



SignGes

Center for
Sign Language and Gesture
RWTH Aachen

The center

For more than 20 years now the sign language research group of the Faculty of Arts and Humanities at RWTH Aachen has carried out research in the field of sign language. The team consists of members who are hearing impaired as well as people who are not. It thereby contributes significantly to the inclusion of persons with hearing impairments.

In 2014 the sign language research group joined forces with the RWTH gesture research group Natural Media to form the new Center of Competence SignGes (Sign language and Gesture) in the Faculty of Arts and Humanities of the RWTH Aachen University.

The following topics constitute the main areas of research and teaching:

- Sing language and culture of the Deaf
- Accessible communication, education and didactics
- Vocational rehabilitation and media literacy
- Linguistics and cognitive semiotics
- Co-speech gesture
- Multimodal interaction in communication
- 3D Motion-Capture technology

The successful work of the SignGes-team is based on the combination of applied and basic research in sign language, gesture and general aspects of diversity. The projects are carried out in co-operation with our partners some of which are listed below:

Berufsbildungswerke NRW

Bundesagentur für Arbeit

Caritas Linz

LVR David-Hirsch-Schule

Fraunhofer Institute for Applied Information Technology (FIT)

Heilpädagogische Fakultät Universität zu Köln

Instituut voor Doven Sint-Michielsgestel

Karlsruhe Institute of Technology

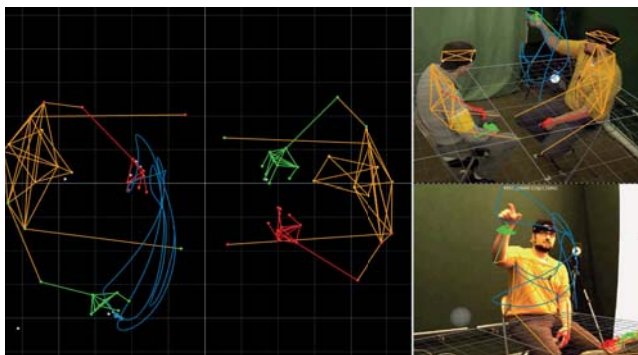
Technical equipment

SignGes is equipped with an excellent HD-Video conference solution. Combined with Smart board technology, this enables location-independent meetings in both sign and spoken languages. High-quality multi-perspective videos are produced with the help of a 270° green screen video studio equipped with a teleprompter and three professional video cameras. The footage is edited in post-production, and subtitles are integrated into the video.

The gesture researchers of SignGes use the Motion-Capture lab of the Human Technology Centre (HumTec) housed in the same building complex. With the help of 16 video and infrared cameras gestures and other forms of communicative behaviour can be captured with high resolution and analysed according to their temporal and spatial dynamics.



Studio for the production of sign language videos



Motion-Capture-Lab for recording and analysing communicative behaviour



eLearning in sign language

Sign language research

The research team works in various translational scientific projects, e.g. barrier-free communication and education, barrier-free didactics and media, vocational rehabilitation, media literacy, sign language and Deaf culture.

DeafExist

Entrepreneurship training for CI-users and people who are hard of hearing, late-deafened and deaf

DeafTrain

Blended-learning seminars to support medial, social, and communicative skills of the Deaf

Gateway

Multimedia-based information and communication platform for people with hearing and visual impairments relating to topics related to education, jobs, and careers

AILB I-III - vibelle.de

Information and eLearning platform addressing career related topics for people who are deaf or hard of hearing

ATBG

Sign language-based test battery for vocational aptitude testing of people who are deaf

AGL

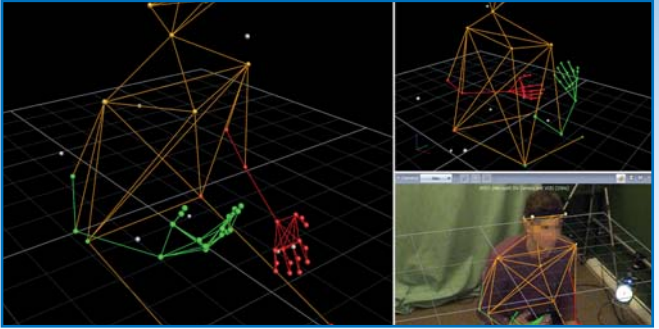
Qualification for sign language teachers in NRW

Further projects

www.signges.rwth-aachen.de

Research funding (selection)

Bundesministerium für Arbeit und Soziales, Bundesagentur für Arbeit, RWTH Aachen, Ministerium für Arbeit und Soziales, Qualifikation und Technologie des Landes NRW



Video laboratory with Motion-Capture system for recording and analysing gestures, postures, and signs in multimodal discourse

Gesture research

Using multiple stream recordings, the gesture research team develops empirical methods for multimodal communication and interaction research. In addition to regular and high-speed video cameras, a state-of-the-art Motion-Capture system is used to record movements of hands, head and torso in real-time and within millimeter accuracy. This enables the Natural Media Group to visualise and statistically analyse ephemeral gestural forms and movements. Theory-building combines semiotics and cognitive-linguistics. Current work involves tools and methods to compile and analyse multimodal corpora (semi-) automatically for purposes of pattern recognition.

Natural Media & Engineering

Linguistic, semiotic, neuroscientific, and technical perspectives on the production and reception of natural media (spoken and signed languages, gesture, mimics, posture)

e-cosmos

Integrating electronic tools for the analysis of complex multimodal data in the humanities

Further projects

www.signges.rwth-aachen.de

Research funding (selection)

Excellence Initiative of the German Federal and State Governments (HumTec, RWTH Aachen Institutional Strategy), Alexander-von-Humboldt Foundation

NeuroPeirce

Gesture as test ground for Peirce's universal categories in the social neurosciences

Manufacturing communication

Gesture codes for industrial production contexts



Sign language translation for the Press and Information Office of the Federal Government

Service

Sign language videos

Professional translation into sign language of:

- Web pages
- Print media (via QR code)
- Exhibitions

info@signges.rwth-aachen.de

Barrier-free seminars

Seminars for people who are hearing impaired and those who are not:

- Inclusion
- Communication
- Awareness raising
- Media literacy

www.deaftrain.de

Learning-DVD „Fliegende Hände“

Multimedia-based teaching and learning material consisting of over 4000 words and phrases

www.signges.rwth-aachen.de

Video-Laboratory

Use of Motion-Capture technology for scientific work

www.humtec.rwth-aachen.de/nmlab



Seminar in German Sign Language “DeafTrain”

Teaching, assistance, and mentoring

Teaching

- Introduction to: Gesture analysis, cognitive linguistics, semiotics
- German Sign Language (DGS) I-IV
- Seminars on: Multimodal interaction, figurative language, linguistic relativity
- Barrier-free didactics
- Leonardo module “Natural Media of Human Communication”
- Interdisciplinary research colloquia
- Mapping Multimodal Dialogue (MaMuD) workshops
- Inclusion and diversity
- Cologne-Aachen Gesture Colloquium

Assistance

- Dissertation projects carried out by researchers with hearing impairments
- Dissertation projects in multimodal communication
- Internships for hearing impaired persons

Mentoring

- Accessibility for people with hearing impairments to:
 - Professional life
 - Online media
 - Education
 - Culture

Board of directors

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- Center for Entrepreneurship -

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Department of Linguistics and
Communication Science

Prof. Dr. Will Spijkers

Institute of Psychology,
Vocational Rehabilitation

Team

Antoinette Brücher, Benno Hermes, Sabine Kortlepel, Thomas Lehmann, Christine Linnartz, Sandra Lintz-Naumann, Linn-Marlen Rekittke, Melania Mateias, Jan Schumacher, Daniel Schüller, Isa Werth, Lars Wilhelm, Dhana Wolf, Kirsten Zäh, Uwe Zelle, Bela Brenger, Felix Schaap, Christian Schönrank, Daniel Schüller, Lena Syring, Christine Tschuschner

Contact

SignGes
Kompetenzzentrum für
Gebärdensprache und Gestik
Theaterplatz 14
52062 Aachen
Germany

Fon. +49 241 8095837
Fax. +49 241 8092659

info@signges.rwth-aachen.de
www.signges.rwth-aachen.de

Directions:



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