Annual Report No. 1

September 2016





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The SFB-TRR 161 "Quantitative Methods for Visual Computing" is a Transregioal Collaborative Research Center. Partner institutions are the Universities Stuttgart and Konstanz and the Max Planck Institute for Biological Cybernetics in Tübingen.

In this project, about 40 scientists are working together to establish quantification as a key ingredient of visual computing research. They see quantification as a cornerstone to further advance visual computing as an established and maturing research field.



Dear readers,

The first year of our Transregio project has already passed. This is a good time for providing the first edition of an Annual Report. With this report, we want to inform you about the current activities and developments in the SFB-TRR 161.

After the process of finding adequate academic staff and arranging the required technical equipment had been successfully completed, all research projects started their work. Up to now, already more than 20 publications resulted from our research, two SFB-TRR 161 members received renowned awards, and two publications were honored with prizes. That is a great success for the first quarter of this funding period! Besides that, the management team established organizational and administrative processes, and the public relation activities got off the ground.

This Annual Report also highlights different activities organized by our members, such as the 1st Summer School for Visual Computing, the lecture series "Quality and Beyond", and further workshops and tutorials, that push visual computing research all over the world.

Our huge engagement to support female academics and young researchers is shown in successfully sending female PhD students abroad and welcoming foreign PhD students at our labs. Furthermore, we organized a press workshop and a doctoral retreat, and won international fellows as well as guest researchers.

Let's continue this way! We wish you great success in your further work.

If you want to keep up with our activities, visit us online on www.sfbtrr161.de or follow us on twitter.de/sfbtrr161.

We hope you enjoy reading the SFB-TRR 161 Annual Report!



Best regards Marcel Hlawatsch, Manager of the SFB-TRR 161

TRANSREGIO PARTNER



Universität Stuttgart

<u>Universität</u> Konstanz





FUNDING BY



RESEARCH

Lecture Series and a Variety of Talks

Winter Term 2015/16 | In November 2015, the SFB-TRR 161 started the lecture series "Quality and Beyond" with six talks. For this lecture series we invited renowned visual computing scientists to the Visualization Laboratory of the University of Stuttgart to talk about their research and latest developments, and to discuss their results with the audience. For interested people in Konstanz, a live stream of the lectures were transmitted.



Hank Childs (top, left), Jürgen Schulze (top, right) and Per Ola Kristensson (bottom) during their talks in Stuttgart at the VISUS-Powerwall.

The opening was done by Rüdiger Westermann (TU München) with a talk about "Scalable Data Visualization". He was followed by Per Ola Kristensson (University of Cambridge), Renato Pajarola (University of Zurich), Hendrik Lensch (Eberhard Karls Universität Tübingen), Amitabh Varshney (University of Maryland), and Margit Pohl (Vienna University of Technology). They talked about their activities in visualization, 3D reconstruction, interaction techniques, as well as visual analytics. In winter term 2016/17, there will be the next lecture series with the title "Visual Computing". Please find the dates on the last page of this report.

Beyond that, the SFB-TRR 161 invited further scientists to Stuttgart and Konstanz to refer about their work, e.g., Jürgen Schulze (USA), Hank Childs (USA), Alexandre Bergel (Chile), or Bernhard Thomaszewski (Zurich).

Summer School for Visual Computing

July 2016 | "Quantifying User-centered Experiences" (QUE-2016) was the title of the 1st Summer School for Visual Computing, organized by Albrecht Schmidt, Lewis Chuang, Niels Henze, and colleagues. The summer school took place in July 2016 in Stuttgart. Central parts of the program were lectures, hands-on sessions, workshops, and poster sessions. Beyond that a research seminar about "Psychophysics and EyeTracking" was part of this Summer School.



The participants, among them PhD students from USA, Hungary, as well as SFB-TRR 161 scientists, spent five days at the Institute for Visualization and Interactive Systems (VIS) and the Visualization Research Center (VISUS) to learn about visual computing and discuss current questions, trends and activities in data analysis, human-computer interaction, visualization, and eye tracking. During a boat trip in Tübingen and a special meeting for female academics, the computer scientists had the chance to talk about their current research activities and to exchange their know-how and experience in the academic world.

Projects C02, C03, C04

I Stuttgart, Tübingen

Seminars about Experiments in Human Computer Interaction in Konstanz

In **June and July 2016**, Harald Reiterer and Ulrike Pfeil hosted a research seminar about "Experiments in Human Computer Interaction (HCI)" at the University of Konstanz. Within three days they teached about 15 students working on their bachelor, master or doctoral thesis in conducting experimental user studies to support them in their research work.



A snapshot of the research seminar: Harald Reiterer (on the left) and Ulrike Pfeil (second from right), together with some participants.

The seminar covered the whys and hows of conducting good experiments in HCI, for example: How do you build on existing work in formulating research questions and devising hypotheses? How do you

select the right measures that provide evidence for conclusions? How do you narrate findings and how do you deal with alternative explanations for results? In a practical part the students presented their own experiments and got detailed feedback.

Project C01

I Konstanz

ETVIS Workshops in Chicago and Baltimore

October 2015 and 2016 | As part of IEEE VIS 2015, the most important conferences for visualization, Daniel Weiskopf, Lewis Chuang, and Albrecht Schmidt, together with Brian Fisher from Simon Fraser University, organized a Workshop on Eye Tracking and Visualization (ETVIS) to build a community of eye tracking researchers within the visualization community, covering information visualization, scientific visualization, and visual analytics.



Kenneth Holmquist at ETVIS 2015 Workshop in Chicago.

With over 60 participants, the workshop was very well attended. And the 2nd workshop ETVIS is just around the corner, taking place in October 2016 in Baltimore, Maryland, USA. Hopefully, it will be as successful as the last one!

Projects A01, B01, C02, C03

Stuttgart, Tübingen

Computer Linguistic Tutorial in Konstanz

February 2016 | Miriam Butt hosted a Computational LinguisticsTutorial during the DGfS 2016 ("38. Jahrestagung der Deutschen Gesellschaft für Sprachwissenschaft") together with her colleague Dominik Sascha in Konstanz. The topic of this tutorial was "LingVis: Visual Analysis for Linguistics".

The aim of this course was to provide an introduction to the emerging field of the visualization of linguistic information. Miriam Butt's group presented concrete use cases for synchronic and diachronic linguistic questions. A part of the course was a hands-on session, in which the participants could experiment with preprepared data sets in order to investigate how complex linguistic questions can benefit from visual analysis.

Project D02

I Konstanz

SFB-TRR 161 Supported EuroVA Keynote



at EuroVA in Groningen.

In **June 2016**, researchers, practitioners, and industry partners met in Groningen (Netherlands) at the visualization symposium EuroVis 2016 to exchange about their current developments, visions, and

ideas for future trends in all areas of visualization. During these five days, the participants of this symposium, among them scientists of the SFB-TRR 161 projects INF and A03, discussed their newest results and challenges.

Moreover, we supported the EuroVA keynote by Sara Irina Fabrikant – head of the Geography Department, University of Zurich (UZH), and of the Geographic Information Visualization and Analysis Group (GIVA) – about "Moving Visual Analytics of Movement". She presented her empirical research on her way to establish usable and useful geovisual analytics tools for the increasingly mobile information society.

Projects A03, INF

I Konstanz

ACM Sigmod Tutorial in San Francisco



July 2016 | At the beginning of July, Melanie Herschel and Marcel Hlawatsch traveled to San Francisco to hold a tutorial at ACM SIGMOD 2016 – a leading international forum for experts

in large-scale data management problems and databases.

"Provenance: On and Behind the Screens" was the title of this course, which covered the two topics provenance and visualization. Together with the participants, the SFB-TRR 161 scientists had intensive discussions on how provenance information can be visualized. Surely that inspired some attendees to work with provenance and create suitable visualizations for their data.

Projects B01, D03

Stuttgart

Korean Image Processing Expert in Konstanz

From **September 2015 to August 2016**, Sung-Hwan Jung, a renowned scientist for image processing and Professor of Computer Engineering at the Changwon National University in Korea, visited the University of Konstanz to work together with the Multimedia Signal Processing Group of Dietmar Saupe.



I. Multi-level Saliency Based Compression

 In the bi-level saliency based compression, abrup changing at the border between ROI and BG.

How about the smooth quality level changing in the box

 Most of all the saliency based coding has the bi-level salie compression [A. Bradley, F. Stentiford DICTA 2002]



v leve

Prof. Jung has extensively researched on topics in image processing. He brought along a strong interest in image and video quality assessment and fits very well in our research team. His contributions led to the paper "Saliency-driven image coding improves overall perceived JPEG quality," which was already presented to two groups of experts. It was well received and invited for submission to the special session on perceptual coding at the prominent IEEE Data Compression Conference in Utah, in April 2017. In August, Sung-Hwan Jung's research stay ended.

Thanks for the great cooperation!

Project A05

I Konstanz

Commitment in Automotive Usability

September 2016 | Lewis Chuang explores simulated real-world scenarios as they are used for entertainment as well as for virtual driving or flying training. He and his group work with gaze-tracking and EEG. They want to find out how visual information is sought out and processed. Similar questions play an important role in automotive engineering. What is the influence of user-state on the driving performance? How should displays and interactions be designed to avoid distractions?

Hence, Lewis Chuang is highly dedicated in pushing developments and research in the field of driving performance. During the last year, he was involved in numerous respective international conferences. He organized workshops and tutorials during the Automotive'UI 2015, attended the Dagstuhl Seminar "Automotive User Interfaces in the Age of Automation" in June together with Albrecht Schmidt, and recently organized, together with colleagues from the Carl-von-Ossietzky University and OFFIS e.V., the symposium "The influence of user-state on driving performance" during the "50. Kongress der Deutschen Gesellschaft für Psychologie" in Leipzig. Furthermore he is on the brink of further engagements: In October, Lewis Chuang will be the chair of a Neuroergonomics symposium in Paris, and two weeks later, he will hold two further workshops at the Automotive'UI 2016.

Project C03

I Tübingen

Dagstuhl Seminar about Autonomous Vehicles

November 2015 | Together with colleagues from Japan, Great Britain, and the Czech Republic, Andrés Bruhn organized an international Dagstuhl Seminar about the "Vision for Autonomous Vehicles and Probes". During six days, 39 participants discussed among other topics the robustness and adaptivity of the methods and the evaluation by adequate benchmarks.

Project B04

Stuttgart

PEOPLE _

From 37 to 56 – SFB-TRR 161 Team Has Grown

At last years' SFB-TRR 161 status seminar, we came together the first time after the start of our project. We have been just at the beginning of our work, and the principal investigators were still in the process of finding adequate staff that have the know-how to find solutions for the project missions. That time, our research group constisted of 37 members.

Meanwhile, open positions could be filled, and new PhD students started their project work. Hence, our group rised up to 56 members, consisting of 18 principal investigators, 31 research assistants, 3 associated scientists, and 4 people for administration and public relations.



Members of the SFB-TRR 161 during the Status Seminar 2015 in Mosbach / Neckarelz.

Call to Münster for Daniel Weiskopf Rejected



In **October 2015**, Daniel Weiskopf got a call for a Computer Science Professorship at the University of Münster.

This call could fortunately be rejected by the rectorship in Stuttgart, so Daniel Weiskopf will keep on leading our project and follow his research goals in the field of Uncertainty

Quantification and Analysis and Adaptive Self-Consistent Visualization.

Call to Duisburg-Essen for Fabian Beck



July 2016 | Fabian Beck, postdoc at the Visualization Research Center in Stuttgart with a special focus on information visualization and software engineering, is involved in projects A01 and B01. In July, he got a call for a Junior Professorship (tenure track) for Computer Science at the University Duisburg-Essen.

Martin Fuchs Goes to the Stuttgart Media University



In **September 2016**, Martin Fuchs moved to the Stuttgart Media University (HdM), where he is now Professor for Interactive Systems and Games.

We wish him every success for this new chapter in his academic career!

New People in the SFB-TRR 161 (since October 2015)

Research Staff

- Jochen Görtler (Konstanz, A01)
- Valentin Bruder (Stuttgart, A02)
- Michael Behrisch (Konstanz, A03)
- Vlad Hosu (Konstanz, A05)
- Franz Hahn (Konstanz, A05)
- Hui Men (Konstanz, A05)
- Dr. Hanhe Lin (Konstanz, A05)
- Nils Rodrigues (Stuttgart, B01)
- Johannes Zagermann (Konstanz, C01)
- Jens Müller (Konstanz, C01)
- Ulrike Pfeil (Konstanz, C01)
- Jakob Karolus (Stuttgart, C02)
- Alessandro Nesti (Tübingen, C03)
- Houssem Ben Lahmar (Konstanz, D03)
- Florian Frieß (Stuttgart, INF)

Administration

 Claudia Widmann (Konstanz, Secretary, Public Relations)

Alumni

Igor Zingman (Konstanz, A05)

• SFB-TRR 161

AWARDS

Albrecht Schmidt Receives ERC Grant



February 2016 | One of this years' Consolidator Grants of the European Research Council (ERC) went to Albrecht Schmidt from the Institute for Visualization and Interactive Systems (VIS) at the University of Stuttgart. In conjunction with this prize, the Professor for Human Computer Interaction receives a two million Euro funding for further research activities. Albrecht Schmidt plans to realize a project called AMPLIFY, which concentrates on the amplification of human senses by technology.

Distinguished Career Award for Thomas Ertl



May 2016 | At the beginning of May, Thomas Ertl was honored with the Distinguished Career Award of the European Association for Computer Graphics (EG). This award is one of the most important and top-ranking prizes in the field of computer graphics in Europe. Prof. Ertl received the award during the opening ceremony of the 37th annual conference of the European Association for Computer Graphics in Lissabon.

Thomas Ertl is Vice Rector for Research and Advanced Graduate Education in Stuttgart

October 2015 | During a public meeting on 22nd of July 2015, the senate of the University of Stuttgart elected a new leadership. In this context, **Thomas Ertl** became Vice Rector for Research and Advanced Graduate Education.

Since October, he is now responsible for the further development of the University in the regard of science, as well as for a sustainable bonding of young talented academics. Thomas Ertl will carry out this function for the upcoming three years.

Researchers from Konstanz Receive "Honorable Mention" at PacificVis 2016

May 2016 | Arlind Nocaj, Mark Ortmann, and Ulrik Brandes (Project B02, Konstanz) received an "Honorable Mention" at PacificVis 2016 in Taipeh (Taiwan). The reviewers honored their paper "Adaptive Disentanglement based on Local Clustering in Small-World Network Visualization", that was presented during this IEEE Pacific Visualization Symposium on Visualization.

Project B02

l Konstanz

"Saliency Award" at ETRA 2016 for Stuttgart

April 2016 | Kuno Kurzhals, Marcel Hlawatsch, Michael Burch, and Daniel Weiskopf received the "Saliency Award" at the ETRA 2016 in Charleston (USA).

During this ACM Symposium on EyeTracking Research and Applications, they presented their paper "Fixation-Image Charts" with a new visualization technique for the analysis of eye tracking studies. The reviewers awarded their work due to the eminent attention in the community and the innovation and utility of their developed method.

Project B01

Stuttgart

YOUNG ACADEMICS

First PhD Graduate in SFB-TRR 161

December 2015 | Adaptive network visualizations was the topic of the first PhD degree awarded to a SFB-TRR 161 scientist by the University of Konstanz.



Arlind Nocaj (right), together with David Schoch, during the graduation ceremony of the University of Konstanz.

Arlind Nocaj's thesis, titled "Untangling Networks Focus on Less to See More", was conducted under the supervision of Ulrik Brandes and Oliver Deussen, both principal investigators within the SFB-TRR 161. He received his certificate during the occasion of the University of Konstanz' graduation ceremony in December 2015. As a postdoc, Arlind Nocaj now continues his research within SFB-TRR 161 project B02.

Project B02

Konstanz

Doctoral Retreat

In **July 2016**, the doctoral retreat was held at the Waldhotel Zollernblick near Freudenstadt in the Black Forest. This was the first doctoral retreat for the SFB-TRR 161, and thus, the first chance to meet each other for many PhD students, especially for those who were not at the previous status seminar.



During the three days, the young academics held short talks and discussed what has already been done and what is planned for the future. Besides that they could get in touch with each other in an informal atmosphere during a mobile archery range or an excursion to the Experimenta Freudenstadt. This helped to integrate new students and to find out who has associated problems or similar data.

International Fellowships Visit Stuttgart

September 2016 | Since the beginning of this year, the SFB-TRR 161 has been offering fellowships for international PhD students in the field of visual computing. In this context, young scientists get the opportunity to collect experiences in Germany and exchange research knowledge with the projects at the Universities of Stuttgart and Konstanz, or at the Max Planck Institute for Biological Cybernetis inTübingen. Until now, two fellows used this chance and visited our visual computing experts.

Juan Pablo Alcocer from the University of Chile was our first guest. The PhD student in computer science spent May and June in Stuttgart at the Visualization Research Center in project A01. During these two months, he worked at a performance evolution matrix in cooperation with Fabian Beck.

The next computer scientist traveling to Germany was Ayush Kumar, a computer scientist from Stony Brook University and SUNY Korea. His research stay at the Visualization Research Center in Stuttgart, where he joined project B01, started in June for the duration of four months. Primarily supported by Rudolf Netzel, Kuno Kurzhals, and Fabian Beck, he investigated the visualization of eye tracking data and got two papers published during his stay. At the end of September, he left the SFB-TRR 161 to return to Korea, but the ambitious PhD student is already thinking about a further visit in Stuttgart to continue working on his research topic.



Ayush Komer at the Visualization Research Center in Stuttgart.

Further fellowships are already scheduled. In October, Dietmar Saupes' team will welcome Moshen Jenadeleh from Iran in Konstanz. Later on, in December, Leonel Merino from Chile will join Daniel Keim's project in Konstanz and Shadan Sadeghian Borojeni from Iran will be a guest in the Lewis Chuang's project in Tübingen.

Projects A01, A03, A05, B01, C03

I Stuttgart, Konstanz, Tübingen



Female Academics Go Abroad

June 2016 | Female computer scientists are rare. Although our discipline has a lot of potential for the future, women often hesitate to start an academic career in this field.

The SFB-TRR 161 pursues the goal to support women working in the field of visual computing. By creating role models and good working conditions, we try to attract woman for computer science. In this context, we send excellent female visual computing scientists abroad. This gives them the possibility to get in contact with the international community and meet people working on similar or neighbouring topics. Thereby, they gain new insights and impulses for their own activities.



Tanja Blascheck from the University of Stuttgart together with a colleague at the University of Calgary in Canada.

In June, the SFB-TRR 161 sent a first woman – Tanja Blascheck from the Institute for Visualization and Interactive Systems of the University of Stuttgart – to Canada. Until the end of October, she is working at the Interactions Lab of the University of Calgary, where she joined the InnoVis group of Sheelagh Carpendale – an artist and computer scientist in the field of information visualization and human-computer interaction.

The next woman going abroad was Christin Schätzle from the Computational Linguistics group (project D02) of the University of Konstanz. She traveled to Iceland to stay three weeks at the University Centre of the Westfjords.

Press Work for Science

In **February and April 2016**, the PhD students of the SFB-TRR 161 met in Stuttgart and Konstanz to get an insight into press work for research activities. For this workshop, the public relations team invited Eva Wolfangel, a journalist for science topics with special interest in computer science, data, and their relevance in our society, to answer questions like: How



do journalists find their topics? Which topics are relevant for press work? How can they be prepared for non-experts?

During the two one day cources – one in Stuttgart, one in Konstanz – the participants carved out relevant topics out of their own research work and tried to find significant headlines in practical exercises.

I Project Ö

Stuttgart, Konstanz

SCIENCE FOR THE PUBLIC _

Visual Computing BLOG

September 2016 | In November 2015, the public relations team of the SFB-TRR 161 initiated a Visual Computing BLOG (visual-computing.org). On this blog, our scientists, as well as guest authors blog about their research activities in computer graphics, visualization, computer vision, augmented reality, human-computer interaction, psychology, etc. They write about the challenges of their work, present current results, post reports from conferences, and discuss current trends and visions in the field of visual computing. Meanwhile, we published more than 20 blog posts by 20 authors.



Having a look at the blog statistics that counts all visits during the last five months, we had

more than 1,300 visitors and over 3,600 page views, with a tendency to rise. The three most clicked posts so far have been "Untangling Networks – or How to Focus on Less to See More" by Claudia Widmann, Menja Scheer's "How does steering engagement influence our susceptibility to distractions?", and "Back from CHI 2016" by Johannes Zagermann. The blog posts are always announced on the SFB-TRR 161 twitter channel (twitter.com/Sfb-Trr161), that is followed by 42 users, mostly scientists, educational institutions, interested people, and journalists.

I Project Ö, various projects

Videos about Eye Tracking in Progress



In **May and July 2016**, members of project Ö visited several scientists at the Visualization Research Center of the University of Stuttgart and at the Department of Computer and Information Science of the University of Konstanz to record video material about different activities in the field of eye tracking research. They interviewed Kuno Kurzhals, Jakob Ka-

rolus, and Franz Hahn, and catched some impression of their research work.

Three videos are going to be produced. They shall inform about the current process of research and attract young academics to participate in our science. What do these scientists do with eye tracking? What are their visions? Where can their results be used for in future? These are only some of the questions the films are going to answer in about five minutes each. The films are currently in the process of postproduction. The first one with Franz Hahn is almost finished and will be published online during the next weeks.

I Projects A05, B01, C02, Ö

Stuttgart, Konstanz

First Flyer about the SFB-TRR 161 Project



In **April 2016**, we printed a flyer with the title "Quantifizierung im Visual Computing" that provides information about our research, future usages, our motivation and concrete aims in German language.

If you are interested in having printed exemplars, please ask project Ö.

Stuttgart

Stuttgart, Konstanz, Tübingen

SFB-TRR 161 in Press & Media

- May, 2015, Reutlinger Generalanzeiger: "Was die Bilder im Kopf machen"
- May, 2015, Forschung Leben – Forschungsmagazin der Universität Stuttgart: "Acht Millionen Euro für Visual Computing. Neuer transregionaler Sonderforschungsbereich bewilligt"
- July, 2015, Stuttgarter Zeitung: "Eine Wissenschaft des Betrachtens – Millionenförderung für ein ambitioniertes Projekt: Wie gehen Nutzer mit Computergrafiken um?"
- July 2015, Uni'kon 59: "Acht Millionen Euro für Visual Computing"
- January, 2016, dasGehirn.info: "Alles Vernetzt", Article about networks of Ulrik Brandes
- January, 2016, PROFIFOTO Online: "Tanz mit den Megapixeln", Column.

• SFB-TRR 161

Events for the Public

The SFB-TRR 161 aims to attract young people to visual computing research, as well as present our work to all interested people. For this purpose, our scientists frequently offer workshops, show demonstrations at public events, or hold lectures. You can see some impressions from these activities here:



"Digitale Bilder generieren", coding course in Stuttgart, September 2016.



Tag der Wissenschaft, University of Stuttgart. Presentation of 3D city models, eye tracking, and visual computing on the VISUS Powerwall, June 2016.



Studientage, University of Konstanz, March 2016.



"Wie programmiert man eine Schneeflocke?", Girls Day, University of Konstanz, April 2016.



"Programmieren mit Processing", Girls Day, University of Stuttgart, April 2016.

 Computational Photography
 Void haux(int x, int y){
 rot(x,y,x40,y-40);
 rot(x,y,x40,y-40);

Informatiktag, University of Stuttgart: LabTour in the Visualization Laboratory, Workshops: "Programmieren mit Processing" and "Bildkomprimierung mit Java", February 2016.



Visiting groups at VISUS, University of Stuttgart: Visit of science journalists and Hexagon engineers, 2016.

Further more, Prof. Bülthoff (project C03) was engaged in the Science Pub Tübingen, where he held a lecture about the topic "Und wenn wir einfach zur Arbeit fliegen: Neue Technologien für persönliche Lufttransportsysteme?" in January 2016. This talk refers to the EU project "Mycopter". Hopefully there will be a Science Pub about visual computing in the future?

I Project Ö, various projects

Stuttgart, Konstanz

UPCOMING EVENTS .

Lecture Series "Visual Computing" in Winter Term 2016/17

On 17th of October the next lecture series "Visual Computing" starts. This is a list of the dates and the already known speakers for the upcoming talks.

17-10-2016 31-10-2016	4.00 pm 4.00 pm	Celine Coutrix t.b.a.
03-11-2016	4.00 pm	Soekhee Hong
21-11-2016	4.00 pm	Marc Stamminger
28-11-2016	4.00 pm	Judith Redi
05-12-2016	4.00 pm	t.b.a.
12-12-2016	4.00 pm	t.b.a.
19-12-2016	4.00 pm	t.b.a.
16-01-2017	4.00 pm	t.b.a.
23-01-2017	4.00 pm	Marcus Magnor
30-01-2017	4.00 pm	Michael Klein
06-02-2017	4.00 pm	t.b.a.

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University of Konstanz SFB-TRR 161 Quantitative Methods for Visual Computing Universitätsstraße 10 78457 Konstanz

Email: sfbtrr161@visus.uni-stuttgart.de Web: www.sfbtrr161.de

V.i.S.d.P. Prof. Daniel Weiskopf, Prof. Oliver Deussen

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Bilder SFB-TRR 161, VISUS. Otherwise noted.

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Workshop at the VMV 2016 in Bayreuth

October 2016 | Visual Computing Workshop at the International Symposium on Vision, Modeling and Visualization (VMV 2016), Bayreuth, organized by the SFB-TRR 161 project team of Oliver Deussen.

Projects A01, A04

I Konstanz

Symposium at Neuroergonomics 2016

October 2016 | Symposium on "Driving headlong into the uncanny valley of automated driving" during the 1st International Conference for Neuroergonomics in Paris, organized by Lewis Chuang.

Project C03

I Tübingen

Transregio Scientists at Automotive'UI

October 2016 | From 24th to 26th of October the 8th International Conference on Automotive User Interfaces and Interactive Vehicular Applications (Automotive'UI) takes place in Ann Arbor, MI, USA. During this conference, Lewis Chuang co-organizes the following events:

- Workshop on "Ethically Inspired User Interfaces for Decision Making in Automated Driving"
- Workshop on "Situational Awareness in Semi-Automated Vehicles"
- Tutorial on "Design and Evaluation Methods for Attention Directing Cues"
- Project C03

I Tübingen

ETVIS 2016 in Baltimore, Maryland

October 2016 | IEEE VIS 2016, ETVIS 2016, Workshop on Eye Tracking and Visualization, co-organized by Daniel Weiskopf and Lewis Chuang.

Projects A01, B01, C03

Stuttgart, Tübingen

Winter School for PhD Students

February 2017 | First Winter School for the SFB-TRR 161 PhD students at Söllerhaus, a guest house of the University of Stuttgart.

