Curriculum vitae

Name: Martin Bílek
Date of birth: 22. 05. 1971
Place of birth: Liberec
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Education and academic degrees

associated professor, Consumer Industry Equipments Design
Faculty of Mechanical Engineering, Technical University of Liberec, Czech republic, 2010
Ph.D., Machine and Equipment Design obor konstrukce strojů a zařízení
Faculty of Mechanical Engineering, Technical University of Liberec, Czech republic, 1999
M.Sc., Construction of Machines and Equipments
Faculty of Mechanical Engineering, Technical University of Liberec, Czech republic, 1994

Professional profile

Head of Department
Faculty of Mechanical Engineering, Department of Textile Machine Design, Technical University of Liberec, Czech republic, 2019 – up to now
Vicedean for Research and Doctoral studies
Faculty of Mechanical Engineering, Technical University of Liberec, Czech republic, 2013 – 2019
Associate professor
Faculty of Mechanical Engineering, Technical University of Liberec, Czech republic, 2010 – up to now
Assistant professor
Faculty of Mechanical Engineering, Technical University of Liberec, Czech republic, 2000- 2010
Technician - specialist
Eko Bet v.o.s., Plaňany. 1994

Selected publications

VALTERA, J., et al. Fabrication of dual-functional composite yarns with a nanofibrous envelope using high throughput AC needleless and collectorless electrospinning. Scientific Reports. NATURE PUBLISHING GROUP, MACMILLAN BUILDING, 4 CRINAN ST, LONDON N1 9XW, ENGLAND, 2019, vol. 9, issue February. Not numbered (10 pages). ISSN 2045-2322.

BAŤKA, O., et al. Analysis of electric field aroud wire spinneret. NANOCON 2017 – Conference Proceedings, 9th International Conference on Nanomaterials – Research and Application. 1. ed. TANGER Ltd., 2018. Pp. 241 – 245. ISBN 978-80-87294-81-9.

SKŘIVÁNEK, J., et al. EFFECT ANALYSIS OF THE STRING CROSS-SECTION ON THE ELECTROSTATIC SPINNING PROCES. Nanocon 2017, Conference Proceedings, 9th International Conference on Nanomaterials – Research and Application. TANGER Ltd., 2018. Pp. 224 – 228. ISBN 978-80-87294-81-9.

BÍLEK, M., Š. KOVÁŘ, and J. SKŘIVÁNEK. Mathematical model of elastic heald. 12th International Conference on the Theory of Machines and Mechanisms.2017. Pp. 315 – 321. ISSN 22110984.

SKŘIVÁNEK, J., M. BÍLEK, and M. KAŠPÁREK. Control optimisation of the new drive of small diameter knitting machines. Autex Research Journal. LODZ 90-924, POLAND: Technical University of Lodz, 2017, vol. 17, issue 1, Pp. 1 – 5. ISSN 1470-9589.

VYSLOUŽILOVÁ, L., et al. Needleless coaxial electrospinning: A novel approach to mass production of coaxial nanofibers. International Journal of Pharmaceutics. 1. ed. AMSTERDAM: ELSEVIER SCIENCE BV, 2017, vol. 516, issue 1-2. Pp. 293 – 300. ISSN 0378-5173.

SKŘIVÁNEK, J., et al. DESIGN OF ELECTRODE FOR COAXIAL ELECTROSPINNING. NANOCON 2016 – Conference Proceedings, 8th International Conference on Nanomaterials – Research and Application. Ostrava: TANGER Ltd., 2016. Pp. 303 – 307. ISBN 9788087294710.
VALTERA, J., et al. Wire spinner for coaxial electrospinning. NANOCON 2015-Conference Proceedings. 1. ed. Ostrava, Czech Republic: TANGER Ltd., 2015. Pp. 270 – 275. ISBN 978-80-87294-63-5.
BÍLEK, M., Š. KOVÁŘ, and J. SKŘIVÁNEK. Mathematical modelling of the heald shaft. Autex Research Journal. LODZ 90-924, POLAND: Technical University of Lodz, 2016, vol. 16, issue 4. Pp. 175 – 181. ISSN 1470-9589.
VYSLOUŽILOVÁ, L., et al. Visualisation of the electrospinning process. Nanofibers, Applications and Related Technologies – NART 2015. 1. ed. Liberec: Technical University of Liberec, 2015. Pp. 37 – 47. ISBN 978-80-7494-265-5.
BÍLEK, M., and J. SKŘIVÁNEK. Mathematical Model of the Heald with Damping Element. Autex Research Journal. 1. ed., 2015, vol. 15, issue 1. Pp. 1 – 7. ISSN 1470-9589.
URSÍNY, P., et al. Mechanical Properties of Traditional and Nanofibre Textiles. Autex Research Journal. 1. ed. Lodz: AUTEX, Technical University of Lodz, 2015, vol. 15, issue 3. Pp. 198 – 206. ISSN 1470-9589.
LUKÁŠ, D., et al. Alternating Current Electrospinning Method for Preparation of Nanofibrous Materials. Nanocon. 1. ed. Ostrava, 2014. Pp. 302 – 305. ISBN 978-80-87294-47-5.
POKORNÝ, P., et al. Emitor of Nanofibers. 20th International Conference STRUTEX Structure and Structural Mechanics of Textiles. 1. ed. Liberec, Czech Republic: Technical University of Liberec, 2014. Pp. 85 – 88. ISBN 978-80-7494-139-9.
POKORNÝ, P., aj. Effective AC needleless and collectorless electrospinning for yarn production. Physical Chemistry Chemical Physics. 1. vyd. Royal Society of Chemistry, 2014, vol. 16, issue. 48. Pp. 26816 – 26822. ISSN 1463-9076.

H-index and citation index

H-index: 5
Citation index according ISI Web of Knowledge: 125 (number of citation till October 25, 2020)

Patents and industrial collaboration

Patents granted by the World Intellectual Property Organization or Industrial Property Office

KOČIŠ, L., et al. Method for production of polymeric nanofibers by spinning of solution or melt of polymer in electric field, and a linear formation from polymeric nanofibers prepared by this method [patent]. Granted at 2019/10/09 as No. EP2931951.
KOČIŠ, L., et al. Method for producing a polymer nanofibers by spinning a solvent solution or melt of polymer in electric field, and the linear form of the polymer nanofibers prepared by this method [patent]. Granted at 2018/07/18 as No. JP6360492B2.
KOČIŠ, L., et al. Method for production of polymeric nanofibers and linear formation from polymeric nanofibers prepared by this method [patent]. Granted at 2018/11/16 as No. RU2672630C2.
KOČIŠ, L., et al. Method for production of polymeric nanofibers by spinning of solution or melt of polymer in electric field [patent]. Granted at 2018/08/07 as No. US10041189B2.
POKORNÝ, P., et al. Method for production of polymeric nanofibers by spinning of solution or melt of polymer in electric field, and a linear formation from polymeric nanofibers prepared by this method [patent]. Granted at 2017/03/15 as No. 201380066102.
BERAN, J., et al. A method of producing polymeric nanofibres by electrical spinning of a polymer solution or melt, a spinning electrode for this method, and a device for the production of polymeric nanofibres fitted with at least one of these spinning electrodes [patent]. Granted at 2017/05/17 as No. 306772.

BERAN, J., et al. A linear fibre formation with a case of polymeric nanofibres enveloping the supporting linear formation constituting the core, the method and equipment for its production [patent]. Granted at 2016/12/07 as No. 306428.

BÍLEK, M., and Š. KOVÁŘ. Loom heald [patent]. Granted at 2015/04/01 as No. 305126.

Memberships in scientific boards and professional memberships

Member of Scientific Board of Faculty of Mechanical Engineering – Technical university of Liberec, 2013- up to now

Czech society for mechanics

Other experience

Chairman of Liberec branch Czech society for mechanics 2012-up to now