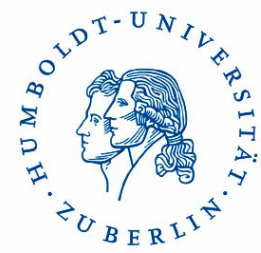


INSTITUT FÜR PSYCHOLOGIE



History of the Institute of Psychology



Research Topics

Facilities

Memory, Perception (Herrmann Ebbinghaus)

Tone Psychology, Methodology, Applied Psychology (Carl Stumpf)

Gestalt Psychology (Wolfgang Köhler, Max Wertheimer)

Topological and Developmental Psychology (Kurt Lewin)

Pedagogical Psychology and Typology (Kroh)

Gestalt Psychology, Personality Psychology and Twin Studies (Gottschaldt)

Cognitive, Mathematical Psychology, Psychophysics, Evolutionary Psychology (Klix)

today: interdisciplinary experimental and empirical psychology



3 rooms, small apparatus collection

10 rooms, apparatus collection, phonogramm archive

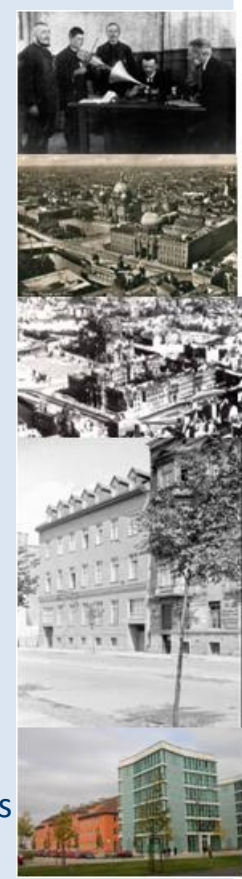
25 (1921) – 41 (1935) rooms, best equipped psychological institute worldwide, seated in Emperors Palace

less than 40 rooms; destroyed 1945

41 rooms, best equipped psychological institute of both German states

60 rooms, best equipped psychological institute of East Germany

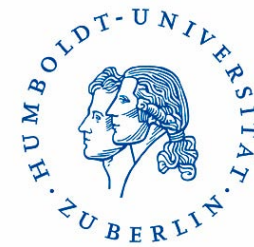
more than 200 rooms, 10 laboratories





Institute für Psychologie

Facts and Figures



Staff

- 14 Professorships**
einschl. 1 Heisenberg Professor,
2 Junior Professors
- 2 Emmy-Noether Nachwuchsgruppen**
- 4 S-Professuren (Max-Planck-Institute)**

- 28 Wissenschaftliche Mitarbeiter (Haushalt)**
- 42 Wissenschaftliche Mitarbeiter (Drittmittel)**

- 16 Technische/Administrative Mitarbeiter**

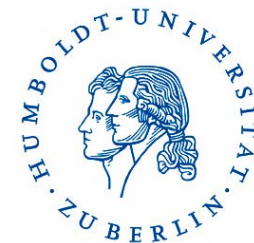
- 20 student assistants (regular budget)**
- 56 student assistants (third-party funded)**

Facilities

- 3 919 m²**
- 10 labs**
 - ⊙ computer pool (25 places)
+ computer facilities at ESZ
- 4 lecture rooms + general rooms at ESZ**
 - ⊙ mechanical shop floor
 - ⊙ library, integrated into the general library at ESZ
 - ⊙ test library (inhouse)
 - ⊙ outpatient clinic
 - ⊙ center for psychotherapy (postgraduate courses)



Institute of Psychology Professorships

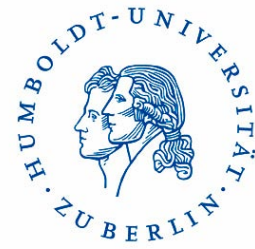


Biological Psychology/ Psychophysiology	Werner Sommer
Clinical Psychology	Norbert Kathmann
Clinical Gerontopsychology (JP)	Katja Werheid
Cognitive Psychology	Elke van der Meer
Developmental /Pedagogical Psychology	Denis Gerstorf
Engineering Psychology / Cognitive Ergonomics	Hartmut Wandke
General Psychology	Peter Frensch / Torsten Schubert
Neuro-Cognitive Psychology (Heisenberg)	Rasha Abdel-Rahman
Social- and Organizational Psychology	Ursula Hess
Personality Psychology	Jens Asendorpf
Psychological Diagnostics	Matthias Ziegler
Psychological Research Methods	Oliver Lüdtke
Psychotherapy and Somatopsychology	Thomas Fydrich
Work Psychology (JP)	Annekatriin Hoppe



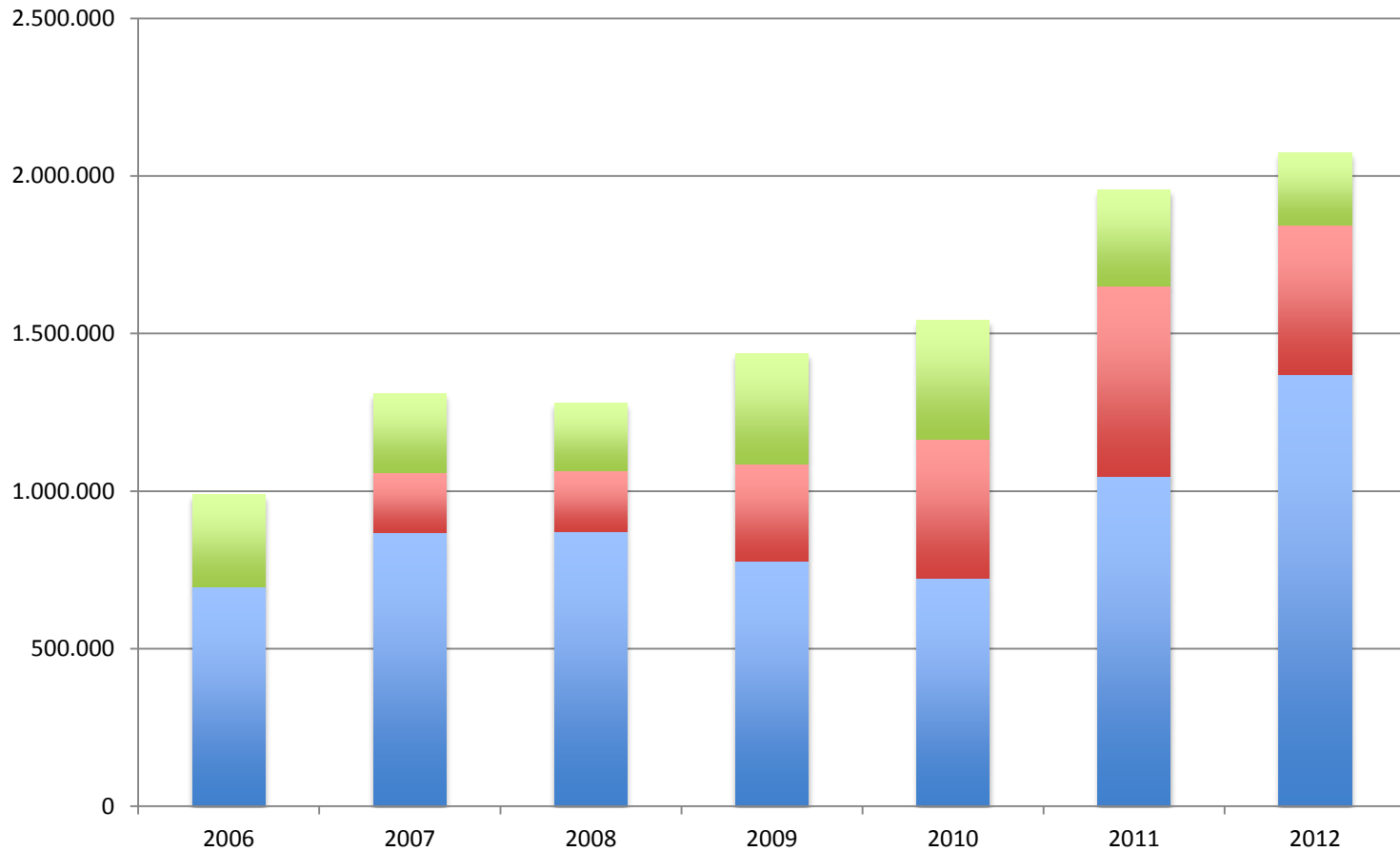
Institute of Psychology

Facts and Figures



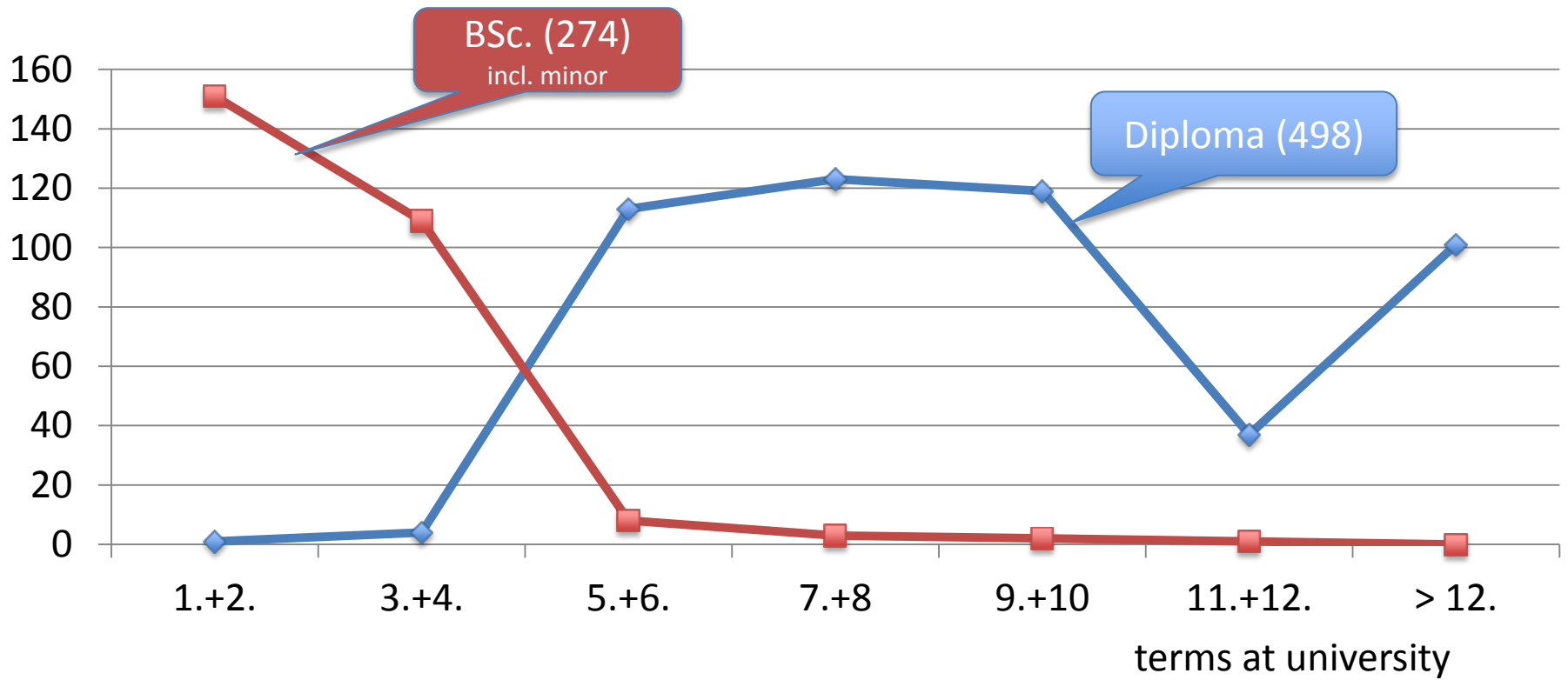
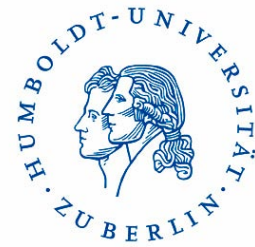
Third Party Funding

■ DFG ■ BMBF ■ Sonstige





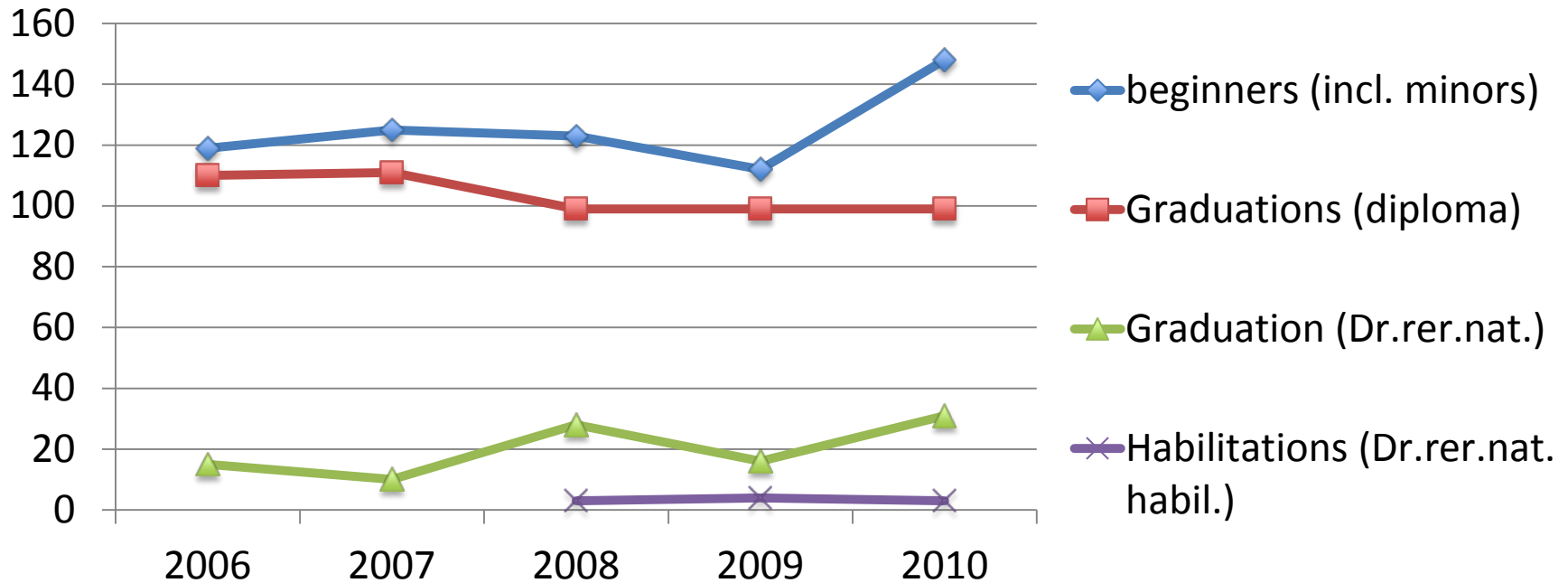
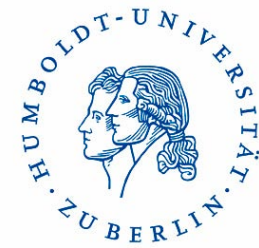
Institute of Psychology Students (n=772)





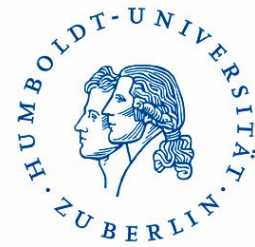
Institute of Psychology

beginners and graduates





Bereich Kognition und Neurowissenschaft



General Psychology



Cognitive Psychology



Biological Psychology and Psychophysiology



Neurocognitive Psychology



Active Vision & Cognition



Numerical Cognition

Methods

Electroencephalogram (EEG)

incl. EEG-Baby-Lab; ERPs, time-frequency analyses, connectivity analyses

Peripheral physiology

heart rate, SCR, EMG

MRI

structural, activity, connectivity analyses, DTI

Eye Tracking / Pupillometrics

gaze fixation, saccades

Psychophysics / Psychometric Measures

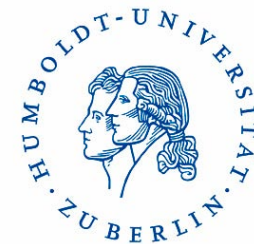
processing speed, accuracy, gestures

Computational modeling



General Psychology

Prof. Peter A. Frensch
Prof. Torsten Schubert



Research Topics

Cognitive conflicts, action regulation and cognitive training

(DFG Schubert, Frensch, Strobach; VW Foundation)

- Processes of executive control, attention and non-conscious information processing
- Functional neuroanatomy of executive functions (fMRI)
- Training- and age-related plasticity of cognitive functions

Concept acquisition and knowledge change

(Cluster of Excellence BWG: Schubert, Frensch, Gaschler, Scholz (Biology); DFG)

- Acquisition, application and change of conceptual mathematical and biological knowledge

Learning, instruction and coding of actions (DFG Wenke, Frensch)

- Implementation of instructions for action control
- Agency and the acquisition of action-effect couplings in action control

Lab Facilities and Methods

Behavioral analyses

processing speed
accuracy
postural responses



Eye Tracking

gaze fixation, saccades

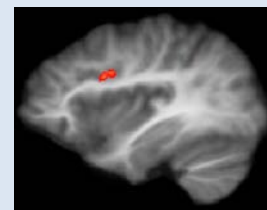


Computational modeling

processing times, errors

fMRI

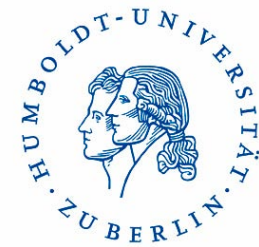
BOLD response
activation patterns
connectivity analyses





Cognitive Psychology

Prof. Dr. Elke van der Meer



Research Topics

- Mathematical cognition: Cerebral correlates and sources of individual differences (intelligence, strategies) (BMBF)
- Impact of chronotype and time perspective on cognitive abilities over the life-span (BMBF)
- Social event knowledge: Understanding deficits (DFG)
- Knowledge acquisition and sleep in infants, young children, and adults (DFG)
- Brain functions and written language acquisition in school children (MPI-CBS, DFG)
- Perception and appraisal of urban environment; impact on human health (DFG; ECAV)

Lab Facilities

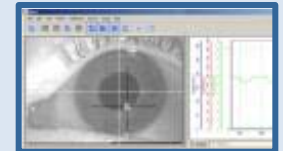
Behavioral Methods

processing speed
accuracy, gestures



Eye Tracking

processing strategies



Pupillometrics

cognitive resource
allocation

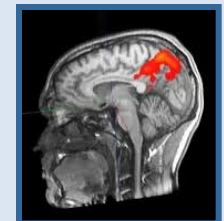
EEG-Baby-Lab

time-frequency analysis
source analysis



fMRI

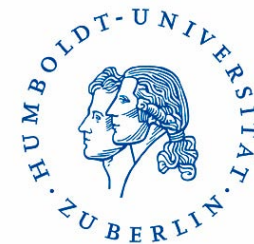
activation patterns
structural scans





Biological Psychology and Psychophysiology

Prof. Werner Sommer



Research Topics

Individual differences in processing emotional facial expressions (W. Sommer & O. Wilhelm; DFG)

The timeline of reading (W. Sommer & R. Kliegl; DFG)

Dynamical modeling of complex networks from EEG (W. Sommer, J. Kurths & G. Ivanova; DFG)

Implicit activation of memory and actions: Automatic or capacity dependent? (C. Lehle; DFG)

Neural underpinnings of individual differences in cognition (W. Sommer, C. Zhou; DAAD)

Lab Facilities

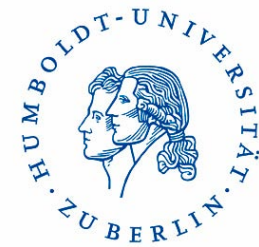
Electroencephalogramm (EEG)



Eye tracking



Peripheral physiology



Research Topics

Language production

- Dynamic and flexible aspects of semantic processes during lexical access
- Time course and microstructure of the language production and comprehension system
- Influence of affective stimulation and mood on lexicalization

Top-down influences on perception

- How are basic perceptual processes affected by higher-level processes, e.g., semantic knowledge and the structure of our language?

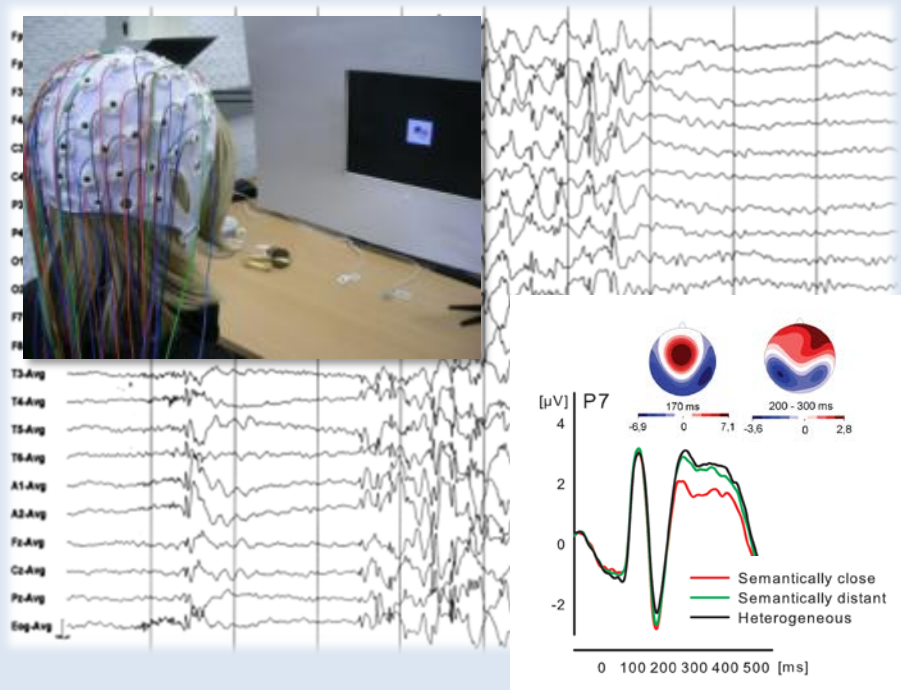
Organization of the semantic system

- Acquisition, storage and use of meaning
- Structure and organization of the semantic system

Lab Facilities and Research Methods

Event-related brain potential (ERP) technique

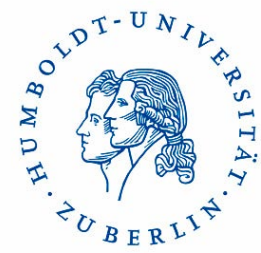
We employ behavioral and electrophysiological measures. To investigate the organization and time course of core cognitive processes and the interplay between these processes.





Emmy Noether Group ,Numerical Cognition Unit'

Dr. André Knops



Topics

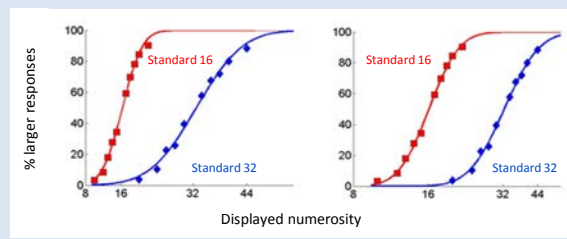
Numerical Cognition

- Neuro-functional & cognitive basis of mathematical reasoning
- Impact of the ,number sense' on mathematical capacities
- Link between numbers and space
- Development of mental magnitude representatinon during childhood
- Developmental Dyscalculia

Research Methods

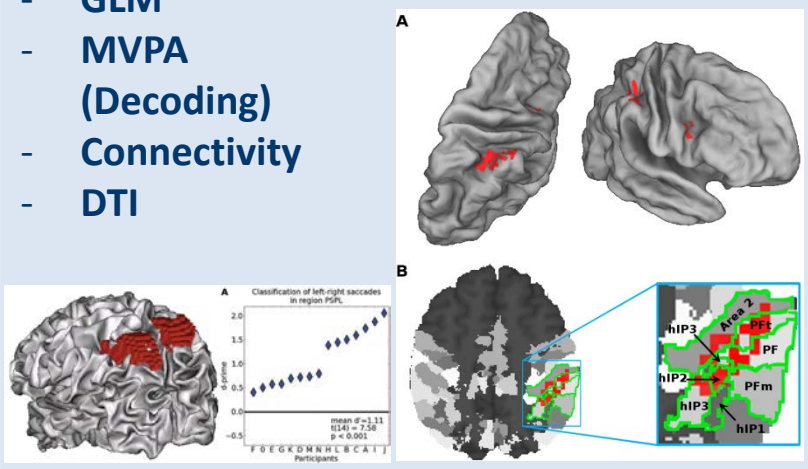
Behavioral

- Reaction time & accuracy
- Psychophysics
- Psychometric Measures



Neural level (fMRI)

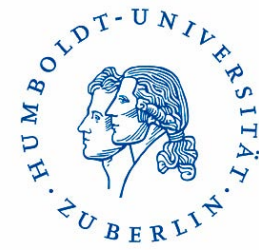
- GLM
- MVPA (Decoding)
- Connectivity
- DTI





Emmy Noether Group

Dr. Martin Rolfs
Active Vision & Cognition



Research Topics

Attentional processes in active vision

- Dynamics of visual attention during unconstrained eye-head gaze shifts
- Modeling of neural & behavioral data

Visuomotor learning and plasticity

- Control and adaptation of goal-directed movements and their impact on perception

Visual cognition

- Foundation of the perception of causality, animacy, and intentionality in visual processing

Lab Facilities

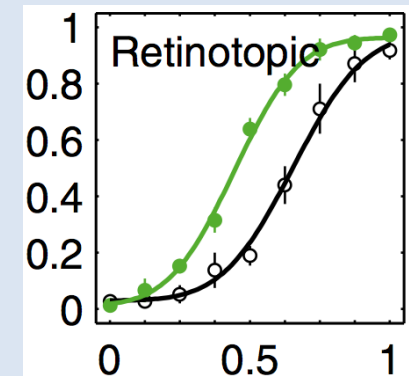
Combined eye and motion tracking



Ultrafast whole-field visual stimulation

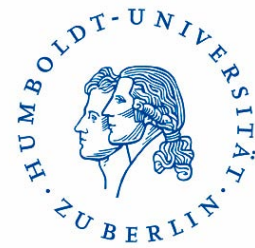


Psychophysics





Bereich Psychometrie



Diagnostik



Methodenlehre

Forschungsthemen

Simulationsstudien

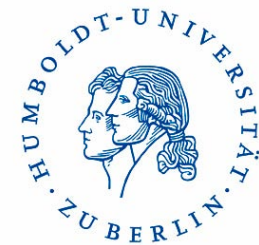
Evaluation von statistischen Verfahren (z.B. Mehrebenenanalyse, Faktorenmodelle)

Methodik von Schulleistungsstudien

Modellierung von Schülerkompetenzen, Behandlung fehlender Werte, Erfassung von Lernumwelten

Methodik von Persönlichkeitsstudien

Modellierung von Persönlichkeitseigenschaften, Wachstumsmodelle, Einfluss absichtlicher Verfälschung, Modellieren des Umwelteinflusses



Research Topics

Abilities and Personality Traits in Learning across the lifespan

- Impact of fluid intelligence and Big 5 traits on learning and performance
- Interaction effects between these human characteristics
- Openness to experience as important influence variable

Faking in Personality Assessment

- Modelling the faking process
- Modelling faking impact

Person x Environment Interaction

- Measuring situational characteristics
- Modeling the interaction between situation perception and personality

Test development

- Generalizability theory
- Test length

Lab Facilities

Computer based psychometric testing



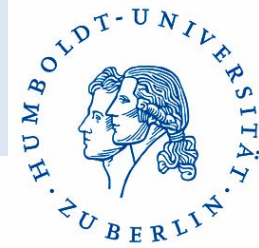
Test library



Experience sampling



Work- Engineering- and Organisational Psychology



Methods

Field Studies

- in the work setting
- Experience sampling methodology/ diary studies
- longitudinal designs for investigating long term effects of work characteristics on well-being

Psychophysiology

Heart rate, SCR, EMG, Cortisol

Simulations



Work Psychology



Social & Organizational Psychology

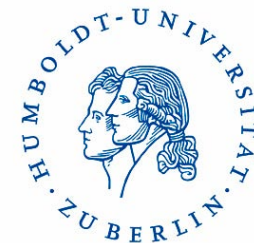


Engineering Psychology



Work Psychology

Prof. Annekatriin Hoppe



Research Topics

Occupational Health Psychology (OHP)

- Stressors- resources- strain relationships in the work setting
- Occupational safety and health interventions/ Worksite health promotion
- Work analysis and work design

Immigrant and low wage workers

- Psychosocial working conditions and health low wage workers
- Ethnic health disparities
- Cultural diversity in teams

Current Projects

Looking at the bright side of work: A diary study

Day level resource-oriented interventions to improve personal resources, work engagement and well-being

(Project partners: A. Michel, Universität Heidelberg, D. O'Shea, Limerick University/ Ireland, G. Gonzalez, Guelph University/Canada , A. Steidle, Universität Hohenheim)

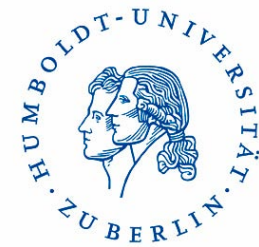
Labor migration of Spanish professionals to Germany

(Project partners: K. Fujishiro, National Institute for Occupational Health, USA)



Engineering Psychology / Cognitive Ergonomics

Prof. Hartmut Wandke



Research Topics

Human Machine Systems (HMI)



- Function allocation and automation
- humans as operators in vs. as developers of HMIs

(Funding: DFG Research Trainig Group prometei)

Ambient Assisted Living



- Social support of elderly people mediated by information technology
- Transgenerational User Interface Design

(Funding: BMBF AAL Programme)



Sustainable Usability Engineering



- Methods and tools for early stages in Human Centred Design
- Integration of design stages by usability principles

(Funding: artop GmbH)

Lab Facilities

Experimental Display for Supervisory Control

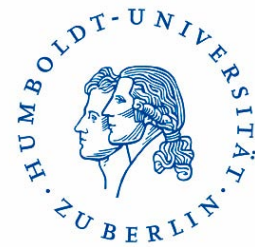


Socially
Augmented
Microworld



Social and Organizational Psychology

Prof. Ursula Hess



Research Topics

A wrinkle in time: The perception of expressions in the elderly

The effect of wrinkles and facial folds on the perception of emotion expressions

(Funding: NIA Research Grant)

National Institute on Aging ■ ◆ ✦ ✧

Empathic reactions to the elderly

Mimicry and Emotional contagion when observing the elderly

(Funding: DFG Research Grant)

Deutsche Forschungsgemeinschaft
DFG

Conflict at the workplace

Stress and emotion regulation in a conflictual dyadic work setting

(Funding: Interdisziplinäres Wolfgang Köhler-Zentrum)

Interdisziplinäres Wolfgang Köhler
Forschungszentrum
Konflikte in intelligenten Systemen

Emotion comprehension and subjective wellbeing

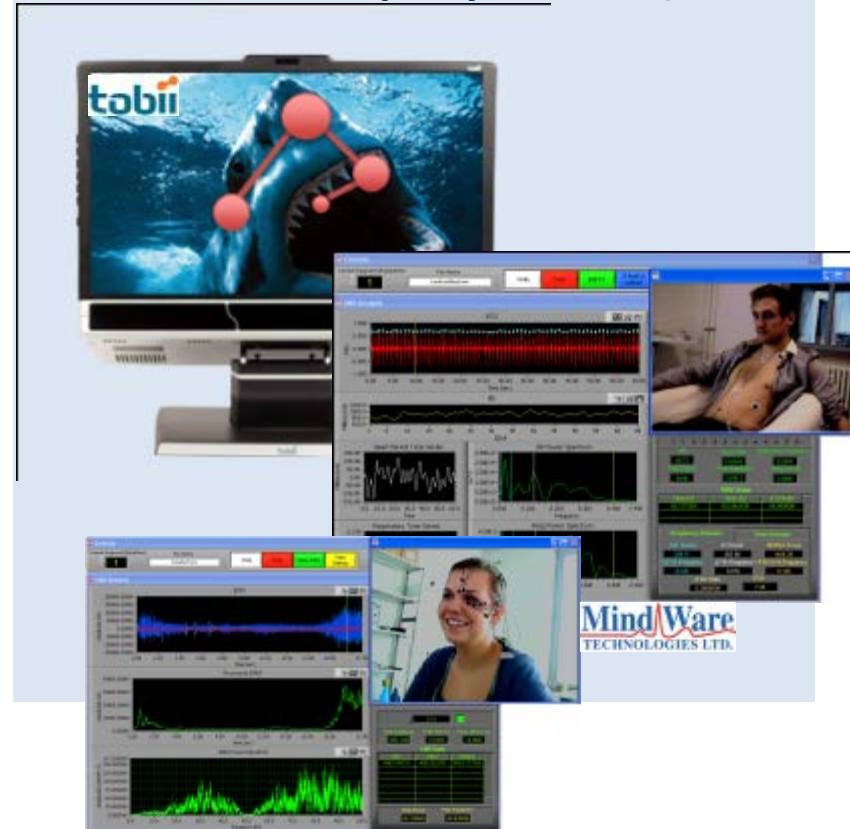
A collaborative study with the University of Crete

(Funding: DAAD)

DAAD

Lab Facilities

Psychophysiology lab (EMG, HRV, IMP, EDA, BP, skin temp., Eye-tracker)



MindWare
TECHNOLOGIES LTD.

Lifespan Development



Methods

high-definition video observation lab with computer-assisted coding facilities

psychophysiology lab (EMG, HRV, IMP, EDA, BP, skin temp., Eye-tracker)



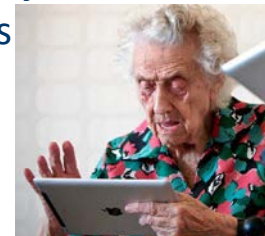
Personality Psychology



Social & Organizational Psychology

in-situ assessments of everyday life

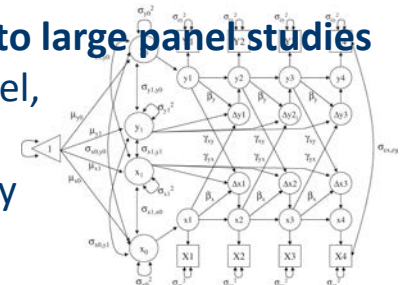
- contact people several times a day for an entire week
- physiological markers (e.g., stress)



Developmental & Educational Psychology

applying longitudinal methods to large panel studies

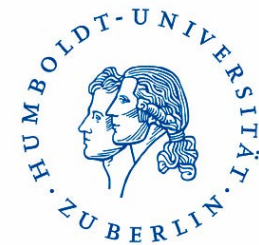
- **Germany:** SocioEconomic Panel, Berlin Aging Studies I & II
- **US:** Health & Retirement Study
- **UK:** British Household Panel





Personality Psychology

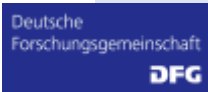
Prof. Jens B. Asendorpf



Research Topics

Empathic reactions to the elderly

- Individual differences in young people's empathic reactions to emotional expressions of the elderly
(Funding: DFG Research Grant)



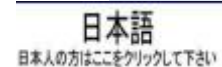
Reassessment in the LOGIC Study

- Adjustment at age 29 as predicted from personality at ages 4-6 and later
- 25-year German longitudinal study
(Funding: Thyssen foundation)



Personality and Acculturation

- Longitudinal acculturation of exchange students to guest culture (GER,JAP,US)
- Longitudinal acculturation of immigrants to host culture in Greece (with University of Athens)



Lab Facilities

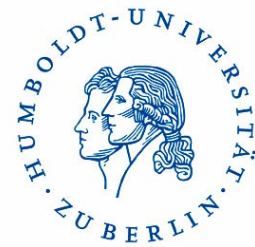
High-Definition Video Observation Lab with Computer-Assisted Coding Facilities





Social and Organizational Psychology

Prof. Ursula Hess



Research Topics

A wrinkle in time: The perception of expressions in the elderly

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National Institute on Aging ■ ◆ ✦ ✧

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Interdisziplinäres Wolfgang Köhler
Forschungszentrum
Konflikte in intelligenten Systemen

Emotion comprehension and subjective wellbeing

A collaborative study with the University of Crete

(Funding: DAAD)

DAAD

Lab Facilities

Psychophysiology lab (EMG, HRV, IMP, EDA, BP, skin temp., Eye-tracker)





Developmental & Educational Psychology

Prof. Denis Gerstorf



Research Topics

Differential Development across Adulthood

late-life change

- How is late-life well-being shaped by disease and impending death?

interrelations in behavioral change

- What are the developmental dynamics between well-being and cognitive functioning?



contextual effects on development

- How is well-being affected by characteristics of one's partner?

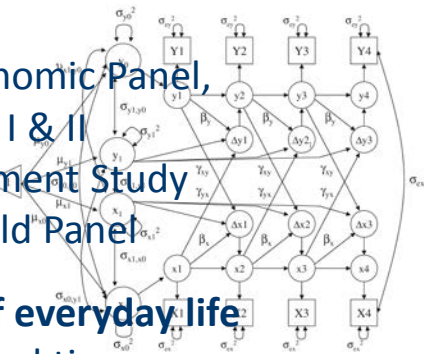
daily life dynamics

- How do older adults master the challenges of everyday life?

Methods

applying longitudinal methods to large-scale panel studies

- **Germany:** SocioEconomic Panel, Berlin Aging Studies I & II
- **US:** Health & Retirement Study
- **UK:** British Household Panel

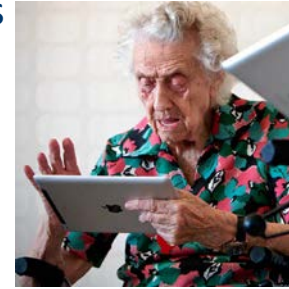


in-situ assessments of everyday life

- contact people several times a day for an entire week

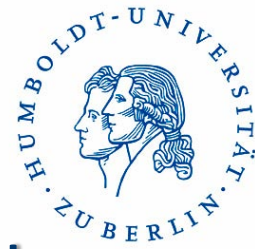
physiological markers

- stress: cortisol





Bereich Klinische Psychologie



Klinische Psychologie (C4)



Psychotherapie und Somatopsychologie (C3)



Klinische Gerontopsychologie (W1)



Themen und Methoden

- Welche (neuro-)psychologischen und –biologischen Veränderungen liegen Zwängen und Ängsten zugrunde ?
- Lässt sich “Vulnerabilität” für solche Störungen identifizieren ?
- Was verändert sich im Gehirn und im Verhalten unter Therapie ?
- Wie effektiv sind bestimmte Therapieformen ?
- Welche speziellen Probleme treten bei der Versorgung von Migranten auf ?
- Neuropsychologische Veränderungen im Alter
- Psychologische Interventionen bei Demenz und Schlafanfall

Wir benutzen :

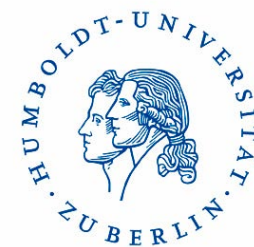
EEG, (f)MRT, SCR, HR, Okulographie, Reaktionszeiten
Psychometrie, Computational modeling (Forschung)

Kognitive Verhaltenstherapie (Behandlung)



Clinical Psychology / Outpatient Care Unit

Prof. Dr. Norbert Kathmann

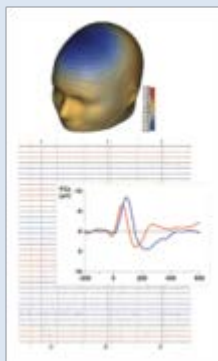


Research Topics

Cognitive-affective mechanisms and brain dysfunctions in mental disease

- Performance monitoring
- Reward-based learning
- Decision making
- Volitional action
- Procedural learning
- Emotion regulation
- Agency
- Genetics

(Funding: DFG /BMBF /VW Foundation)



Treatment of anxiety disorders

- Evaluation of treatment components
- Development of guidelines

Patient groups

- Obsessive-compulsive disorder
- Panic disorder
- Schizophrenia

Methods and Lab Facilities

Electroencephalography (EEG)

- Event-related brain potentials
- Time-frequency analysis
- Source analysis



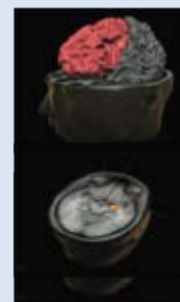
Oculography

- (Anti-) Saccades
- Smooth-pursuit eye movements



Functional-/ Magnetic Resonance Imaging (MRI & fMRI)

- BOLD Response (GLM) analysis
- Connectivity analysis
- Resting State Analysis
- Morphometry
- Simultaneous EEG/fMRI

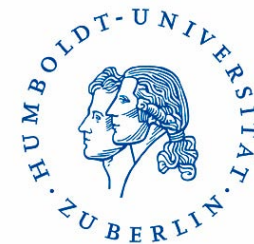


Transcranial magnetic stimulation (TMS)



Psychotherapy and Somatopsychology

Prof. Dr. Thomas Fydrich



Research Topics

Disorder-related research

- Social Phobia
- Personality Disorders
- Obsessive-Compulsive Disorder in children
- Depression and motivation
- Panic Disorder and Agoraphobia

Quality assurance and evaluation of psychotherapeutic care

Social support and health

Homework assignments in psychotherapy

Mental health and culture

- Mental health care utilization and migration
- Transcultural aspects of mental disorders and psychotherapy

Staff / Facilities

Staff

- Dipl.-Psych. Kirsten Baschin
- Dr. Andrea Ertle
- PD Dr. Lydia Fehm
- Dr. Ulrike von Lersner
- Dipl.-Psych. Dominik Ülsmann

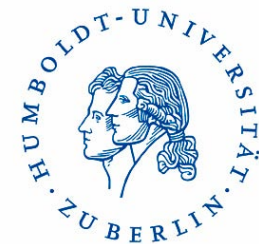
**ZPHU – Psychotherapy Training and
Treatment Center**
Berlin-Mitte





Clinical Gerontopsychology

Prof. Dr. Katja Werheid



Research Topics

Affective processing in elderly people

- Psychophysiological experiments
- Emotion-memory interaction
- Structural parallelisms in language

(Funding: DFG, BMBF, Languages of Emotion, Sonnenfeld Found.)

Psychological Interventions the Elderly

- Alzheimer disease/Mild Cognitive Impairment
- Stroke patients

(Funding: BMG, Humor hilft Heilen)

Post-stroke depression

- Pathogenesis
- Psychosocial risk factors
- Neurobiological risk factors

(Funding: HU Berlin)



Lab Facilities

EEG recording



Behavioral experiments

