

CURRICULUM VITAE



PERSONAL INFORMATION

Name
Address
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Nationality
Date of birth



UNIV.-PROF. DR. SC. JELKA GERŠAK

UNIVERSITY OF MARIBOR, FACULTY OF MECHANICAL ENGINEERING, DEPARTMENT OF TEXTILE MATERIALS AND DESIGN, SMETANOVA 17, SI-2000 MARIBOR, SLOVENIA

+386 2 220 7960; Mobile +386 659 335

+386 2 220 7990

Jelka.Gersak@um.si

SLOVENE

25th JANUARY, 1954

WORK EXPERIENCE-1

- Dates (from – to)
- Name and address of employer
- Type of business or sector
- Occupation or position held
- Main activities and responsibilities

1.06.1983 – TODAY

UNIVERSITY OF MARIBOR, FACULTY OF MECHANICAL ENGINEERING, DEPARTMENT OF TEXTILE MATERIALS AND DESIGN, SMETANOVA 17, SI-2000 MARIBOR, SLOVENIA

HIGHER EDUCATION / UNIVERSITY

UNIV.-PROFESSOR

PEDAGOGICAL AND RESEARCH WORK

HEAD OF THE RESEARCH GROUP FOR CLOTHING ENGINEERING

HEAD OF THE LABORATORY FOR CLOTHING ENGINEERING, PHYSIOLOGY AND CONSTRUCTION OF GARMENTS

1985/1986: 10-MONTH ADVANCED SCIENTIFIC STUDY AT THE TECHNISCHE UNIVERSITÄT DRESDEN, INSTITUT FÜR TEXTIL- UND BEKLEIDUNGSTECHNIK, GERMANY

FELLOWSHIP

WORK EXPERIENCE-2

- Dates (from – to)
- Name and address of employer
- Type of business or sector
- Occupation or position held
- Main activities and responsibilities

1.10.1980 – 31.05.1983

MEHANOTEHNIKA IZOLA, Pliš igrače (FACTORY OF PLUSHY TOYS), MATERIJJA, SLOVENIA

PRODUCTION OF PLUSHY TOYS

PRODUCTION MANAGER

PLANNING, MANAGING AND CONTROLLING

EDUCATION -1

- Dates (from – to)
- Name and type of organization providing education and training
- Title of qualification awarded

1985-1990

UNIVERSITY OF ZAGREB

FACULTY OF TEXTILE TECHNOLOGY, ZAGREB, CROATIA

Dr. sc.

EDUCATION -2

- Dates (from – to)
- Name and type of organization providing education and training
- Title of qualification awarded

1980-1985

UNIVERSITY OF ZAGREB,

TECHNOLOGICAL FACULTY, ZAGREB, CROATIA

MSc.

EDUCATION -3

- Dates (from – to)
- Name and type of organization providing education and training
- Title of qualification awarded

1974-1979

UNIVERSITY OF LJUBLJANA

FACULTY OF NATURAL SCIENCES AND TECHNOLOGY, DEPARTMENT OF TEXTILE TECHNOLOGY, LJUBLJANA

UNIV.-DIPL. ENG. (TEXT. TECHLOG.)

SCIENTIFIC AND PROFESSIONAL INTERESTS

HER SCIENTIFIC AND PROFESSIONAL INTERESTS INCLUDE: CLOTHING ENGINEERING, MECHANICS OF TEXTILE MATERIALS, OBJECTIVE EVALUATION OF TEXTILE PRODUCTS AND CLOTHING, PROTECTIVE AND FUNCTIONAL CLOTHING, THERMO-PHYSIOLOGICAL COMFORT.

AS A RESULT SHE PUBLISHED MORE AS 740 BIBLIOGRAPHIC UNITS, FROM THEM 70 ORIGINAL SCIENTIFIC PAPERS IN INTERNATIONAL JOURNALS, 35 REVIEWS AND PROFESSIONAL PAPERS AND MORE AS 100 SCIENTIFIC PAPERS ON INTERNATIONAL CONFERENCES, EIGHT OF THEM AS INVITED LECTURES.

SHE WAS IN CHARGE OF 20 SCIENTIFIC PROJECTS, 11 INTERNATIONAL SCIENTIFIC PROJECTS, COORDINATOR OF 12 CEEPUS (CENTRAL EUROPEAN EXCHANGE PROGRAM FOR UNIVERSITY STUDIES) NETWORKS, AS WELL AS AUTHOR OF NUMEROUS STUDIES FOR THE NEEDS OF INDUSTRY.

EIGHT DOCTORAL THESES, 10 MASTER THESES AND MORE AS 200 DIPLOMA THESES WERE MADE UNDER HER ADVISORSHIP.

FROM 1996-1999 SHE WAS HEAD OF THE CHAIR FOR TEXTILE TECHNOLOGY AND CLOTHING ENGINEERING AND FROM 1999-2004 HEAD OF THE INSTITUTE OF TEXTILE AND GARMENT MANUFACTURING PROCESSES.

SHE WAS THE ORGANIZER AND HEAD OF 6 INTERNATIONAL CONFERENCES (AUTOMATION OF TEXTILE PROCESSES WITH MICROCOMPUTERS AND 1st – 5th IMCEP) AND 4 SYMPOSIUMS OF CLOTHING ENGINEERING.

SHE IS A MEMBER OF NUMEROUS INTERNATIONAL AND INLAND SCIENTIFIC AND PROFESSIONAL ASSOCIATIONS, EDITORIAL BOARDS OF MAGAZINES AND SCIENTIFIC COUNCILS OF INTERNATIONAL CONFERENCES.

SHE HAS RECEIVED SEVERAL AWARDS FOR HER RESEARCH ACTIVITIES. SINCE 2009 SHE IS A MEMBER OF CROATIAN ACADEMY OF ENGINEERING.

RESEARCH PROGRAMS

CLOTHING ENGINEERING AND TEXTILE MATERIALS (P2-0123)

DEVELOPMENT OF FUNCTIONAL CLOTHING BASED ON NANOTECHNOLOGY (BI-HR/10-11-001)

3D MODELING OF HUMAN BODY AND INTEGRATING HUMAN DIMENSIONS INTO PRODUCTS (BI-HU/10-11-007)

DEVELOPMENT OF CLOTHING FOR EXTREME COLD ENVIRONMENT (BI-IN/10-12-006)

SUSTAINABILITY IN CLOTHING DESIGN - MASS CUSTOMIZATION AS A STRATEGY (BI-FI/11-12-013)

TEACHING PROGRAM

UNDERGRADUATE STUDIES: GARMENT MANUFACTURING PROCESSES, GARMENT MANUFACTURING PROCESSES AND MATERIALS MANAGEMENT, GARMENTS AND COMFORT

POSTGRADUATE – MASTER STUDY PROGRAMME: CLOTHING ENGINEERING, MECHANICAL PROPERTIES OF TEXTILE MATERIALS, THERMO-PHYSIOLOGICAL PROPERTIES OF TEXTILE PRODUCTS, DEVELOPMENT OF COLLECTIONS

PH.D. STUDY PROGRAMME: MECHANICS OF TEXTILE MATERIALS AND CLOTHING DESIGN, THERMAL CLOTHING COMFORT

VISITING PROFESSOR

VISITING PROFESSOR AT THE UNIVERSITY OF ZAGREB, FACULTY OF TEXTILE TECHNOLOGY, CROATIA
GRADUATE STUDY: OBJECTIVE EVALUATION OF TEXTILES AND CLOTHING;
POSTGRADUATE STUDY: GARMENT ENGINEERING DESIGN

RECENT PUBLICATIONS

ORIGINAL SCIENTIFIC ARTICLE - PARTIAL LIST

SHABARIDHARAN, DAS, A., GERŠAK, J. (2014), PHYSIOLOGICAL RESPONSES OF DIFFERENT TYPES CLOTHING IN COLD WEATHER CONDITION - A WEAR TRIAL STUDY. *INDIAN JOURNAL OF FIBRE AND TEXTILE RESEARCH*, MAR. 2014, VOL. 39; 33-42

FATKIĆ, E., GERŠAK, J. (2013), DIMENSIONAL CHANGES OF SINGLE JERSEY WEFT KNITTED FABRIC WITH ELASTOMER YARN CONSUMPTION DURING RELAXATION PROCESS. *TEKSTILEC*, VOL. 56, NO. 1; 22-33

PODPOVITNY, M., SCHACHER, L., GERŠAK, J., ADOLPHE, D. C. (2011), DEVELOPMENT OF A NEW PROTECTIVE GOWN FOR DENTISTS. *TEKSTIL*, OCT. 2011, VOL. 60, NO. 10, STR. 493-497

GERŠAK, J., MARČIĆ, M. (2008), ASSESSMENT OF THERMOPHYSIOLOGICAL WEAR COMFORT OF CLOTHING SYSTEMS. *TEKSTIL*, VOL. 57; NO. 10; 497-515

ZAVEC PAVLINIĆ, D., GERŠAK, J. (2009), PREDICTING GARMENT APPEARANCE QUALITY. *THE OPEN TEXTILE JOURNAL*., VOL. 2; 29-38, DOI: [10.2174/1876520300902010029](https://doi.org/10.2174/1876520300902010029)

TOKMAK, O., BERKALP, O. B., GERŠAK, J. (2010), INVESTIGATION OF THE MECHANICS AND PERFORMANCE OF WOVEN FABRICS USING OBJECTIVE EVALUATION TECHNIQUES. PART 1, THE RELATIONSHIP BETWEEN FAST, KES-F AND CUSICK'S DRAPE-METER PARAMETERS. *FIBRES TEXT. EAST. EUR.*, VOL. 18, NO. 2 (79); 55-59

FATKIĆ, E., GERŠAK, J., UJEVIĆ, D. (2011), INFLUENCE OF KNITTING PARAMETERS ON THE MECHANICAL PROPERTIES OF PLAIN JERSEY WEFT KNITTED FABRICS. *FIBRES TEXT. EAST. EUR.*, VOL. 19, NO. 5(88); 87-91

- RUDOLF, A., GERŠAK, J., SFILIGOJ-SMOLE, M. (2012), THE EFFECT OF HEAT TREATMENT CONDITIONS USING THE DRAWING PROCESS ON THE PROPERTIES OF PET FILAMENT SEWING THREAD. *TEX. RES. J.*, vol. 82, no. 2: 161-171
- CELCAR, D., MEINANDER, H., GERŠAK, J. (2008), A STUDY OF THE INFLUENCE OF DIFFERENT CLOTHING MATERIALS ON HEAT AND MOISTURE TRANSMISSION THROUGH CLOTHING MATERIALS, EVALUATED USING A SWEATING CYLINDER. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 20, NO. 2; 119-130
- CELCAR, D., MEINANDER, H., GERŠAK, J. (2008), HEAT AND MOISTURE TRANSMISSION PROPERTIES OF CLOTHING SYSTEMS EVALUATED BY USING A SWEATING THERMAL MANIKIN UNDER DIFFERENT ENVIRONMENTAL CONDITIONS. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 20, NO. 4; 240-252
- GERŠAK, J., MARČIČ, M. (2007), DEVELOPMENT OF A MATHEMATICAL MODEL FOR THE HEAT TRANSFER OF THE SYSTEM MAN - CLOTHING - ENVIRONMENT. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 19, NO. 3-4; 234-241
- RUDOLF, A., GERŠAK, J. (2012), THE EFFECT OF DRAWING ON PET FILAMENT SEWING THREAD PERFORMANCE PROPERTIES. *TEX. RES. J.*, JAN. 2012, VOL. 82, NO. 2, STR. 148-160
- SALOPEK, I., SKENDERI, Z., GERŠAK, J. (2007), INVESTIGATION OF KNITTED FABRIC DIMENSIONAL CHARACTERISTICS. *TEKSTIL*, VOL. 56, NO. 7; 391-406
- TAMÁS, P., GERŠAK, J., HALÁSZ, M. (2006), SYLVIE® - 3D DRAPE TESTER - NEW SYSTEM FOR MEASURING FABRIC. *TEKSTIL*, VOL. 55, NO. 10; 497-509
- RUDOLF, A., GERŠAK, J. (2006), THE INFLUENCE OF THREAD TWIST ON ALTERATIONS IN FIBERS' MECHANICAL PROPERTIES. *TEX. RES. J.*, VOL. 76, NO. 2; 134-144
- ZAVEC PAVLINIČ, D., GERŠAK, J., DEMŠAR, J., BRATKO, I. (2006), PREDICTING SEAM APPEARANCE QUALITY. *TEX. RES. J.*, VOL. 76, NO. 3; 235-242.
- ŠAJN GORJANC, D., GERŠAK, J., FLAJS, R. (2006), PREDICTION OF STRESS RELAXATION OF FABRICS WITH INCREASED ELASTICITY. *TEX. RES. J.*, VOL. 76, NO. 10; 742-750
- KOCIK, M., ŽUREK, W., KRUCINSKA, I., GERŠAK, J., JAKUBCZYK, J. (2005): EVALUATING THE BENDING RIGIDITY OF FLAT TEXTILES WITH THE USE OF AN INSTRON TENSILE TESTER. *FIBRES TEXT. EAST. EUR.*, VOL. 13, NO. 2 (50); 31-34
- GERŠAK, J., ŠAJN GORJANC, D., BUKOŠEK, V. (2005): A STUDY OF THE RELAXATION PHENOMENA IN THE FABRICS CONTAINING ELASTANE YARNS. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 17, NO. 3-4; 188-199
- ŽUNIČ-LOJEN, D., GERŠAK, J. (2005), THREAD LOADINGS IN DIFFERENT MEASURING POSITIONS ON THE SEWING MACHINE. *TEX. RES. J.*, VOL. 75, NO. 6; 498-506
- GERŠAK, J. (2004), STUDY OF RELATIONSHIP BETWEEN FABRIC ELASTIC POTENTIAL AND GARMENT APPEARANCE QUALITY. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 16, NO. 1-2; 238-251
- URBANIJA, V., GERŠAK, J. (2004): IMPACT OF THE MECHANICAL PROPERTIES OF NAPPA CLOTHING LEATHER ON THE CHARACTERISTICS OF ITS USE. *J. SOC. LEATHER TECHNOL. CHEM.*, VOL. 88, NO. 5; 181-190
- JEVŠNIK, S., GERŠAK, J. (2004): MODELLING THE FUSED PANEL FOR A NUMERICAL SIMULATION OF DRAPE. *FIBRES TEXT. EAST. EUR.*, VOL. 12, NO. 1; 47-52
- ZAVEC PAVLINIČ, D., GERŠAK, J. (2003): INVESTIGATIONS OF THE RELATION BETWEEN FABRIC MECHANICAL PROPERTIES AND BEHAVIOUR. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 15, NO. 3-4; 231-240
- GERŠAK, J. (2002), DEVELOPMENT OF THE SYSTEM FOR QUALITATIVE PREDICTION OF GARMENTS APPEARANCE QUALITY. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 14, NO. 3-4; 169-180
- DRAGIČEVIĆ, Z., ZAVEC PAVLINIČ, D., GERŠAK, J. (2002), WORKLOADS AND STANDARD TIME NORMS IN GARMENT ENGINEERING. *JOURNAL OF TEXTILE AND APPAREL TECHNOLOGY AND MANAGEMENT*, SPRING, VOL. 2, NO. 2; 1-8. [HTTP://WWW.TX.NCSU.EDU/JTATTM](http://www.tx.ncsu.edu/jtattm)
- GERŠAK, J. (2002), A SYSTEM FOR PREDICTION OF GARMENT APPEARANCE. *TEXT. ASIA*, VOL. 33, NO. 4; 31-34
- GERŠAK, J. (1998), STUDY OF THE YIELD POINT OF THE THREAD. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 10, NO. 3-4; 244-251
- BLEKAČ, R. AND GERŠAK, J. (1998), INFLUENCE OF MECHANICAL AND PHYSICAL PROPERTIES OF FABRICS ON CUTTING PROCESS. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 10, NO. 3-4; 293-304
- GERŠAK, J. (1997), EVALUATION OF RHEOLOGICAL PROPERTIES OF A THREAD USING NUMERICAL METHODS. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 9, NO. 2/3; 236-240
- GERŠAK, J. (1995), RHEOLOGICAL PROPERTIES OF THREADS: THEIR INFLUENCE ON DYNAMIC LOADS IN THE SEWING PROCESS. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 7, NO. 2-3; 71-80
- GERŠAK, J. (1991), REDUCTION IN THREAD STRENGTH AS A CAUSE OF LOADING IN THE SEWING PROCESS. *INT. J. CLOTH. SCI. TECHNOL.*, VOL. 3, NO. 4; 6-12

PUBLISHED SCIENTIFIC CONFERENCE CONTRIBUTION (INVITED LECTURE)

GERŠAK, J. (2013), CLOTHING DESIGN AND FIT COMFORT BASED ON BODY MOTION. V: 10TH CONFERENCE OF CHEMISTS, TECHNOLOGISTS AND ENVIRONMENTALISTS OF REPUBLIC OF SRPSKA, BANJALUKA, „GAZETTE OF CHEMISTS, TECHNOLOGIST AND ENVIRONMENTALISTS OF REPUBLIC OF SRPSKA, P. 43-49; ISSN 1840-054X, UNIVERSITY OF BANJA LUKA, FACULTY OF TECHNOLOGY, NOVEMBER, 15 TO 16, 2013

GERŠAK, J., MARČIČ, M. (2011), THE PECULIARITIES OF A COMPLEX DESIGN CONCEPT FOR FUNCTIONAL PROTECTIVE CLOTHING, *BOOK OF PROCEEDINGS: CBMTS INDUSTRY VII »THE WORLD CONGRESS ON THE CBRN THREAT AND TERRORISM«* CAVTAT, 10 TO 15 APRIL, 2011

GERŠAK, J. (2008), STUDY OF THE ASYMMETRIC BEHAVIOR OF THE FABRICS IN A PRODUCED GARMENT. 4TH INTERNATIONAL TEXTILE, CLOTHING & DESIGN CONFERENCE ITC&DC, *MAGIC WORLD OF TEXTILES, BOOK OF PROCEEDINGS*, ZAGREB: FACULTY OF TEXTILE TECHNOLOGY, UNIVERSITY OF ZAGREB, 587-592

GERŠAK, J., MARČIČ, M. (2007), A NOVEL APPROACH TO IMPROVE THE THERMOPHYSIOLOGICAL CLOTHING COMFORT. AGILTEX DESIGN - 2ND INTERNATIONAL WORKSHOP DESIGN - INNOVATION - DEVELOPMENT, IAȘI, ROMANIA, 102-112

GERŠAK, J., MARČIČ, M. (2006), THERMOPHYSIOLOGICAL COMFORT. 1ST INTERNATIONAL WORKSHOP DESIGN - INNOVATION - DEVELOPMENT, IAȘI, ROMANIA, JULY 24TH TO 27TH, 2006. *AGILTEX DESIGN, BOOK OF PROCEEDINGS OF THE 1ST INTERNATIONAL WORKSHOP DESIGN - INNOVATION - DEVELOPMENT, IAȘI, ROMANIA*, 143-147

GERŠAK, J., ZAVEC PAVLINIČ, D. (2005), SYSTEM OF PREDICTING GARMENT APPEARANCE QUALITY. *PROCEEDINGS OF THE 34TH TEXTILE RESEARCH SYMPOSIUM AT MT. FUJI*, 51-53

GERŠAK, J. (1998), DETERMINATION OF DYNAMIC LOADING OF THREAD AND THREAD STRENGTH REDUCTION USING THE MATHEMATICAL MODEL. 27TH TEXTILE RESEARCH SYMPOSIUM AT MT. FUJI, SHIZUOKA, JAPAN. *PROCEEDING OF THE 27TH TEXTILE RESEARCH SYMPOSIUM AT MT. FUJI*, 32-39

GERŠAK, J. (1996), TEXTILE RESEARCH IN SLOVENIA. *KYOTO TEXTILE SEMINAR, NEW PROGRESS IN TEXTILE TECHNOLOGY IN THE WORLD, KYOTO UNIVERSITY*, AUGUST 1, 1996, KYOTO

SCIENTIFIC MONOGRAPH

GERŠAK, J. (2013), *DESIGN OF CLOTHING MANUFACTURING PROCESSES : A SYSTEMATIC APPROACH TO PLANNING, SCHEDULING AND CONTROL*, (WOODHEAD PUBLISHING SERIES IN TEXTILES, NO. 147). CAMBRIDGE: WOODHEAD PUBLISHING, 320. ISBN 978-0-85709-778-1. ISBN 0-85709-778-4

GERŠAK, J., HALÁSZ, M., TAMÁS, P., KOKAS PALICSKA, L. (2013), *COMPLEX FABRIC DEFORMATIONS AND CLOTHING MODELLING IN 3D*, (COMPLEX FABRIC DEFORMATIONS & MODELLING). SAARBRÜCKEN: LAP LAMBERT ACADEMIC PUBLISHING, 2013. VIII, 254 P., ISBN 978-3-659-32809-1

GERŠAK, J. (2009), *CLOTHING MANUFACTURE MANAGEMENT (PRIJAVA PROIZVODNJE OBLAČIL)*, UNIVERSITY OF MARIBOR, MARIBOR, ISBN 978-961-248-119-3

REVIEWED UNIVERSITY TEXTBOOK

GERŠAK, J. (2014), OBJECTIVE EVALUATION OF TEXTILE STRUCTURES AND CLOTHING (*OBJEKTIVNO VREDNOVANJE PLOŠNIH TEKSTILIJA I ODJEĆE*), UNIVERSITY OF ZAGREB, MANUALIA UNIVERSITATIS STUDIORUM ZAGRABIENSIS, 190 P., ZAGREB, ISBN 978-953-7105-42-6

MECHANICAL AND PHYSICAL PROPERTIES OF TEXTILE MATERIALS (MEHANSKE IN FIZIKALNE LASTNOSTI TEKSTILNIH MATERIALOV), UNIVERSITY OF MARIBOR, MARIBOR, 2006, ISBN 86-435-0754-7

PATENTS

MEASURING SYSTEM FOR PROGRAMMED MEASUREMENT AND EVALUATION OF MECHANICAL PROPERTIES OF LINEAR AND FLAT FLEXIBLE MATERIALS (MERILNI SISTEM ZA PROGRAMIRANO MERJENJE IN VREDNOTENJE MEHANSKIH LASTNOSTI FLEKSIBILNIH LINIJSKIH IN PLOŠKIH MATERIALOV): PATENT ŠT. SI 23645 A, DATUM OBJAVE 31.8.2012; PATENTNA PRIJAVA ŠT. P-201200162, DATUM VLOŽITVE PRIJAVE 24.5.2012. LJUBLJANA: MINISTRSTVO ZA GOSPODARSKI RAZVOJ IN TEHNOLOGIJO, URAD RS ZA INTELKTUALNO LASTNINO, 2012

INTELLIGENT FUNCTIONAL JACKET FOR THE DETECTION OF INJURIES FEATURING PARTIAL BULLET PROTECTION (INTELIGENTNI FUNKCIONALNI JOPIČ ZA DETEKCIJO POŠKODB S FUNKCIJO DELNE ZAŠČITE PROTI PREBOJU). *PATENT NO. 22644, DATE 30.04.2009*; NO. APPLICATION NO. P-200800294, DATE 01.12.2008, LJUBLJANA: URAD RS ZA INTELKTUALNO LASTNINO, 2009

EDITOR

JOURNAL OF FIBER BIOENGINEERING AND INFORMATICS. EDITOR: GERŠAK, J. (2012-2013, 2014-2016). DANBURY (CT): BINARY INFORMATION PRESS, 2008-. ISSN 1940-8676.
<http://www.researchgate.net/journal/1940-8676> *Journal of Fiber Bioengineering and Informatics*.

MEMBERSHIP:

MEMBER OF CROATIAN ACADEMY OF ENGINEERING (SINCE 2009).