Bartlett School of Architecture (University College London), bridging the broader agenda of Matters of Activity and shifting discourses from possibility to constraint spaces of technology.

Bastian Beyer's research deals with fiber-based materials in the design context. He studied architecture in Munich (University of Applied Sciences) and Berlin (Universität der Künste Berlin). After his studies, he received a Marie Curie Research Fellowship in the ArcInTex program and received his doctorate from the Royal College of Art in London. In his dissertation, he investigated structural and reactive properties of biofilms on fiber-based substrates and explored new manufacturing methods for bio-based materials. At Matters of Activity, he currently works together with Regine Hengge, Skander Hathroubi, and Iva Rešetar on cellulose-based biofilms and their application for design and architecture.

Horst Bredekamp is professor of art and visual history at Humboldt-Universität zu Berlin and senior co-director of Matters of Activity. In 2000, he founded the project The Technical Image at the Hermann von Helmholtz Center for Cultural Techniques. He was a permanent fellow of the Wissenschaftskolleg from 2003 to 2012 and directed the Centre for Advanced Studies in the Humanities and Social Sciences project Picture Act and Embodiment funded by the German Research Association (DFG). From 2012 to 2018, he co-directed the Cluster of Excellence project Image Knowledge Gestaltung along with Wolfgang Schäffner. Bredekamp was also one of the founding directors of Humboldt Forum, Berlin.

Maxime Le Calvé is an anthropologist of art and science and currently a postdoctoral research associate at Matters of Activity. He trained in general ethnology in Paris Nanterre and has a PhD in social anthropology and theater studies from EHESS Paris and Freie Universität Berlin. He has published on the ethnographic study of atmospheres (*Exercices d'ambiances*, 2018), on performance art, music, Berlin, brains, and ethnographic training. He is also the co-curator of the exhibitions *Field/Works* in Lisbon (2020–2021), *Stretching Materialities* (Berlin, 2021–2022), and currently the participant exhibition *Sketching Brains* (Charité, Berlin).

Emile De Visscher has been a practice-based design researcher at Matters of Activity since 2019. Trained as an engineer (Université de Technologie de Compiègne) and designer (Royal College of Art, London), he obtained a PhD in the SACRe doctoral program from Université Paris Sciences & Lettres and École des Arts Décoratifs Paris in 2018. His research focuses on the invention of small-scale production tools at the intersection of engineering, design, material sciences, and performing arts. He is the editor in chief of the design research journal *Oblique*, and co-curated the exhibition *Material Legacies* with Michaela Büsse at Kunstgewerbemuseum Berlin in 2022.

Myfanwy Evans is a scientist applying geometric ideas in the study of a wide variety of entangled structures. She is professor for applied geometry and topology at the Institute for Mathematics at the University of Potsdam. She aims to create robust geometric tools to deepen the analyses of complex and

hierarchical materials, shedding light on the important role of geometry in the structure-function relationship in materials.

Mohammad Fardin Gholami graduated in polymer science with a Bachelor of Engineering and a Master of Science. As part of his doctoral thesis, he focuses on carbon-based 2D nanomaterials and their polymeric functionalization, primarily using scanning probe microscopy and spectroscopy methods. Fardin is a project leader of Cutting at Matters of Activity, where he is developing tools for a micro- and nanometer-size surgical operation room for biological matters as well as high-precision cutting and manipulation of materials.

Lorenzo Guiducci obtained a PhD in physics and science of biomaterials at the University of Potsdam for the research performed at the Biomaterials Department at the Max Planck Institute for Colloids and Interfaces in Golm. He was a researcher and teacher at the Cluster of Excellence project Image Knowledge Gestaltung at Humboldt-Universität zu Berlin. As a postdoc at Matters of Activity, he aims to explore structure-function relationships in both biological role models and mechanical metamaterials using both engineering tools (FE simulations and modeling) and design methods including traditional fabrication practices (such as weaving).

Regine Hengge studied biology and obtained her doctorate at Universität Konstanz. After a post-doctoral phase at Princeton University, she completed her habilitation in microbiology and molecular genetics at Universität Konstanz. She has been a professor of microbiology at Freie Universität Berlin (1998–2013) and Humboldt-Universität zu Berlin (since 2013). Going through the scales from molecules to macroscopic morphogenesis, she studies regulation and signal transduction in environmental stress adaption and biofilm formation of bacteria. She received the Gottfried Wilhelm Leibniz Prize and an ERC Advanced Investigator Grant and is an elected member of the German National Academy Leopoldina, EMBO and the American Academy of Microbiology.

Heidi Jalkh is an experimental designer, design educator, and researcher based in Buenos Aires, Argentina. Trained in industrial design, she is a specialist in the logic and technique of form, holds a master's degree in interdisciplinary research, and received the Humboldt Innovation Prize in 2022. Her professional practice as a designer consists of many interests, including the design and manufacture of bio-inspired and bio-fabricated materials, interdisciplinary research, and craft-based processes. As leader of the research group Sistemas Materiales, she focuses on making significant connections between biology, design, and engineering, aiming to achieve a higher level of integration between form, behavior, and material.

Yoonha Kim is an anthropologist with a background in design. She is a research associate at *inherit. heritage in transformation* focusing on the theme Decentering the Human. Her recent project explores alternative worldings, addressing ecological sensibility and diversifying technological imagination through wearing and making Korean sartorial heritage. Her previous education in fashion design at Central Saint Martins—University of the Arts London (GradDip) and Visual and Media Anthropology at Freie Universität Berlin (MA) led her to deploy a range of multimodal forms of anthropology, from curatorial practices to filmmaking and sensorial workshops with emergent technologies. She has also conducted various modes of interdisciplinary research within Matters of Activity, where she is an associated member.

Claudia Mareis is an expert for design as well as cultural history and theory. Since 2021, she has been professor of design and history of knowledge at the Department of Cultural History and Theory at Humboldt-Universität zu Berlin. Her research interests include histories, theories and methodologies of design, knowledge cultures in design, cultural history of creativity, design and eco-material politics. From 2013 to 2021, she directed the Institute for Experimental Design and Media Cultures (IXDM) as well as

the Critical Media Lab at the FHNW Academy of Art and Design in Basel. At IXDM, she has built up a pioneering interdisciplinary research group converging design, media arts, anthropology, historical studies, and technology. As co-director of Matters of Activity, she has co-lead the Cluster with Horst Bredekamp, Peter Fratzl, and Director Wolfgang Schäffner since 2019.

Sabine Marienberg studied philosophy and Romance studies in Munich, Berlin, and Perugia and completed her doctoral degree on sign actions in the thought of Giambattista Vico and Johann Georg Hamann at Freie Universität Berlin. From 2014–2018, she led the research project Symbolic Articulation, where she investigated the relation of language and images. After a subsequent visiting professorship in the interdisciplinary program Diversity of Knowledge at Humboldt-Universität zu Berlin, she joined the research project Symbolic Material at Matters of Activity. Her work focuses on the conceptual and terminological framework of the Cluster from a philosophical and linguistic perspective.

Natalija Miodragović is an architect whose interdisciplinary and experimental work starts from an understanding of art and space as vehicles for social change. Her work focuses on the perception and understanding of space and lightweight, flexible, and textile structures. As a researcher, she has taught at the Institute for Architecture-Related Art at Technische Universität Braunschweig, Weißensee School of Art and Design Berlin, and the Frankfurt University of Applied Sciences. She works in cooperation with artists and researchers and co-authored a series of projects and exhibitions, such as the Serbian Pavilion EXPO 2010, dreidreidrei Organ for Zionskirche Berlin, and artist Tomas Saraceno.

Thomas Ness holds the Cluster Professorship for Embodied Interaction at the Product Design Department of Weißensee School of Art and Design Berlin. With a background in designing physical interactions and focusing on exploration and prototyping as design practice, he has done work for international clients ranging from automotive and tech industries to educational and cultural institutions.

Léa Perraudin is a media theorist and speculative material scholar and a postdoc at Matters of Activity. Her research interests include (media) infrastructures of the Anthropocene as well as practices of knowing and making in the realm of environmental humanities and queer feminist technology studies. Perraudin is currently working on a media theory of phase transitions by investigating the material ties of media infrastructures in contemporary technocapitalist environments through situated phenomena of transience, dispersal, abundance, and solidification. Perraudin holds a PhD in media studies from University of Cologne. She co-leads the experimental laboratory for knowledge exchange and speculative design “CollActive Materials” funded by the Berlin University Alliance (2022–2024).

Jürgen P. Rabe has been professor of the physics of macromolecules at the Department of Physics at Humboldt-Universität zu Berlin since 1994. His research aims to correlate the structure and dynamics of molecular systems at interfaces with mechanical, electronic, optical, and (bio)chemical properties, from the molecular to the macroscopic length and time scales. He is also the founding director of the Integrative Research Institute for the Sciences – IRIS Adlershof at Humboldt-Universität zu Berlin.

Felix Rasehorn is a practice-based researcher with a background in product and interaction design from Weißensee School of Art and Design Berlin. He works as a research assistant at Matters of Activity and is a PhD candidate at Technische Universität Berlin. In his dissertation, he works with bio-mimetic design approaches and collaborates with natural scientists to sustainably, technically, and economically co-develop prototypes that envision preferable futures.

Khashayar Razghandi is a material scientist and design teacher working at the intersection of natural sciences, humanities, and design, between Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, and the Cluster of Excellence project Matters of Activity. He is engaged with active new

materialism, creating interdisciplinary educational co-creation spaces, and materials sustainability. Recent publications include “Rethinking Active Matter: Current Developments in Active Materials, Active Materials” with Mohammad Fardin Gholami, Lorenzo Guiducci, and Susanne Jany, in *Active Materials* (De Gruyter, 2021) and “Rethinking Materials Paradigm: Towards an Active Understanding of Gestalt,” in *Design, Gestaltung, Formativität* (Birkhäuser, 2022).

Iva Rešetar studied architecture at the University of Belgrade and at the Städelschule in Frankfurt am Main. She has been a practicing architect in the field of digital and experimental design, and has held several research positions, among others at the Akademie Schloss Solitude, in the ArcInTexETN, and at Universität der Künste Berlin. In her research and teaching, she explores fluid and marginalized materialities in architecture through experimental and interdisciplinary ways of designing and making. Her interests include histories and aesthetic practices of thermodynamics around issues of climate adaptation, energy, and the environment in architecture, design processes between the analogue and the digital, and textile architectures, understood as temporary and more-than-human.

Nina Samuel is an art and science historian and curator with a PhD from Humboldt-Universität zu Berlin. Her thesis *The Shape of Chaos* investigates visual epistemologies in the field of complex dynamics and fractal geometry and drawing as a mode of thinking. She held various research positions, among others with Technisches Bild (HU), *Embodied Information – “Lifelike” Algorithms and Cellular “Machines”* (Freie Universität Berlin), and at the Bard Graduate Center in New York City. Samuel has received scholarships and research grants from the Fulbright Program, eikones Basel, and the Max Planck Institute for the History of Science. Before coming to *Matters of Activity*, she was program director of the museum-centered PhD program “PriMus – Promovieren im Museum” at Leuphana University Lüneburg and is now a project lead of Object Space Agency.

Wolfgang Schäffner is a historian of science and media technologies and has been professor of cultural history of knowledge at the Department of History and Theory of Culture at Humboldt-Universität zu Berlin since 2009. From 2012–2018, he was the Director of the Hermann von Helmholtz Center for Cultural Techniques and Director of the Cluster of Excellence project *Image Knowledge Gestaltung* at Humboldt-Universität zu Berlin. He is a permanent guest professor and director of the Walter Gropius Program at the Faculty of Architecture, Design and Urbanism at Universidad de Buenos Aires, and head of the German-Argentinian MA program *Open Design*. Since 2019, he is the director of *Matters of Activity*.

Nelli Singer is a textile designer with a focus on active materials research. She holds an MA in textile and surface design from the Weissenhof School of Art and Design Berlin and has been part of *Matters of Activity* since September 2020. Her interests lie in innovative material structures and the experimental process of their design. Her creative work is characterized by an interdisciplinary approach involving design, art, architecture, natural sciences, and technology. Her work has been shown at Humboldt Forum under the heading *Active Curtain* and the exhibition *Stretching Materialities* at Tieranatomisches Theater, Berlin.

Mareike Stoll holds a PhD in German studies from Princeton University (2015). Her first book titled *ABC der Photographie: Photobücher der Weimarer Republik*—for which she was awarded a research and publication grant by the Deutsche Gesellschaft für Photographie (DGPh)—was published with Walther König in 2018. At Weissenhof School of Art and Design Berlin and *Matters of Activity* she is a research associate, currently working on her second monograph about the contemporary children’s picturebook as site of visual and emotional literacy and artistic practices as “*Making Sense by Hand*.”

Daniel Suárez is an architect and researcher interested in innovative materials, design interfaces, and technology processes for architectural production. He holds an MSc in architecture and urban design

from the Polytechnic University of Madrid. In his research, Daniel explores textile-informed material systems on a large scale, combining fluid interactions of human craftsmanship and vernacular design with computational design processes and digital fabrication. He was part of the ArcInTexETN network and worked as associated researcher at Universität der Künste Berlin. Currently, he is part of the Structural Textiles project at Matters of Activity, examining relations between active materiality, bio-based materials, digital instructions, and geometry formation processes.

Kolja Thurner is an art and visual historian. He studied art history, German studies, and philosophy at Eberhard-Karls University, Tübingen, and art and visual history at Humboldt-Universität zu Berlin. His research focuses on the early modern history of double imagery as well as on the material and symbolic interplay of chance, amorphism, and figuration in landscape painting. His PhD project *Patinir and the Pioneers of Seeing* investigates the visual culture of double images in sixteenth-century Antwerp art. Since 2017, he has worked as a research assistant to Horst Bredekamp at Matters of Activity.

Hanna Wiesener is a designer, researcher, and design consultant. With a background in product design and cultural studies, she works as a research associate at Matters of Activity in the projects *Filtering* and *Robotic-Assisted Surgery*. At Designfarm, the design-in-tech accelerator at Weißensee School of Art and Design Berlin, she mentors teams in turning their design prototypes into meaningful concepts.

Clemens Winkler is a design researcher at Matters of Activity, whose work relates environmental concerns and social, scientific, and technological development. His current projects explore epistemic foundations of atmospheric control, especially on experiencing, notating, archiving, and speculating in experimental exhibition formats with his research group Object Space Agency. In his current position as a guest professor at the University of Performing Arts Ernst Busch in the MA studio *Spiel und Objekt*, he is setting up a playful framework for negotiations on current societal concerns, energy, and pollution governance, post-fossil futures, and digital media use on the theater stage.

