



**International Co-operation on
Theories and Concepts in
Traffic Safety**

**X ICTCT extra Workshop in Beijing, China
on 26th and 27th April 2016**

on

Cycling and planning for cyclists

Book of abstracts

The workshop is organised in co-operation with:

Beijing University of Technology (BJUT)



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SCIENTIFIC COMMITTEE

Niels Agerholm, Demark

Stijn Daniels, Belgium

Lucheng He, China

Jiang Bi Hu, China

Clemens Kaufmann, Austria

Rob Methorst, The Netherlands

Ralf Risser, Austria

Paul Schepers, The Netherlands

Åse Svensson, Sweden

What is ICTCT?

ICTCT is an association developed out of an international working group of safety experts with the aim to identify and analyse dangerous situations in road traffic on the basis of criteria other than past accidents, analogous to the methods of air and industrial safety.

Our Goal

International co-operation in the identification and analysis of potentially dangerous situations in road traffic, and their causes, on the basis of relevant safety data derived from observations and surveys.

The aim of **ICTCT** is to achieve a deeper understanding of problems in the area, to harmonise future research activities, and to provide for means for an optimal utilisation of research results from different countries.

To fulfil these aims **ICTCT** has been involved in a number of co-operative research efforts (workshops, calibration studies, formulation of international guidelines, clearing house for reports, etc.).

**"WE DON'T NEED ACCIDENTS
IN ORDER TO PREVENT ACCIDENTS!"
because we are aware of "danger indicators"**

Danger indicators are, for example, traffic conflicts and near-accidents, as well as the behaviour and interaction patterns in which they are rooted. To improve knowledge about these events and behaviour patterns, which in the long run lead to accidents, is to be collocated within the **ICTCT's** sphere of activities.

Today's activities and future plans of ICTCT

- Information and co-ordination service for the international exchange of information
- Production and distribution of a regularly-published research journal ("Newsletter")
- Encouragement of international co-operation by the organisation of conferences and other events
- Development of research structure for the planning, realisation and implementation of projects
- Organisation and administration of an archive and a library ("Clearing house")
- Establishment of advisory centres for the identification, analysis, and solution of safety problems in line with the present state-of-the art
- Advice on the development of facilities for the training of safety experts in the identification of risk indicators in traffic
- Publishing of material (e.g. handbooks, brochures, guidelines...)
- Public relations work

Contact / Information

ICTCT Secretariat
Clemens Kaufmann, FACTUM OHG
Danhausergasse 6/4
A-1040 Wien

Phone: +43 1 504 15 46
Fax: +43 1 504 15 48
e-mail: clemens.kaufmann@factum.at

www.ICTCT.org

Session I

SPECIAL SESSION

Title: **Overview of the project IMPACT**

Author: *Daniel Vankov, Open Youth Institute for Research, Education and Development, Bulgaria, d.vankov@ired-bg.eu*

“Road traffic injuries are the eighth leading cause of death globally, and the leading cause of death for young people aged 15–29” (WHO, 2015). A multitude of international initiatives on all levels have been developed and implemented in an attempt to address this issue. Several successful projects from the my own experience as a project leader in Europe such as “Local Innovative adVentures to Ensure quality in youth road Safety promotion” (LIVES) and “Actions Corresponding to the Creativeness and local Opportunities in Road safety Development” (ACCORD) addressed one or more risk factors related to young traffic participants through a combination of appropriate Information and Communication Technology deployment and peer-to-peer education. Those projects lead to the development of an initiative that takes place simultaneously on three continents, the project “Involvement and Motivation for Participation of Active young Citizens to stand for Traffic safety” (IMPACT).

The aim of the IMPACT project is to boost international efforts to save young lives on the road by exchanging information and sharing good practices, providing a platform for long-term targeted impact through a list of exceptional players in the road safety and accident prevention field from Europe, Asia and Latin America. The project fosters improvements in awareness raising with focus on the most vulnerable road users (youth, cyclists, children, etc.) and facilitates building of a better methodology through cross-fertilizing intercontinental experience.

The reason for the development of the IMPACT project is the need to implement a more holistic approach in solving contemporary social problems, which need to be based on available data and former experience but also need a clear view of potential and a vision for the future. IMPACT explores the experience in involving youth in road safety promotion and accident prevention, learned through ACCORD and LIVES, and implements the acquired knowledge where it has greatest potential for positive impact and is most needed. The WHO 2013 Global Status Report on Road Safety states “Middle income countries, that are motorizing rapidly, are the hardest hit.” and “Eighty per cent of road traffic deaths occur in middle-income countries, which account for 72% of the world’s population, but only 52% of the world’s registered vehicles. This indicates that these countries bear a disproportionately high burden of road traffic deaths relative to their level of motorization.” This is why IMPACT focuses on such countries in EU, Asia and Latin America to support not only reaching the 2020 EU road safety target of halving the road victims but also the UN Decade of Action for Road Safety 2011-2020. Those are Argentina, Belgium, Bulgaria, China, Hungary and Romania. An experienced Austrian research center adds value as a project evaluator.

The IMPACT project has been funded with support from the European Commission. Its current presentation reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Title: **THE FIRST ACTION IN SHANGHAI CHINA of impact program --EXPERIENCE, LEARNINGS AND OPPORTUNITIES**

Author: *Fannie Wang¹, Grace Hu², Monica Cui³, Winny Ge³, Safe Kids China, Shanghai, fwang@safekidschina.org*

Background Road traffic injuries take the lives of too many people in China. Road traffic injuries are the leading cause of death for young people across the world. In China, young people are a prioritized age group for road traffic injury prevention. Safe Kids China (registered name ZBH) joined the Sino-EU program on road safety promotion among youth since year 2012 from ACCORD program. It is the second time that Safe Kids China participate the Sino-EU program on road safety promotion among youth with the program name as IMPACT, meaning Involvement and Motivation for Participation of Active young Citizens to stand for Traffic safety.

Position We positioned the IMPACT program as an international program, with cross cultural communication. The ACTIONS are tactics that focusing on experiences exchange, so that each member country could get inspired by others when planning their second ACTION. The process is fertilization, which helps the road traffic safety promotion from a global view but execute from a local stand. The strategy will make the ACTION more effective, and contributing to the global goal such as the UN Decade of Action for Road Safety.

Objectives When we conducted the IMPACT program, we set the objectives as raising youth participant's awareness as a start. When doing education, we followed the behavior-oriented strategy. We train the youth leaders, building their capacity through in-depth communication, providing interactive game tools and printed materials. The youth leaders organized peer trainings, activities, and conducting evaluations. The youth teams of IMPACT program were getting developed and gradually building the safe culture in their environment.

Process

Cities: The IMPACT ACTION happened in two cities, Shanghai and Suzhou.

Channels: The ACTIONS are conducted through synergizing with Youth Safe-driving program, sponsoring by Continental China, through working government stakeholders such as Traffic Police, Shanghai CDC, and through working with universities.

Contents: Based on a primary survey conducted among 3000 university students in year 2014 in 6 campus, we designed the IMPACT contents on 5 SAFE DRIVING behaviors, which are No drink-driving, No distraction, Seat-belt, Walking around before starting engine, Slow down.

Quality control: We developed a standardized education kit including training slides, game tools and evaluation forms.

Youth Leaders: According to the three different channels, we have Safe Kids youth leaders, Continental volunteer's youth leaders, government youth leaders and university student youth leaders. They are actively working on their own field impacting peers around them.

Outcome: In the first ACTION, we have trained 9 youth leaders. They have engaged 225 youth participants' directly through training, interactive games and etc. Among the 225 youth participants, 50% are vulnerable road users. Their campus at suburban area with less opportunities on road safety education or the participant coming from underserved area such as mid-west China, new to metropolitan city, with less experiences on road traffic safety awareness.

Impact: In the first ACTION, we have achieved the following impacts

- 1300 youth reached through printed materials
- 61292 readership through 6 social media and media app reports
- 730000 readership through 4 print media reports

- 5615400 unique visits to the online media reports

Opportunities: In the second ACTION, we would like to make the following improvements

- Explore the content to be added into the education such as road ranger
- Upgrade the tool kit to make it more friendly used by youth leaders and welcomed by youth participants
- Get evaluation data on awareness change before and after the ACTION
- More creative work on engaging social media

Title: **Evaluation of the IMPACT project**

Authors: *Clemens Kaufmann, FACTUM OG, Austria, clemens.kaufmann@factum.at*

IMPACT aims to promote road safety and explore synergies between all stakeholders in the participating countries (Bulgaria, Romania, Hungary, Belgium, Argentina and China). This will be achieved by project activities which will focus on relevant issues such as informal education and training with the goal of helping young people play an active part in society by making their main mobility modes – walking, cycling and/or motorcycle use – safer and an integral part of their lives as responsible road users.

In order to ensure the efficiency of these planned activities, as well as the meetings that will take place throughout the duration of the project, all working steps are evaluated. The main evaluation tool that is employed are questionnaires targeted at different actors (partner, youth workers, young people participating in the actions, stakeholders) which will be distributed at different stages of the project (evaluation phases). These serve as an information source for the achievements obtained as well as aspects of project campaigns, communication tools and dissemination strategies that need to be improved.

The presentation will give an overview about the evaluation of the first two phases of the project, namely the planning phase and the first implementation phase.

Session II:

Promoting Cycling

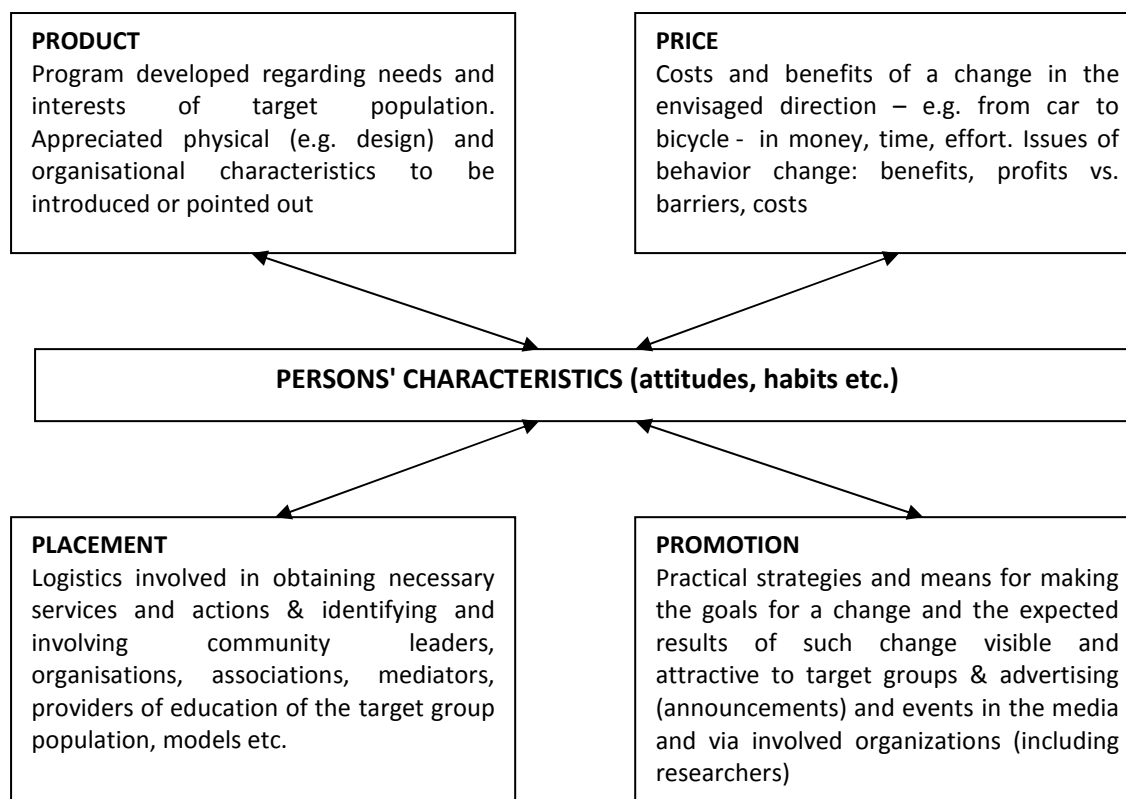
Title: **A Safe and Efficient Traffic Environment for the Elderly**

Authors: *Ralf Risser, Factum OG, Austria, ralf.risser@factum.at*

Author keywords: Cycling, mode choice, quality of life, social marketing

This paper will summarise aspects of social marketing with the goal to outline a strategy to promote cycling. Social marketing can help to influence mode choice of the target audience in such a way that improvements of the quality of life of individuals and their society become tangible. It can help to identify the reasons, why people resist change, uncover affordable benefits, which the audience cares about, and create strategies to market those benefits in compelling and cost-effective ways. Social marketing helps organisations to increase targets persons' participation, and in the case of government and community organisations, to increase voluntary compliance with new introduced suggestions, regulations, laws, and policies. Use of social marketing has been proven to be effective in many social programs: from reducing smoking rates, increasing immunisation rates among children, increasing physical activity in elderly change nutrition habits in the population etc. The concepts, theories and design components for nutrition education and enhancing physical activity among older persons have been well described and everything points in the direction that mode-choice can be influenced effectively and efficiently with the help of social-marketing measures. Social marketing is characterised by the 5 Ps displayed in figure 1 below:

Figure1: Application of Marketing Mix Strategy to Mode Choice Modification



The development of informative and persuasive communication (P = Promotion) is very important and ensures that the product (program) is provided in an appropriate manner. This includes formulating the objectives of mode-change efforts, addressing the appropriate persons and institutions in an appropriate way (P = Placement), and tracking responses to the program in order to adapt offers (P = Product) and arguments to the users' needs and expectations. It takes into account

what the audience wants, needs, and expects, i.e. their satisfaction/dissatisfactions. This means that social marketing has to consider the social context of the behaviour, available resources (human and financial), organisations involved (competitors analysis, coalition building) and the attitudes and habits of the target audience (P = Persons' characteristics): socio-demographic and psychological characteristics, perceived benefits and barriers (P = Price), mass media usage, important others, membership in community organisations, road user associations, etc. etc.

The paper will give an outline of a social-marketing process for cycling from A to Z and present some examples of successful social marketing where the effects of such marketing could be measured both as increased portions of cyclists and as improved satisfaction expressed by practicing cyclists.

Title: **Bicycle Traffic in the Czech Republic: the Ways of Influencing the Behaviour of People Involved in It**

Author: *Matus Sucha, Palacky University in Olomouc, Czech Republic, matus.sucha@upol.cz*

Author keywords: Bicycle traffic safety, Traffic psychology, How to influence behaviour

The main objectives of the present contribution are to provide general information about the development and safety of bicycle traffic in the Czech Republic and the ways of influencing the behaviour of road users to promote a higher share of bicycle traffic and increase the safety of cyclists. The “How to influence behaviour” (HIB) model, applied to the issue of bicycle traffic, was used for this purpose.

The safety of cyclists in the Czech Republic still seems to be rather low in comparison with other developed countries of the EU (such as the Netherlands, Denmark, and Germany), where, moreover, the intensity of cycle traffic is much higher than in the Czech Republic. Evidence indicates that a cyclist in the Czech Republic is at a 4.5 times higher risk of being killed in a traffic accident than a cyclist in the Netherlands.

An urban area must offer mobility for everybody to be a pleasant place to live. Progress in transportation means improving conditions for all modes of transport. It is not the faster, motorised modes of transport that get priority; the emphasis is placed on sustainability, safety, and comfort. In the Czech Republic the major barriers which prevent higher rates of cyclists in urban areas and compromise their safety include: the insufficient quality of the surfaces of cycling paths (or their absence), cycling paths not being interconnected into a coherent network, a lack of places where bicycles can be parked securely, and a lack of facilities at workplaces for people who use bicycles to get to work. However, one of the main obstacles to a higher rate of bicycles being used as means of transport is generally the cyclists’ low subjective feeling of safety, especially with regard to roads used together with cars.

In psychological terms, any behaviour results from multiple mental processes and states which precede it. Therefore, behaviour (albeit a consequence) cannot be influenced directly; to achieve a change in behaviour, it is necessary to exert an effect on the factors which shape that behaviour. These factors can be divided into those that influence the driver from within (i.e. human-specific factors) and those of which the action comes from without (situation-specific factors). In the How to influence behaviour (HIB) model, internal factors are represented by the red rectangle on the left (needs, preferences, and motives), while external factors are depicted in blue in the “Interface” box. Interventions can be implemented with respect to the following four levels:

1. Traffic regulations and effective enforcement
2. Means of transport and their ergonomics
3. Traffic infrastructure
4. Traffic culture

In practical traffic safety terms, the key factors are those that influence road users from without (i.e. situation-specific), as we can be more successful, quicker, and more effective in shaping them. In addition, these interventions are focused on the driver population as a whole, or specified segments of the population, rather than on individuals. Therefore, our contribution does not address situation-specific factors which may steer road users’ behaviour towards greater safety and an increase in bicycle traffic.

Title: **Encouraging cycling in medium-sized cities in Germany - The Karlsruhe Example**

Authors: *Christoph Hupfer, University of Applied Sciences Karlsruhe, Germany christoph.hupfer@hs-karlsruhe.de*

Author keywords: bicycle climate index, medium-sized cities, encouraging cycling

In 2003 the first German bicycle climate index was issued by the German bicycle association (ADFC) and Karlsruhe was ranked on 22nd of 28 tested cities with more than 200,000 residents. The latest issue of this test from 2015 set Karlsruhe on rank 2 behind Münster, which is the bicycling capital in Germany with about 40% trips done by bike. Karlsruhe had an increase of bike usage between 2002 and 2013 from 15% up to 25%, which is an increase of 67%.

What happened in Karlsruhe between 2003 and today?

Rank 22 out of 28 was a real poor result in the nationwide bicycling ranking, especially because Carl Drais, inventor of the bicycle, was born in Karlsruhe. After a short and intensive public debate, the mayor of Karlsruhe announced the goal to be the bike capital of southern Germany in 2015. 20 Points has been worked out and ratified as a plan by the city council.

The basic idea is the understanding, planning and acting for cycling as a complex system, including all aspects of safe and comfortable biking. The points include political goals (Bike Capital of southern Germany till 2015, increase of bike mode share up to 21%, increase of traffic safety, consideration of cycling demands in any reconstructions) as well as dedicated measures like building and redesigning cycling infrastructure also in arterial roads, expand the cycle network, looking for useful and comfortable conditions and public relations etc.

The final point is – especially from a German traffic behavior perspective – a real hard one: Tolerance and Consideration, if someone act not completely according to the road traffic act.

The presentation will reflect on the survey and definition of the bicycle climate index and give an overview about the development and changes in medium-sized German Cities. The main part will describe the “20 Points Concept” and how it worked out. Finally, the ideas and measures will be illustrated with examples and will give a perspective about further steps and developments.

Title: **Bicycles as key-elements in developing mobility service providers in Germany**

Authors: *Fabienne Kuerner, University of Applied Sciences Karlsruhe, Germany,
fabienne.kuerner@hs-karlsruhe.de*

Christoph Hupfer, University of Applied Sciences Karlsruhe, Germany christoph.hupfer@hs-karlsruhe.de

Author keywords: Bicycles, Mobility Service Provider, Rural Areas

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Session III

SAFETY

Title: **Young drivers and effects from graduated driving license**

Authors: *Charlotte Tønning, Aalborg University, Denmark, ctanni11@student.aau.dk*

Niels Agerholm, Aalborg University, Denmark, na@civil.aau.dk

Author keywords: Graduated driving license, Young novice drivers, Exposed road users, Effect studies

Background

Cyclist safety is heavily affected by car drivers' involvement in accidents. Partly because of the high share of injury accidents including car involvement, but also due to the severity of these accidents compared e.g. with cyclist-cyclist accidents. In the majority part of the accidents reasons are related to driver lapses. As it is a set target to increase the modal share of cyclists with parallel ongoing traffic safety improvements, is it crucial to improve this situation, so cyclist transportation become safer – also in part of the road network, which includes mixed modes of transport.

Driver lapses are most frequent among young drivers, and focus in Denmark in the moment is, if there, via additional advanced driver training before the normal driving age (18 year) can be more safe driving among them.

Aim

The aim with this study is to investigate, which safety benefits there can be expected from advanced driver training, and if possible to identify, which measures there have the best effect on traffic safety.

Method or methodological issues

The method is literature studies. All Scandinavian-written reports and articles are screened. Likewise, are ScienceDirect, Google Scholar and Taylor Francis Online screened for articles of relevance. The search words will be 'graduated driver license', 'evaluation', and 'experience'. In addition, will grey literature from IRTAD and the UN be included in the review. The results will to the highest possible extent be organised and compared in the search for clear, explicit effects from specific approaches or a combination of those.

Results obtained or expected

It is expected that clear evidence on positive effect from advanced driver training can be documented. Also, it is expected that the length of the driver training scheme and the connecting with safety effect can clarified. It is, however less likely that nor the type of advanced driver training, the risk of getting punished if violate the rules or the type of training can be documented to have a clear effect on the safety.

Title: **Cycling speed and trip length as factors influencing helmet use**

Katja Schleinitz, TU Chemnitz, Germany, katja.schleinitz@psychologie.tu-chemnitz.de

Tibor Petzoldt, TU Chemnitz, Germany, tibor.petzoldt@psychologie.tu-chemnitz.de

Authors: *Josef F. Krems, Chemnitz University of Technology, Germany,
josef.krems@psychologie.tu-chemnitz.de*

Tina Gehlert, German Insurers Accident Research, Germany, T.Gehlert@gdv.de

Author keywords: **Helmet use, E-bike, Naturalistic cycling study, Velocity**

Survey findings imply that cyclists use a helmet especially for longer trips and when they ride with higher speed (Kakefuda, Stallones, & Gibbs, 2009; Rodgers, 1995). Accordingly, Fyhri, Bjornskau and Backer-Grondahl (2012) reported that faster cyclists are aware of their in-creased risk, and actively try to reduce it through helmet use. Aim of this study was to investigate whether this self-reported relationship between trip length, cycling speed and helmet use can also be found in behavioural data. As part of a naturalistic cycling study, we observed 76 participants riding their own bicycles (conventional bicycles and pedelecs (electrical assistance)) on their daily trips. The bicycles were equipped with a data acquisition system, which included sensors to record speed and distance, as well as two cameras. One camera recorded the face of the participant and the other one the forward scenery. Data was collected over a period of four weeks for each participant. Nearly 12,700 kilometres of cycling were recorded. In total, participants used their helmet in 56% of all trips. Pedelec riders used a helmet significantly more often than rider of conventional bicycles. Final results on intra-individual differences in distance, speed and helmet use (for participants who wore their helmets occasionally, but not always) will be presented at the conference.

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Title: **Communication of bicyclists with car drivers and safety critical events**

Authors: *Christine Chaloupka-Risser, Factum OG, Austria, christine.chaloupka@factum.at*

Elisabeth Füssl, Factum OG, Austria, elisabeth.fuessl@factum.at

Author keywords: communication in traffic, bicyclists, safety critical aspects, naturalistic riding study

Bicyclists face a higher accident risk than other road users (ETSC 2012). The question therefore is how traffic safety for bicyclists can be enhanced? Communication is essential in traffic in order to inform other road users and to coordinate behaviour. The current proposal focuses on the analysis of how bicyclists communicate with car drivers in order to obtain a better understanding of the strategies that lie behind a certain communication behaviour. Communication is defined as exchange of information between persons. Any behaviour in the presence of others can be considered as a form of communication. This includes verbal communication and non verbal communication, e. g. physical appearance (e.g. wearing a helmet). The aim of this study is to obtain a better understanding of the communication processes between bicyclists and car drivers and the effects they have. Project results aim at identifying and evaluating safety-critical events in relation to the cycling infrastructure. The general hypothesis is that infrastructure has an influence on the communication between bicyclists and other road users. Infrastructure influences the willingness and the chance for communication: e. g. the intersection design enhances the visibility of cyclists. Differences in communication behaviour and the used strategies are supposed to be related to socio-demographic variables like age, sex, driving experience and attitudes, e.g. own responsibility or one's own role in the traffic system.

The main aim of the presentation is to discuss the theoretical framework regarding definition of safety critical events and the relevance of communication. Thus to strengthen the Austrian research within the project BIKEALYZE (financed by the Austrian Ministry of Transportation) which will include a naturalistic riding study in the cities of Vienna and Salzburg. Data there will be gained by (1) mobile eye tracking, (2) GPS-based motion data acquisition complemented with acceleration and steering direction data and (3) video-based data.

The results can be adapted and used for drivers' training, but also for the training of bicycle riders. In addition recommendations for the adaptation of the bicycle infrastructure or input for road safety awareness campaigns can be derived from the results. So the target groups are also organizations and persons concerned with cycling infrastructure planning as well as cyclists' interest groups (NGOs).

Session IV

INFRASTRUCTURE

Title: **Analysis on the technical content of bicycle lane system**

Author: *Jiechao Chen, Beijing University of Technology, China, 981898520@qq.com*

Feng Liu, Beijing University of Technology, China, 1558849383@qq.com

Author keywords: Bicycle lane system, Bicycle lane rights, Road surface material for bicycle, Alignment index of bicycle lane, Sign and marking of bicycle lane

Bicycles as a green, low-carbon modes of transport as well as its features of flexible and expedient use gradually get attention and widely applied in urban roads around the world, while the security of cyclist get more and more attention. However, For the lack of the standards and norms of bicycle lane rights distribution, the selection of bicycle lane pavement materials, bicycle lane width and horizontal alignment design of bicycle lane in China, the random of bicycle lane system design results in a relatively low service level, which cannot provide a safe and comfortable environment for cyclists.

Our research is based on the Chinese cyclists ' cycling needs and Physiological- psychological threshold characteristics at different riding speeds, according to the different collision characteristics of bicycle lane and mixed traffic lane's transportation and other modes of transportation, research the content of system technology of bicycle lanes and mixed traffic lane and its influence on cyclists' riding behavior In terms of suitable riding speed of cyclists, right of way allocation method, lane width, horizontal alignment, pavement material, riding induction, signs marking Channeling methods and so on.

The research results provide new methods, new technology and new standards for the typical level crossings, roads, distribution right of underpass bicycle lane, width of the bicycle lane, plane alignment and materials of the pavement. It provides the technical basis for constructing and improving the system technology of bicycle lane, also it provides the technical basis for developing and improving the comfortable ,safe and continuous bicycle traffic. It is beneficial to attract more bicycle traffic, and plays an maximum important role in green bicycle travel, improve road congestion, improve the service level of cycling, and promote coordination of the bicycle travel and the motor vehicle traffic.

Title: **Cycling and designing for cyclists in Germany: An Overview of Road safety, Research and Guidelines**

Authors: *Benjamin Schreck, Federal Highway Research Institute (BASt), Germany, schreck@bast.deGermany*

Author keywords: Bicycles, cycling, road accidents, urban roads, Germany, research, safety programme

Cycling is considered a social, eco-friendly, pollution-free, low noise and healthy activity and mode of transportation. [1] There are currently around 67 million bicycles in Germany. [2] This number is expected to increase in the near future with greater use of electromotive assisted bicycles. Regarding the expected increase, there should be additional attention given to road traffic accidents involving cyclists.

In 2014, 396 cyclists were killed in road accidents in Germany, which is 12 % of all road fatalities. Also in 2014, Germany reported over 78,000 injuries to cyclists. The majority of the fatalities (about 58 %) and 83 % of the serious injuries to cyclists occurred in urban areas. [3]

This paper will examine three aspects concerning cyclists. First, the paper will show the main current developments, for example the National Cycling Plan 2020, the effects of the road safety programme and provide an analysis of the German national accident statistics. Second, the paper will give an overview of the regulations, guidelines for road traffic and designing of cycling facilities. Lastly, this study will detail the current and completed research in Germany addressing cyclist. For example, the paper will discuss the topic "Accidents between Turning-off Trucks and Cyclists" Accidents between right turning trucks and straight riding cyclists often show massive consequences. Accident severity is much higher than in other accidents. The situation is critical especially due to the fact that, in spite of the six mirrors that are mandatory for ensuring a minimum field of sight for the truck drivers, cyclists in some situations cannot be seen or are not seen by the driver. Either the cyclist is overlooked or is in a blind spot area that results from the turning manoeuvre of the truck. At present driver assistance systems are discussed that can support the driver in the turning situation by giving a warning when cyclists are riding parallel to the truck just before or in the turning manoeuvre. The paper will describe the requirements for turning assist systems for trucks. The outcome of the study is an overview of the accident situation between right turning trucks and straight driving cyclists in Germany as well as a corresponding test procedure for driver assistance systems.

Below are several other projects which will be investigated, too:

- Accident Risk and Acceptance of Traffic-Rules by Cyclists,
- Safety Improvement in Terms of Using Bicycle Paths in the Opposite Direction,
- Cycling in Mixed-Traffic,
- Observation of Pedal Electric Cycles Riders to Identify Safety Concerns.

These three aspects will provide the current situation on the topic of cyclist safety in Germany.

Title: **Applied Research on Self-light Emitting Technology in Slow Traffic Language**

Ting Yu, Forestry University, China Nanjing, 1321074587@qq.com

Authors: *Liquan Zou, NANJING SKY TRAFFIC SAFETY TECHNOLOGY STOCK CO.,LTD, China, 23842074@qq.com*

Gan Liu, NANJING SKY TRAFFIC SAFETY TECHNOLOGY STOCK CO.,LTD, China, 269017285@qq.com

Author keywords: Self-light emitting technology, Slow traffic language, Visibility

With the rapid development of urban traffic and vehicles, the pressure on urban traffic has been increasing. Slow traffic has been ignored in urban management, however, the disorder of the slow traffic has increased the pressure on the city traffic to a certain extent. Therefore, the administrators of the city should pay more and more attention to the management of the slow traffic. The slow traffic of the city needs guidance, it calls for a set of perfect management system, in which indicating system is an important part of the management system of slow traffic. From the point of view of the current situation of China's slow traffic language development, the paper analyzes the status and shortcomings of the slow traffic language identification system. Aimed at the problems of the slow traffic language recognition system, this paper puts forwards the solution measures for drivers' visibility. From the point of view of traffic safety, new self-light emitting technology is introduced to slow traffic language system. The research aims at various aspects of the signs, which includes the amount of information, the correlation between the marks, the harmony between the surrounding environment, drivers' visibility and new technology to improve visibility. This paper gives the examples of self-light emitting products used in the indicating system which includes the slow road traffic language, pedestrian safety protection design and protection facilities, and non motor vehicle parking facilities and so several aspects. This paper is intended to establish a set of complete slow traffic indicating system, which is coordinate with urban motor vehicle management system. The content of this research in a certain extent can effectively enhance the safety of the slow system, make up for the defect visibility of the traditional signs of slow traffic. It is good to ensure the safety of vulnerable groups in traffic system. This paper has certain reference value and guiding significance to the improvements for the slow traffic system.