

► Energetic materials and systems

Peer reviewed publications

Energetic nanoparticles and nanomaterials for future defense applications

M. COMET, C. MARTIN, F. SCHNELL, D. SPITZER

Human Factors and Mechanical Engineering for Defense and Safety / SPRINGER

doi: 10.1007/s41314-019-0016-6

R-01/13/07/000/0/00-00/PR-56/2019

Nanothermites: A short review. Factsheet for experimenters, present and future challenges

M. COMET, C. MARTIN, F. SCHNELL, D. SPITZER

Propellants Explos. Pyrotechnics, Vol. 44, Issue 1, pp. 18-36, January 2019

© 2019 Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim

doi: 10.1002/prop.201800095

R-01/13/07/000/0/00-00/PR-61/2019

Publications

Identification of simulants for additive manufacturing of gun propellants

M. CHIROLI, F. CISZEK, B. BASCHUNG

EuroPyro 2019, 44th International Pyrotechnics Society Seminar, Tours, FR, 03-07 June 2019

R-01/17/01/798/2/00-00/PU-152/2019

Three-dimensional numerical fluid flow simulation of the interior and transitional ballistics process

R. WÖLBING, B. BASCHUNG

31st International Symposium on Ballistics, Hyderabad, IN, 4-8 November 2019

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R-01/17/01/822/1/00-00/PU-319/2019

Laser ignition of low vulnerability propellants based on RDX

J. EHRHARDT, L. COURTY*, P. GILLARD*, B. BASCHUNG

EuroPyro 2019, 44th International Pyrotechnics Society Seminar, Tours, FR, 3-7 June 2019

R-01/13/10/000/0/00-00/PU-337/2019

Investigation on the pyrolysis products of low vulnerability propellants based on RDX

J. EHRHARDT, L. COURTY*, P. GILLARD*, B. BASCHUNG

49th International Annual Conference of the Fraunhofer ICT, Karlsruhe, DE, June 26-29, 2019

R-01/13/10/000/0/00-00/PU-338/2019

Guidance of medium caliber projectiles by using an impulse thruster coupled with a navigation module based on magnetometers-in-flight demonstration

E. FOUSSON, S. CHANGEY, A. KOLB, E. PECHEUR, A. SCHNEIDER, R. ADAM, S. PETER, P. GNEMMI

31st International Symposium on Ballistics, Hyderabad, IN, 4-8 November 2019

R-01/13/02/742/1/00-00/PU-345/2019

► Flight techniques for projectiles

Peer reviewed publications

A velocity observer for exterior ballistics using an embedded frequency detection of pitch and yaw aerodynamics

A. FIOT, S. CHANGEY, C. COMBETTES, N. PETIT*

57th IEEE Conference on Decision and Control, Miami Beach/FL, US, 17-19 December 2018

© 2018 IEEE

R-02/14/03/000/0/00-00/PR-14/2019

Metasurface antennas embedded in small circular cavities for telemetry applications

L. BERNARD, M. MARTINIS, S. COLLARDEY, K. MAHDJOUBI, R. SAULEAU

Applied Sciences, Special Issue Advanced Active and Passive Metasurfaces: Appl. Sci. 2019, 9(12), 2496;

doi.org/10.3390/app9122496

R-02/13/19/000/0/00-00/PR-139/2019

Aerodynamic prediction of a projectile fitted with fins

C. DECROCQ, B. MARTINEZ, M. ALBISSER, S. DOBRE, P. GNEMMI, Y. BAILLY*, J.-C. ROY*

International Journal of Numerical Methods for Heat & Fluid Flow, Vol. 28 No. 5, pp. 1218-1236

© 2018, Emerald Publishing Limited

doi.org/10.1108/HFF-06-2017-0259

R-02/19/02/000/0/00-00/PR-171/2019

Design of an H_{∞} gain-scheduled guidance scheme for a guided projectile

F. SÈVE, S. THEODOULIS

International Journal of Numerical Methods for Heat & Fluid Flow, Vol. 28 No. 5, pp. 1218-1236

Journal of Guidance Control and Dynamics, Vol. 42, No. 11, November 2019

doi: 10.2514/1.G004317

R-02/19/01/000/0/00-00/PR-346/2019

Design of an H_{∞} gain-scheduled guidance scheme for a guided projectile

F. SÈVE, S. THEODOULIS

AIAA SciTech 2019 Forum, San Diego/CA, US, 7-11 January 2019

R-02/19/01/000/0/00-00/PR-347/2019

Publications

Miniaturized onboard electronics for attitude measurement of medium caliber projectiles

F. SAADA, A. ZEINER, K. MEDER, L. GARCIA-GAMEZ, L. BERNARD

ICECS 2018 - 25th IEEE International Conference on Electronics Circuits and Systems, Bordeaux, FR, 09-12 December 2019

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R-02/13/19/000/0/00-00/PU-53/2019

Robust design for the roll-channel autopilot of a canard-guided dual-spin projectile

S. THAI, S. THEODOULIS, C. ROOS*, J.-M. BIANNIC*

1st IFAC Symposium on Automatic Control in Aerospace, Cranfield, UK, 27-30 August 2019

R-02/19/01/000/0/00-00/PU-320/2019

A gyroless adaptation of attitude complementary filtering

A. FIOT, C. COMBETTES, S. CHANGEY, N. PETIT*

European Control Conference, Naples, IT, 25-28 June 2019

R-02/14/03/000/0/00-00/PU-330/2019

Accuracy enhancement of wind tunnel aerodynamic coefficients determination based on the coupling of balance data and optical angle of attack measurement

M. LIBSIG, B. MARTINEZ, J. JUNCKER, M. BASTIDE, C. DEMAUTIS

18th International Symposium on Flow Visualization, Zurich, CH, 26-29 June 2018

R-02/16/02/000/0/00-00/PU-332/2019

Antennes patch à polarisation circulaire accordables en fréquence *Circularly polarized printed antennas tunable in frequency*

M. MÜLLER, L. BERNARD

XXI^{èmes} Journées Nationales Microondes, Caen, FR, 14-17 mai 2019

R-02/13/19/000/0/00-00/PU-344/2019

▶ Laser and electromagnetic technologies

Peer reviewed publications

Experimental and numerical study of a thermal expansion gyroscope for different gases

G. KOCK*, P. COMBETTE*, M. TEDJINI*, M. SCHNEIDER, C. GAUTHIER-BLUM, A. GIANI*

Sensors 2019, 19, 360

doi:10.3390/s19020360

R-03/16/07/599/3/00-00/PR-59/2019

Inductive pulsed power supply for a railgun artillery system

O. LIEBFRIED, S. HUNDERTMARK, P. FRINGS*

IEEE Transactions on Plasma Science, Vol. 47, No. 5, pp. 2550-2555, May 2019

© 2019 IEEE

doi: 10.1109/TPS.2019.2903725

R-03/13/11/472/3/00-00/PR-80/2019

Electromagnetic compatibility of a railgun implemented on a warship

F. BIETH, P. DELMOTE, M. SCHNEIDER

IEEE TRANSACTIONS ON PLASMA SCIENCE, Vol. 47, No. 6, pp. 2987-2994, June 2019

© IEEE 2019

doi: 10.1109/TPS.2019.2894952

R-03/13/20/000/0/13-00/PR-96/2019

Behavior of a railgun launch package at the muzzle and during sabot discard

B. RECK, S. HUNDERTMARK, D. SIMICIC, R. HRUSCHKA, F. LEOPOLD, M. SCHNEIDER

IEEE Transactions on Plasma Science, Vol. 47, No. 5, May 2019

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doi: 10.1109/TPS.2019.2902715

R-03/19/04/000/0/00-00/PR-335/2019

Investigation of rail deformation and stress wave propagation in the ISL-NGL60 railgun

B. RECK, S. HUNDERTMARK, G. VINCENT, F. SCHUBERT, M. SCHNEIDER

IEEE Transactions on Plasma Science, Vol. 47, No. 5, May 2019

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doi: 10.1109/TPS.2019.2903933

R-03/19/04/000/0/00-00/PR-336/2019

Publications

Flow visualization of projectile-sabot separation in a pulsed wind tunnel in comparison with numerical simulations

B. RECK, R. HRUSCHKA, B. SAUERWEIN

18th International Symposium on Flow Visualization, Zurich, CH, 26-29 June 2018

doi.org/10.3929/ethz-b-000279198

R-03/19/04/000/0/00-00/PU-33/2019

A new gas flow gyroscope MEMS for harsh environment applications

G. KOCK*, A. KECHAF*, P. COMBETTE*, T. MARWAN*, A. GIANI*, M SCHNEIDER,
C. GAUTHIER-BLUM

DTIP 2019, Paris, FR, 12-15 May 2019

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R-03/16/07/599/3/00-00/PU-165/2019

Numerical and experimental study of the behaviour of a single-axis fluidic thermal gyroscope

G. KOCK*, P.COMBETTE*, M. TEDJINI*, M. SCHNEIDER, C. GAUTHIER-BLUM, A. GIANI*

Engineering Research Express, 2019, 1 (1), pp.015009

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doi: 10.1088/2631-8695/ab2452

R-03/16/07/599/3/00-00/PU-357/2019

► Protection technologies, security, situational awareness

Peer reviewed publications

Optical limiting properties of surface functionalized nanodiamonds probed by the Z-scan method

O. MULLER, V. PICHOT, L. MERLAT, D. SPITZER

Scientific Reports, 9(1):519, 24 January 2019

doi: 10.1038/s41598-018-36838-7

R-04/16/06/000/0/00-00/PR-16/2019

Optical limiting properties of templated Cr₂O₃ and WO₃ nanoparticles

O. MULLER, P. GIBOT

Optical Materials 95 109220, 2019

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doi.org/10.1016/j.optmat.2019.109220

R-04/16/06/000/0/00-00/PR-145/2019

Lung injury risk assessment during blast exposure

J. BOUTILLIER, C. DECK, S. DE MEZZO, P. MAGNAN, N. PRAT, R. WILLINGER, P. NAZ

Journal of Biomechanics 86, pp. 210–217, 2019

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doi.org/10.1016/j.jbiomech.2019.02.011

R-04/17/01/655/3/00-00/PR-176/2019

Spatial and temporal temperature evolution of rotating tubes heated by a Gaussian laser beam - analytical solutions and calculations

R. SCHMITT

International Journal of Numerical Methods for Heat & Fluid Flow, Vol. 29, No. 2, pp. 682–701, 4 February 2019

© 2019 Emerald Publishing Limited

doi: 10.1108/HFF-11-2017-0482

R-04/15/01/000/0/00-00/PR-182/2019

Dynamic perforation of ultra-hard high-strength armor steel: Impact experiments and modeling

T. FRAS, C.C. ROTH*, D. MOHR*

International Journal of Impact Engineering 131, pp. 256–271, 2019

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doi.org/10.1016/j.ijimpeng.2019.05.008

R-04/16/02/000/0/00-00/PR-197/2019

Monitoring the isothermal crystallization kinetics of PET-A using THz-TDS

S. ENGELBRECHT, K.-H. TYBUSSEK, J. SAMPAIO, J. BÖHMLER, B. M. FISCHER, S. SOMMER*

International Journal of Infrared and Millimeter Waves, Vol. 40, Issue 3, pp. 306–313, March 2019

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doi.org/10.1007/s10762-019-00570-8

R-04/18/03/000/0/15-00/PR-216/2019

Experimental SWIR gated viewing in accumulation mode

Y. LUTZ, A. MATWYSCHUK, J.M. POYET

Adv. Opt. Techn. 2019; *aop*
doi.org/10.1515/aot-2019-0038
R-04/19/01/000/0/00-00/PR-221/2019

Sixty years of advanced imaging at the French-German Research Institute of Saint-Louis: from the Cranz-Schardin camera to computational optics

F. CHRISTNACHER, M. LAURENZIS, Y. LUTZ, A. MATWYSCHUK

Adv. Opt. Techn. 2019; *aop*
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doi.org/10.1515/aot-2019-0036
R-04/19/01/000/0/00-00/PR-223/2019

Comparison of pressure measurement technique for free-field down scaled blast experiments

S. TRÉLAT*, M.-O. STURTZER, D. ECKENFELS

24^{ème} Congrès Français de Mécanique, Brest, FR, 26-30 août 2019
R-04/16/01/000/0/00-00/PR-225/2019

Parallax beam: A vision-based motion estimation method robust to nearly planar scenes

M. REBERT, D. MONNIN, S. BAZEILLE*, C. CUDEL*

Journal of Electronic Imaging 28(2), 023030, 2019
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[doi: 10.1117/1.JEI.28.2.023030](https://doi.org/10.1117/1.JEI.28.2.023030)
R-04/19/03/000/0/00-00/PR-235/2019

TimeScaleNet: A multiresolution approach for raw audio recognition using learnable biquadratic IIR filters and residual networks of depthwise-separable one-dimensional atrous convolutions

E. BAVU*, A. RAMAMONJY, H. PUJOL*, A. GARCIA*

IEEE JOURNAL OF SELECTED TOPICS IN SIGNAL PROCESSING, Vol. 13, No. 2, May 2019
© 2019 IEEE
[doi: 10.1109/JSTSP.2019.2908696](https://doi.org/10.1109/JSTSP.2019.2908696)
R-04/18/01/000/0/00-00/PR-250/2019

Screening of absorbing materials for blast mitigation technology based on sandwich claddings

L. BLANC, T. SCHUNCK, D. ECKENFELS, J.-F. LEGENDRE

Light-Weight Armour Group for Defense and Security, Roubaix, FR, 8-9 October 2019
François BOUSSU (Editor)
ISBN: 9 782955 791219
R-04/16/01/000/0/00-00/PR-257/2019

Numerical investigations on 7.62x39 mm projectile ricochet off aramid plates

M. SEIDL, T. DE VUYST*, N. DJORDJEVIC*

Light-Weight Armour Group for Defense and Security, Roubaix, FR, 8-9 October 2019
François BOUSSU (Editor)
ISBN: 9 782955 791219
R-04/16/02/807/2/00-00/PR-258/2019

Numerical and experimental evaluation of natural fragmentation of explosively driven cylinder rings

M. BECKER, M. SEIDL, T. DE VUYST*, M. MEHL*, M. SOULI*

Light-Weight Armour Group for Defense and Security, Roubaix, FR, 8-9 October 2019

François BOUSSU (Editor)

ISBN: 9 782955 791219

R-04/16/03/000/0/00-00/PR-263/2019

Measurement of the acoustic leak for the determination of the optimal earplug type

V. ZIMPFER, P. HAMERY, G. BLANCK, T. FUX, G. ANDEOL

ICSV26, 26th International Congress on Sound & Vibration, Montreal, CA, 7-11 July 2019

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R-04/15/02/000/0/00-00/PR-265/2019

Development of a novel rubber as damping interlayer in light-weight armour applications

J. KARL, F. KIRSCH*, L. PERKO*, T. FRAS

Light-Weight Armour Group for Defense and Security, Roubaix, FR, 8-9 October 2019

François BOUSSU (Editor)

ISBN: 9 782955 791219

R-04/16/02/832/1/00-00/PR-276/2019

Predicting explosion and blast effects: A multi-scale experimental approach

S. TRÉLAT*, M.-O. STURTZER

Int. J. of Safety and Security Eng., Vol. 9, No. 4, pp. 356–370, 2019

© 2019 WIT Press, www.witpress.com

doi: 10.2495/SAFE-V9-N4-356-370

R-04/16/01/000/0/00-00/PR-331/2019

Publications

Comparaison de décompositions de la matrice homographique et essentielle pour l'estimation du mouvement de caméra

Comparison of the decomposition of the homography matrix and the essential matrix for the estimation of the camera motion

M. REBERT*, D. MONNIN, S. KOHLER*, C. CUDEL*

Congrès ORASIS, Colleville-sur-Mer, FR, juin 2017

<https://hal.archives-ouvertes.fr/hal-01866706>

R-04/19/18/000/0/00-00/PU-46/2019

Faisceau de parallaxe : estimation du mouvement de caméra robuste aux scènes planes

Parallax beam: camera motion estimation robust to planar degeneracy

M. REBERT*, D. MONNIN, S. KOHLER*, C. CUDEL*

Congrès ORASIS, Journées francophones des jeunes chercheurs en vision par ordinateur, Saint-Dié-des-Vosges, FR, 27-31 mai 2019

R-04/19/18/000/0/00-00/PU-69/2019

Numerical and experimental investigation of SPH, SPG, and FEM for high-velocity impact applications

M. BECKER, M. SEIDL, M. MEHL*, M. SOULI*, J.-F. LEGENDRE

12th European LS-DYNA Conference, Koblenz, DE, 14-16 May 2019

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R-04/16/03/000/0/00-00/PU-70/2019

Influence of TCAPS on HRTFs and on sound source localization precision

L. KROENER, A. GARCIA*, V. ZIMPFER

DAGA 2019 - 45. Jahrestagung für Akustik, Rostock, DE, 18.-21. März 2019

© Deutsche Gesellschaft für Akustik (DEGA e.V.), Berlin

R-04/15/02/000/0/00-00/PU-178/2019

The effect of hypervelocity impact loading on explosively welded Ti/Al/Al plate

M. WACHOWSKI*, T. FRAS, R. KOSTUREK*, L. ŚNIEŻEK*, I. SZACHOGŁUCHOWICZ*, K. GRZELAK*

2018 International Conference on Materials and Manufacturine Engineering (MSME 2018), Paris, FR, MATEC Web of Conferences, 08-10 November 2018

R-04/16/02/000/0/00-00/PU-196/2019

Strikers with different nose shape impacting an armour steel - numerical modelling

T. FRAS, N. FADERL, C.C. ROTH*, D. MOHR*

12th European LS-DYNA Conference, Koblenz, DE, 14-16 May 2019

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A review of the dataset available for visual odometry

M. REBERT, D. MONNIN, S. BAZEILLE*, C. CUDEL*

QCAV2019, 14th International Conference on Quality Control by Artificial Vision, Mulhouse, FR, 15-17 May 2019

Proc. SPIE 11172 - © 2019 SPIE

doi: 10.1117/12.2521750

R-04/19/18/000/0/00-00/PU-213/2019

Detection of ageing effects in protective structures using THz technologies

S. ENGELBRECHT, T. JEAN, A. KLAVZAR, J.-F. LEGENDRE, S. SOMMER*, B. M. FISCHER

SPIE OPTO, 2019, San Francisco/CA, US, 02-07 February 2019

Proc. SPIE 10917, Terahertz, RF, Millimeter, and Submillimeter-Wave Technology and Applications XII, 1091711, 1 March 2019 - © 2019 SPIE

doi: 10.1117/12.2509968

R-04/18/03/000/0/19-00/PU-214/2019

Terahertz spectroscopy from air plasmas created by two-color femtosecond laser pulses: The ALTESSE project

L. BERGÉ*, K. KALTENECKER*, S. ENGELBRECHT, A. NGUYEN*, S. SKUPIN*, L. MERLAT, B. FISCHER, B. ZHOU*, I. THIELE*, P. U. JEPSEN*

EPL (Europhysics Letters), 126, 24001 - Perspective, 2019

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doi: 10.1209/0295-5075/126/24001

R-04/16/05/548/3/00-00/PU-215/2019

Assessment feedback of intelligent earplug

P. HAMERY, V. ZIMPFER, S. HENGY, G. NEXER*

ICSV26 - 26th International Congress on Sound & Vibration, Montreal, CA, 7-11 July 2019

R-04/15/02/603/9/00-00/PU-217/2019

Numerical modelling of honeycomb structure subjected to blast loading

M. STANCZAK, T. FRAS, P. PAWLOWSKI, L. BLANC, A. RUSINEK*

12th European LS-DYNA Conference, Koblenz, DE, 14-16 May 2019

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R-04/16/02/000/0/00-00/PU-218/2019

Blast wave mitigation with galvanized polyurethane foam in a sandwich cladding

L. BLANC, M.-O. STURTZER, A. JUNG*, S. DIEBELS*, A. KLEINE*

ISSW 32, 32nd International Symposium on Shock Waves, Singapore, SG, 14-19 July 2019

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doi: 10.3850/978-981-11-2730-4_0154-cd

R-04/16/01/806/2/00-00/PU-219/2019

Explosion mitigation by metal grid with water curtain

T. SCHUNCK, M. BASTIDE, D. ECKENFELS, J.F. LEGENDRE

ISSW 32, 32nd International Symposium on Shock Waves, Singapore, SG, 14-19 July 2019

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doi: 10.3850/978-981-11-2730-4_0154-cd

R-04/16/04/000/0/00-00/PU-222/2019

Washing and wearing processes effects on soldiers uniforms friction sound characterization

F. LECLINCHE, D. ADOLPHE*, E. DREAN*, V. ZIMPFER

The Spring fiber society conference 2018, Tokyo, JP, 12-14 June 2018

R-00/17/01/000/0/00-00/PU-224/2019

Characterization of early shockwaves generated by condensed explosives in free-field

S. TRÉLAT*, M.-O. STURTZER, J. MORY

EuroPyro 2019, 44th International Pyrotechnics Society Seminar, Tours, FR, 3-7 June 2019

R-04/16/01/000/0/00-00/PU-226/2019

Travel times in complex environments

A. DAGALLIER, S. CHEINET, D. JUVE*, A. PONTE*, J. GULA*

23rd International Congress on Acoustics (ICA), Aachen, DE, 9-13 September 2019

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R-04/18/02/000/0/00-00/PU-230/2019

Hearing protections: Effects on HRTFs and localization accuracy

L. KROENER, A. GARCIA*, C. LANGRENNE*, V. ZIMPFER

23rd International Congress on Acoustics (ICA), Aachen, DE, 9-13 September 2019

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R-04/15/02/000/0/00-00/PU-236/2019

60 years of advanced imaging at ISL: From the Craz-Schardin camera to non-line-of-sight imaging

F. CHRISTNACHER, M. LAURENZIS, Y. LUTZ, A. MATWYSCHUK

Proceedings of SPIE 11160, Electro-Optical Remote Sensing XIII, 1116007, 10 October 2019

Event: SPIE Security + Defence 2019, Strasbourg, FR

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doi: 10.1117/12.2533902

R-04/19/01/000/0/00-00/PU-247/2019

Modelling back face deformation of woven layered composite targets under oblique impact

M. SEIDL, N. FADERL, M. BECKER

12th European LS-DYNA Conference, Koblenz, DE, 14-16 May 2019

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R-04/17/01/689/3/00-00/PU-249/2019

Dynamic back face deformation of a combat helmet upon oblique impact of a 7.62x39 mm PS projectile

M. SEIDL, N. FADERL, M. BECKER

31st International Symposium on Ballistics, Hyderabad, IN, 4-8 November 2019

R-04/17/01/689/3/00-00/PU-251/2019

In-vehicle illumination-invariant change detection based on intrinsic images and differences of Gaussians

M. TEKTONIDIS, D. MONNIN

Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIV

Proc. of SPIE Vol. 11012, 1101213 - © 2019 SPIE

doi: 10.1117/12.2521446

R-04/19/03/000/0/00-00/PU-252/2019

Illumination-invariant change detection for the protection of vehicle convoys

M. TEKTONIDIS, D. MONNIN

Electro-Optical Remote Sensing XIII, Proceedings of SPIE 11160

Event: SPIE Security + Defence, Strasbourg, FR, 2019

© 2019 SPIE

doi: 10.1117/12.2533134

R-04/19/03/000/0/00-00/PU-253/2019

Fragment detection algorithm for postprocessing high velocity impact and natural fragmentation

M. BECKER, M. SEIDL, M. MEHL*, M. SOULI*

8th GACM Colloquium on Computational Mechanics for Young Scientists from Academia and Industry, Kassel, DE, 28-30 August 2019

R-04/16/03/000/0/00-00/PU-262/2019

Automatic mesh-generation (FEM/SPH) for HVI-simulations of arbitrary rotational symmetric impactors

M. BECKER, M. SEIDL, M. MEHL*, M. SOULI*

Hypervelocity Impact Symposium (HVIS2019), Destin, FL, USA, 14-19 April 2019

R-04/16/03/000/0/00-00/PU-264/2019

Development of an adapted lung injury risk criterion for thoracic protective system evaluation against blast loading

J. BOUTILLIER, C. DECK*, S. DE MEZZO, P. MAGNAN, R. WILLINGER*, P. NAZ

Blast Injury Conference, Imperial College, London, UK, 11-12 July 2019

R-04/17/01/655/3/00-00/PU-266/2019

Assessment of the fabric's wear by sound measurements on soldiers uniforms

F. LECLINCHE, D. ADOLPHE*, E. DREAN*, V. ZIMPFER

AUTEX2019 - 19th World Textile Conference on Textiles at the Crossroads, Ghent, BE, 11-15 June 2019

R-00/17/01/000/0/00-00/PU-267/2019

A data base of outdoor transfer functions

S. CHEINET, L. EHRHARDT, M. COSNEFROY, A. DAGALLIER

23rd International Congress on Acoustics (ICA), Aachen, DE, 09-13 September 2019

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R-04/18/02/000/0/00-00/PU-269/2019

Experimental and numerical investigation on load impulse reduction with sandwich add-on armor

L. BLANC, D. LEBAILLIF*, A. BUFALO**, M.-O. STURTZER

18th International Symposium on the Interaction of the Effects of Munitions with Structures (ISIEMS),

Panama City Beach/FL, US, 21-25 October 2019

R-04/16/01/000/0/00-00/PU-277/2019

Reduced-scale high explosive charges: A joint experimental work to study blast effects

S. TRÉLAT*, M.-O. STURTZER, D. ECKENFELS, L. SINNIGER

18th International Symposium on the Interaction of the Effects of Munitions with Structures (ISIEMS),

Panama City Beach/FL, US, 21-25 October 2019

R-04/16/01/000/0/00-00/PU-278/2019

Resistance of steel-elastomer laminate armors to impacts of small-caliber projectiles

T. FRAS, J. KARL, N. FADERL

31st International Symposium on Ballistics, Hyderabad, IN, 4-8 November 2019

R-04/16/02/000/0/00-00/PU-279/2019