



European Working Group
Non-Lethal Weapons

Programme

4th European Symposium on
Non-Lethal Weapons
May 21 - 23, 2007

Stadthalle Ettlingen, Germany

Non-Lethal Weapons: Fulfilling the Promise?



Fraunhofer Institut
Chemische Technologie

Programme Committee

The European Working Group on Non-Lethal Weapons (EWG-NLW) serves as the Programme Committee:

Helmut Oppenheim
Bundesministerium für
Landesverteidigung, Vienna, A

Stanislav Tecl
Military Technical Institute of the
Ground Forces CZ Army, Vyskov, CZ

Arnaud Reichart
DGA/SPART/SM-EA, Saint-Cloud, F

Norbert Eisenreich
Fraunhofer ICT, Pfinztal, D

Roberto de Maio
Segredifesa, Rome, I

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Victor Selivanov
Baumann University, Moscow, RU

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FOI, Tumba, SE

Martin Hubbard
DSTL, Sevenoaks, UK

Chairman of the Symposium

Klaus-Dieter Thiel
Fraunhofer ICT,
Pfinztal, D

4th European Symposium on Non-Lethal Weapons

Non-Lethal Weapons: Fulfilling the Promise?

The employment of non-lethal weapons has arguably saved many human lives in a variety of different situations in recent times, such as the use of non-lethal kinetic munitions.

At the present moment there are an abundance of missions where deployment of non-lethal weapons may be appropriate; however there is a lack of discussion about this in the public arena.

In principle there are numerous scenarios all over the world where non-lethal weapons could meet new challenges. Sometimes however, the expectations are unrealistic, for example the prospect of 100% non-lethality.

Non-lethal weapons also have to be seen in the context of a broader framework, where further aspects need to be considered, such as training, rules of engagement, tactics....

It should be underlined that non-lethal weapons are no panacea. Nevertheless they clearly offer wider and potentially more acceptable options when compared to the use of conventional lethal weapons.

Today, some twelve years since their issue was first formally debated, are non-lethal weapons fulfilling their promise? What is their promise? The Symposium will try to answer these questions, by presenting information and providing an opportunity for discussion and a better appraisal of the issue.

Topics

Advanced non-lethal technologies will play a major role in providing new and unique capabilities for police as well as the military. It should, however, be underlined that a framework for the development of non-lethal capabilities must be based upon a multidisciplinary approach.

The 4th European Symposium on Non-Lethal Weapons will act as a forum to review current and future non-lethal weapon technologies, to present new results and to encourage discussions about non-lethal weapons.

The Symposium will include topics such as:

- Current and desired Capabilities
- Advanced Technologies
- Operational and Tactical Aspects
- Effects on Targets
- Evaluation of Effects
- Legal and Public Acceptability

General Information

REGISTRATION

Please return the enclosed **registration form**. Registration fees (incl. proceedings, coffee breaks, lunch), depending on arrival of the registration form at the ICT:

- Registration up to **April 30**:
EURO 930,-- (incl. 19% VAT)
- Registration up to **May 11**:
EURO 1.025,-- (incl. 19% VAT)

Participation cannot be guaranteed for registrations arriving after May 11, 2007.

The fee has to be paid **upon receipt of the invoice** either by

- remittance to the account given on the invoice
- or
- cheque

CANCELLATION POLICY

EURO 300,-- will be charged for cancellations after **May 11, 2007**. **No-shows** will be charged with **EURO 800,--**.

ACCOMMODATION

HORE Hotel Reservation,

Weingartener Str. 70,
76229 Karlsruhe

Phone +49-(0)7 21/ 48 23 56
Telefax +49-(0)7 21/ 48 26 14
e-mail: HoreHotelReservation@t-online.de

An application form is enclosed.

CONFERENCE OFFICE

Foyer of the Stadthalle Ettlingen.

Monday, May 21, 14.00 h till Wednesday, May 23, 17.30 h during this time to be reached by

**Phone +49-(0)72 43/101-158
Fax +49-(0)72 43/101-157**

CHECK IN / WELCOME RECEPTION

Please check in at the conference office on **Monday, May 21 between 14.00 and 20.00 h.**

All participants are cordially invited to the **Welcome Reception** on the same day, starting at **18.00 h** in the foyer of the Stadthalle Ettlingen.

CONFERENCE LANGUAGE

English

PROCEEDINGS

One copy is included in the registration fee. Additional copies cost **EURO 70,--** (Subscription price during the conference EURO 50,--).

Programme

DISCUSSION FORUMS

Monday, May 21

15.00 – 17.00

Discussion Forums

Venue: Stadthalle Ettlingen

Forum I: »ACOUSTIC WEAPONS AND HAILING DEVICES«

chaired by Jürgen Altmann,
University of Dortmund, D

Forum II: »NON-LETHAL KE SYSTEMS - TECHNOLOGICAL CHALLENGES«

chaired by Pascal Paulissen,
TNO Defence, Security and Safety, Rijswijk, NL

These Forums will be organized as parallel sessions; Participation in one of them will only be possible for attendees of the Symposium itself. As the number of participants is limited interested persons are asked to register as early as possible (see registration form).

PROGRAMME NLW

Tuesday, May 22

8.30

Opening & Introduction

Opening

K.-D. Thiel
Fraunhofer ICT, Pfinztal, D

Welcome Address

M. Klaus
Wehrtechnische Dienststelle für Schutz- und Sondertechnik (WTD 52), Oberjettenberg, D

Key Note Lecture

WHEN PRECISION IS NOT ENOUGH

J. B. Alexander
Las Vegas, USA

Session 1 VIRTUAL WORKING GROUPS

Chairman: V. V. Selivanov

Baumann University, Moscow, RUS

9.20

V 1

VIRTUAL WORKING GROUP I

A POSITIVE PERSPECTIVE FOR NON-LETHAL WEAPONS: DEFINITION AND INTERNATIONAL LEGAL BASIS

F. Krüger-Sprengel
International Society for Military Law and the Law of War, Brussels, B

- 9.50** **V 2** **VIRTUAL WORKING GROUP II
MEDICAL ASPECTS ON WORK WITH NEW
AND OLDER NLW**
M. Risling
Swedish Defence Research Agency (FOI),
Stockholm, SE
- 10.20** **Coffee Break**
- Session 2** **CURRENT AND DESIRED CAPABILITIES
Chairman: R. de Maio
MoD Segredifesa, Rome, I**
- 10.50** **V 3** **UPDATE ON THE LESS LETHAL WORK
PROGRAMME OF HOSDB**
G. Smith
Home Office Scientific Development Branch,
St Albans, UK
- 11.15** **V 4** **REPORT ON THE DEPLOYMENT OF CS IRRI-
TANT GAS AS A NON-LETHAL WEAPON FOR
THE IMPROVEMENT OF THE PROTECTION OF
AUSTRIAN FEDERAL ARMY PROPERTY**
B. Schneider
Amt für Rüstung und Wehrtechnik, Vienna, A
- 11.40** **V 5** **KINETIC ENERGY – BLUNT TRAUMA
PROJECTILES. DANGERS, LIMITS AND
OPPORTUNITIES**
M. Annati
MoD-Navarm, Rome, I
- 12.05** **V 6** **COMPUTER-AIDED TOOLS FOR SYSTEM
ANALYSIS OF NLW DEVELOPMENT AND
DEPLOYMENT**
A.H. Mahir
Aerospace Research Agency, UK
V.V. Leonov, V.V. Selivanov, A.V. Kozyrev
Bauman Moscow State Technical University,
Moscow, RUS
- 12.30** **Lunch Break**
- Session 3** **ADVANCED TECHNOLOGIES
Chairman: D. Surateau
DGA/DET/ETBS, Bourges, F**
- 13.30** **V 7** **AIRBORNE LONG-RANGE NLW DISPENSER**
S. Zettl, W. Liehmann, K.-D. Thiel
Fraunhofer ICT, Pfinztal, D

- 13.55** **V 8** **APPLICATION OF INACTIVE PAYLOAD TRANSFER BY VORTEX RING IN NON-LETHAL WEAPONS SYSTEMS**
D. P. Levin, V. V. Selivanov
Bauman Moscow State Technical University, Moscow, RUS
- 14.20** **V 9** **ELECTRIC DISCHARGE IN THE WATER– SOURCE OF SHOCK WAVES FOR NON-LETHAL WEAPONS**
M. V. Silnikov, S. L. Kulakov, K. S. Kulakov, A. I. Mikhaylin
Special Materials, Ltd., St. Petersburg, RUS
- 14.45** **V 10** **NON LETHAL ELECTRIC DISCHARGE LAUNCHER**
P. Steardo, A. Adorni, C. Bellotti, F. Varone, F. Novelli
O.T.O. Melara S.p.A., La Spezia, I
A. Gastaldi
Celin Avio Loc. Cerri, Follo-La Spezia, I
- 15.10** **V 11** **A STUDY FOR INNOVATIVE SOURCES OF HIGH POWER MICROWAVES FOR NLW**
A. Matrone
CRIS – Naples, I
C. Ravera, S.Tenconi, F. Zanzi
Ansaldo Ricerche S.p.A., Genova, I
A. Monorchio
University of Pisa, Pisa, I
- 15.35** **Coffee Break**
- Session 4** **OPERATIONAL AND TACTICAL ASPECTS**
Chairman: Z. Verheij
TNO Defence, Security and Safety, Delft, NL
- 16.00** **V 12** **MILITARY NON-LETHAL SOLUTIONS FOR MEDIUM TO LONG RANGES**
O. H. Arnesen, R. Rahimi
Norwegian Defence Research Establishment, Kjeller, N
- 16.25** **V 13** **ENHANCING PEACE KEEPING OPERATIONS WITH NLWs**
A. J. van Vliet
TNO Defence Security and Safety, Soesterberg, NL
- 16.50** **V 14** **BEHAVIORAL REACTIONS TO THE USE OF LESS-LETHAL WEAPONS IN FOUR COUNTRIES**
M. D. Silver, E.W. Holder
Anacapa Sciences, Inc., Santa Barbara, USA

Session 5 EFFECTS
Chairman: U. Sundberg
FOI, Tumba, SE

- 8.00 V 15 DRUG-INDUCED LOSS OF AGGRESSIVENESS IN THE MACAQUE RHESUS**
L. Hess
Institute of Experimental Medicine (IKEM), Prague, CZ
J. Schreiberová, J. Málek, M. Votava
Charles University Prague, Prague, CZ
J. Fusek
University of Defence, Hradec Králové, CZ
- 8.25 V 16 INDIVIDUAL BEHAVIORAL RESPONSE TO DIRECTED ENERGY NON-LETHAL WEAPONS: CONCEPTUALIZING FUTURE RESEARCH**
A. Ashworth, D. Jones
Air Force Research Laboratory, Brooks AFB, USA
- 8.50 V 17 OBSERVATIONS ON DENDRITE MORPHOLOGY IN RAT HIPPOCAMPAL NEURONS EXPOSED TO HIGH POWER MICROVAVES**
M. Risling, M. Sköld
Swedish Defence Research Agency (FOI), Stockholm, SE
Karolinska Institute, Stockholm, SE
E. Malm
Swedish Defence Research Agency (FOI), Stockholm, SE
L. Malmgren
University of Lund, Lund, SE
- 9.15 V 18 AN ANALYSIS OF THE DISABLING POTENTIALITIES OF HIGH LEVEL UWB ELECTROMAGNETIC PULSES ON SENSITIVE ELECTRONIC EQUIPMENT**
P. Bernardi, R. Cicchetti, O. Testa
University of Rome »La Sapienza«, Rome, I
A. Di Vito
Elettronica S.p.A., Rome, I
F. Filippine
Consultant Elettronica S.p.A., Rome, I
- 9.40 Coffee Break**

Session 6 **EVALUATION OF EFFECTS I**
Chairman: M. Klaus
WTD 52, Oberjettenberg, D

- 10.00** **V 19** **MULTI-SPECTRAL MEASUREMENT OF NLW EFFECTS**
F. Wolf
Wehrtechnische Dienststelle für Schutz- und Sondertechnik (WTD 52), Oberjettenberg, D
- 10.25** **V 20** **PRESSURE MEASUREMENTS AT IMPACT OF KINETIC ENERGY AMMUNITIONS**
J. Höcherl
Universität der Bundeswehr München, Neubiberg, D
- 10.50** **V 21** **MEDICAL ASPECTS OF NLW**
W. Weinert
Sanitätsamt der Bundeswehr, München, D
- 11.15** **V 22** **RISK CHARACTERIZATION OF ELECTRO-MUSCULAR INCAPACITATING DEVICES: LITERATURE SURVEY AND DESCRIPTION OF A SAFE TEST ARRANGEMENT**
H. Ruser, H.-R. Tränkler, D. Zhelondz
Universität der Bundeswehr München, Neubiberg, D
- 11.40** **Poster Session**
- 13.00** **Lunch Break**
- Session 7** **EVALUATION OF EFFECTS II**
Chairman: M. Hubbard
DSTL, Sevenoaks, UK
- 14.00** **V 23** **THE STATE OF CURRENT HUMAN RESEARCH AND ELECTRONIC CONTROL DEVICES (ECD)s**
J. D. Ho
Hennepin County Medical Center, Minneapolis, USA
D. M. Dawes
Lompoc District Hospital, Lompoc, USA
M. A. Johnson
TASER International, Scottsdale, USA
- 14.25** **V 24** **THE IMPACT OF EXPOSURE STANDARDS ON DIRECTED ENERGY NON-LETHAL WEAPONS (DENLW)**
M. R. Murphy
Air Force Research Laboratory, Brooks AFB, USA

- 14.50** **V 25** **PRINCIPLES OF MEDICAL-BIOLOGIC CRITERIA OF SAFETY FOR NLW DEVICES OF ELECTRO-MAGNETIC TECHNOLOGY**
O. Grigoriev, V. Stepanov, V. Prokofiev
Institute of Biophysics, Moscow, RUS
- 15.15** **Coffee Break**
- Session 8** **LEGAL, PSYCHOLOGICAL AND PUBLIC ACCEPTANCE**
Chairman: H. Oppenheim
Bundesministerium für Landesverteidigung, Vienna, A
- 15.35** **V 26** **VOODOO SCIENCE AND NONLETHAL WEAPONS**
C. »Sid« Heal,
Los Angeles Sheriff's Department, Monterey Park, USA
V. Bovbjerg
University of Virginia Medical Center, USA
J. Kenny
Pennsylvania State University, USA
- 16.00** **V 27** **ENSURING THE PROTECTION OF CIVILIANS AND RESPECT FOR INTERNATIONAL HUMANITARIAN LAW**
D. Loyer
International Committee of the Red Cross, Geneva, CH
- 16.25** **V 28** **PSYCHOLOGICAL EFFECTS OF NON-LETHAL WEAPONS: A NEW APPROACH FOR DEFINING MORE EFFECTIVE USES**
P. Capet
THALES COMMUNICATIONS, Colombes, F
- 16.50** **Summary**
- 17.00** **End of the Symposium**

Poster Programme

Posters will be presented during the whole Symposium. A special **Poster Session** will take place on **Wednesday, May 23, 11.40 – 13.00 h**. During this time authors should be present for discussion at their poster boards in the foyer.

Current and Desired Capabilities

- P 29** **CENTER OF EXCELLENCE ON LESS LETHALITY**
T. Jacobs
FN HERSTAL, Herstal, B
P. Thys
University of Liege, B
- P 30** **ACOUSTIC WEAPONS: ARE THEY FEASIBLE?**
N. C. Nicholas, T. A. Brungart, T.E. McDevitt, A.R. Barnard,
B.L. Kline, D.M. Jenkins, M. Hendrickson, A.F. Mazzara
Pennsylvania State University, State College, USA
- P 31** **STUDY OF CONSTRAINTS ON THE DRIVER**
D. Vaillant
DGA, Bourges, F
- P 32** **INTERNATIONAL LESS LETHAL WEAPONS DATABASE**
M. Symons
Home Office Scientific Development Branch, St Albans, UK
- P 33** **JET PROTECTOR JPX – OC LAUNCHER**
J. Thomann
Piexon AG Aarwangen, CH

Advanced Technologies

- P 34** **NON-LETHAL EFFECTS AND PRECISION OF THE PAINTBALL-SYSTEM**
H. Fang, H. Kaufmann
RUAG Land Systems, Thun, CH
B. Kneubühl
Science + Technology Centre armasuisse, Thun, CH
C. Inäbnit
armasuisse, Bern, CH
- P 35** **COMPACT VACUUM TUBE WITH VIRTUAL CATHODE FOR REPEATED GENERATION HPM**
L. Drazan, R. Vrana
University of Defence, Brno, CZ
- P 36** **HIGH POWER GENERATOR TEST, PGP-II**
P. Fiala, M. Steinbauer, R. Kubasek
Brno University of Technology, Brno, CZ
B. Kral
PROTOTYPA a.s., Brno, CZ

Poster Programme

- P 37** **MEASUREMENT METHODS OF PULSED POWER GENERATORS**
P. Fiala, P. Drexler
Brno University of Technology, Brno, CZ
B. Kral
PROTOTYPA a.s., Brno, CZ
- P 38** **FCG-GENERATOR – RESULTS OF RESEARCH AND PRACTICE TESTS**
M. Bezdek
VOP-026 Sternberk, divize VTUVP Vyskov, Vyskov, CZ
- P 39** **APPROACHES FOR DIRECTED STICK RADIATORS**
N. Eisenreich, K.-D. Thiel, A. Herzog, E. Walschburger, H. Krebs
Fraunhofer ICT, Pfinztal, D
- P 40** **HIGH ENVIRONMENTAL COMPATIBILITY CARGO PROJECTILE: PROJECT DEVELOPMENT AND EXPERIMENTAL TESTS**
A. Lunadei, P. Steardo, A. Gastaldi
O.T.O. Melara S.p.A., La Spezia, I
- P 41** **LESS THAN LETHAL PROJECT, A FURTHER OPTION FOR THE CHALLENGE OF THE FUTURE**
M. Micheletti
Fabbrica d'Armi Pietro Beretta S.p.A., Brescia, I
- P 42** **NON LETHAL BARRIERS BASED ON AIRBAG SYSTEMS**
J. Neutz, H. Ebeling, K.-D. Thiel, W. Hill, P. Scholz
Fraunhofer ICT, Pfinztal, D
- P 43** **AUTONOMOUS ACOUSTIC SOLID PROPELLANT GAS GENERATORS**
G. Sakovich, V. Arkhipov, S. Bondarchuk, A. Vorozhtsov, B. Vorozhtsov
Institute for Problems of Chemical and Energetic Technologies SB RAS, Tomsk, RUS
- P 44** **MICROFIBER OBSTACLES**
M. Sporer, A. Ganghofer
Diehl BGT Defence GmbH & Co. KG, Roethenbach, D
- P 45** **HOT BURNING OXIDISER/METAL FLARES FOR IRRITATION AND DECOY APPLICATIONS**
V. Weiser, E. Roth, L. Deimling, W. Eckl, N. Eisenreich
Fraunhofer ICT, Pfinztal, D

Poster Programme

- P 46** **EXTENDING TASER® ELECTRONIC CONTROL DEVICES –
NEW TECHNOLOGIES FOR AREA DENIAL AND EXTENDED
RANGE CAPABILITIES**
K. Williams, G. Fenton, R. Smith
TASER International, Scottsdale, USA

Operational and Tactical Aspects

- P 47** **EXTENDED RANGE NON-LETHAL IMPACT MUNITIONS**
J. A. Kapeles
Defense Technology, Casper, USA
- P 48** **COMPLEMENTARY EMPLOYMENT OF NON-LETHAL AND
LETHAL WEAPONS**
L. Czapnick, E. Baldecchi, T.-T. Mai, P. Sieye
DGA, Arcueil, F
- P 49** **AREA DENIAL/PERIMETER DEFENSE EMPLOYING NON-
LETHAL WEAPONS & NEW TYPE OF SENSOR FENCE**
N. C. Nicholas, D. C. Swanson
Pennsylvania State University, State College, USA
D.A. Rigsby
Umbra LLC, USA
- P 50** **DETERMINATION OF DEGRADATION POTENTIAL FOR
VLAD FIBERS**
E. R. Bixon, L. Chico, J. Ackerman
US Army ARDEC, Picatinny Arsenal, USA
- P 51** **NON-LETHAL TECHNOLOGIES IN BRAZIL**
C. F. Queiroz de Aguiar, P. L. Schneider
Condor Non-Lethal Technologies, Rio de Janeiro, BR
- P 52** **ENHANCING THE COMMANDER'S DECISION AID TO
MEET FUTURE COMBAT SYSTEM PLATFORM PROTECTION
SYSTEM REQUIREMENTS**
R. M. Yannoni
BAE Systems Electronics & Integrated Solutions, Nashua, USA

Effects

- P 53** **BIO-EMPULSE: A RESEARCH PROGRAM TO STUDY THE
EFFECTS OF NANOSECOND ELECTROMAGNETIC PULSES
ON BIOLOGICAL CELLS**
R. Barale, A. Monorchio
Universita' di Pisa, Pisa, I
P. Steardo
O.T.O. Melara S.p.A., La Spezia, I
C. Ravera
Ansaldo Ricerche, Genova, I

Poster Programme

- P 54** **TEMPORARY PARAMETERS OF HIGH VOLTAGE ELECTRIC IMPULSE GENERATING BY SHOCK GUNS IN CAUSING SPASMODIC SYNDROME**
G.V. Batanov, S.L. Kulakov, Ä.I. Mikhaylin, M.V. Silnikov
Special Materials, Ltd. St. Petersburg, RUS
- P 55** **MORTALITY FOLLOWING TASER EXPOSURE**
E. David, A. Fretz, J. Reissenweber
ZEPU GmbH, Zentrum für Elektropathologie und Umweltmedizin, Witten, D
- P 56** **TASER AND HEALTH RISK**
E. David, A. Fretz, J. Reissenweber
ZEPU GmbH, Zentrum für Elektropathologie und Umweltmedizin, Witten, D
- P 57** **SOFTWARE AND HARDWARE OF INSTRUMENTATION FOR HUMAN STATE CONTROL IN INFLUENCE FIELD OF MICROWAVE RADIATION**
V. N.Makukhin
Center of Scientific Engineering and Social Activities »Trymas«, Moscow, RUS
- P 58** **BLAST WAVE GENERATOR BASED ON PBX ENCLOSED IN WATER CONTAINER**
I. Plaksin
LEDAP, Condeixa, P
J. Campos
University of Coimbra, Coimbra, P

Evaluation of Effects

- P 59** **MILLIMETRE-WAVE AND LASER NLW: PHYSICS ANALYSIS AND INFERENCES**
J. Altmann
Universität Dortmund, Experimentelle Physik III, Dortmund, D
- P 60** **PRESSURE, VELOCITY AND DISCHARGE RATES OF INCAPACITANT SPRAYS AND HOW THESE PARAMETERS CAN BE USED TO PREDICT POSSIBLE OCULAR INJURY**
S. Croft,
Home Office Scientific Development Branch, St Albans, UK
- P 61** **ASSESSMENT OF NON-LETHAL WEAPONS(NLW)**
A. Groll, J. Haumann, C. Pick
EADS Deutschland GmbH, Friedrichshafen, D
- P 62** **ANALYSIS OF CRITICAL LEVELS OF PHYSICAL EFFECTS ON LOCALIZED MASSES OF PEOPLE (CROWD)**
A. V. Kozyrev, V. V. Selivanov, V. V. Leonov
Bauman Moscow State Technical University Moscow, RUS

Poster Programme

**P 63 MODELING OF INFLUENCE OF FACTORS OF THE WEAPON
OF NOT LETHAL ACTION ON THE PERSON ON THE BASIS
OF STUDYING A GUNSHOT INJURY**

V. I. Khрупkin, V.V. Savostianov

State Medical Postgraduate Institute of Ministry of Defense of
Russian Federation, Moscow, RUS

V. V. Selivanov

Bauman Moscow State Technical University, Moscow, RUS

Legal, Psychological and Public acceptance

**P 64 THE USE OF FORCE BY LAW ENFORCEMENT AGENCIES
AND LESS LETHAL WEAPONS: APPLICABILITY AND
ACCEPTABILITY**

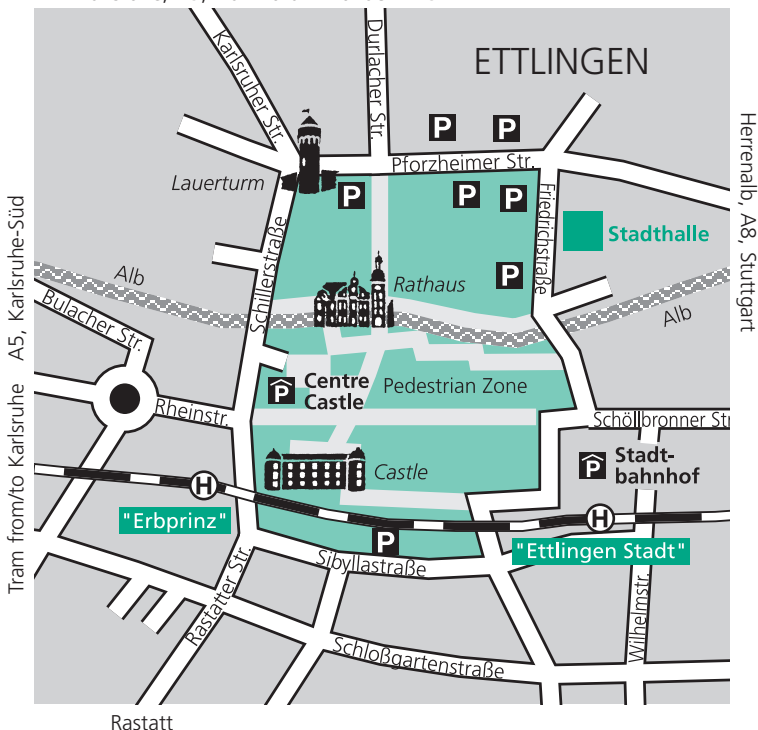
L. Hougardy

University of Liege, Faculty of Law, Liège, B

Ettlingen City Plan

How to find the venue

Karlsruhe, A5, Frankfurt Durlach. B 3

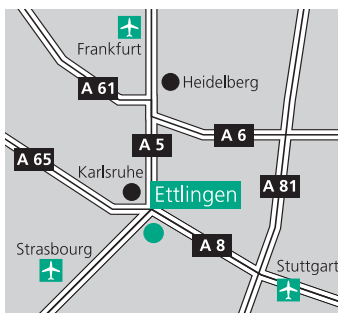


Ettlingen is located in the vicinity of Karlsruhe approx. 120 km south of Frankfurt/Frankfurt International Airport just beside the Autobahn A5.

Other airports are Strasbourg, F (approx. 100 km) and Stuttgart (approx. 90 km)

From the airport you may go by train (approx. 1 hour) to Karlsruhe Hauptbahnhof (Main Station), then take the »Stadtbahn« (tramway)

S1 or S11, direction Ettlingen or Ittersbach, and (after approx. 15 min.) get out at »Ettlingen Stadt« (»Stadtbahnhof Ettlingen«). After a short walk (approx. 10 min.) you reach the »Stadthalle Ettlingen« (see map).



Points of Contact

Chairman

Klaus-Dieter Thiel

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Exhibition

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Web site

www.ict.fraunhofer.de

www.non-lethal-weapons.com



**Wehrtechnische Dienststelle für
Schutz- und Sondertechnik (WTD 52)**



Fraunhofer Institut
Chemische Technologie

**HORE
Hotel Reservation
Weingartener Str. 70**

D - 76229 Karlsruhe

Platz für Visitenkarte

Zimmerreservierung / Accommodation

4th European Symposium on Non-Lethal Weapons
Stadthalle Ettlingen, Germany

May 21 - 23, 2007

Name / name _____

Vorname / first name _____

Straße / street _____ Nr. / no. _____

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Land / country _____

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Telefon / phone _____

E-Mail _____

Datum / date _____ Unterschrift / signature _____

Ankunft / arrival Abreise / departure Ankunftszeit / arrival time

Anzahl der Zimmer / number of rooms EZ (Einzelzimmer) / SGL (single room) DZ (Doppelzimmer) / DBL (double room)

Bitte reservieren Sie Hotel/Please reserve Hotel

	EZ /SGL	EZ /SGL	DZ /DBL	Entfernung/Distance
A1 **** Radisson SAS Business	155,-- Euro		170,-- Euro	2,0 km
A2 **** Radisson SAS Standard	119,-- Euro		135,-- Euro	2,0 km
B1 **** Erbprinz Comfort	150,-- Euro		170,-- Euro	0,5 km
B2 **** Erbprinz Classic	130,-- Euro		150,-- Euro	0,5 km
C *** Stadthotel Engel	92,-- Euro		115,-- Euro	0,5 km
D *** Watthalden	99,-- Euro		120,-- Euro	0,5 km
E * Sonne	62,-- Euro		81,-- Euro	0,5 km

Alle Zimmer mit Bad/Dusche/WC, inkl. Frühstück. / All rooms with bath/shower/WC, incl. breakfast.

Kreditkarte / Creditcard Kreditkartennummer zur Garantie / Credit Card No.

Gültigkeit / Expiry Date of Credit Card

Falls die gewünschte Hotelkategorie nicht mehr verfügbar ist, reservieren Sie bitte die Kategorie:
If accommodation is not available in the desired category, please reserve category:

Anmeldung / Registration Form

4th European Symposium on Non-Lethal Weapons
Stadthalle Ettlingen, Germany

May 21 - 23, 2007

Last name

First name

Title/Position

The registration fee will be paid upon receipt of the invoice.

It is agreed upon that pictures being taken during this event may be published.

Signature

Company / Authority / Complete Address

Participation (please tick)

Welcome Reception*

Monday, May 21, 18.00 h

Discussion Forums*

Monday, May 21, 15.00 - 17.00 h

Forum I

Forum II

* (incl. in the registration fee)

e-mail

Phone No.

Fax No.

**Fraunhofer-Institut für
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Attn. Manuela Wolff
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