Curriculum Vitae

Pavel Zeman, Ph.D.

Researcher in field of machining technology, laser technology and machine tools.
Doctor at the Czech Technical University in Prague (CTU). Born 1977, divorced, 1 child.

Education:

2001 - 2005 doctoral study	**Czech Technical University in Prague, Faculty of Mechanical Engineering** Field of study: Manufacturing Technology (Ph.D.)
1996 - 2001 master study	**Czech Technical University in Prague, Faculty of Mechanical Engineering** Field of study: Manufacturing Technology (Ing.)

Working experience:

2/2016 - as yet Senior researcher; Project manager; Guarantor for the Machining Technology Area	**Czech Technical University in Prague, Faculty of Mechanical Engineering** Department of production machines and equipment (U12135/RCMT) • Acquisition of new projects • Member of the advisory board of the department • Project leader of several research projects funded by Czech Technology Agency, Ministry of Industry and Ministry of Education; Project manager of commercial projects.
1/2012-1/2016 Senior researcher; Educator; Head of Technology group	**Czech Technical University in Prague, Faculty of Mechanical Engineering** Department of production machines and equipment (U12135/RCMT) • Acquisition of new projects. • Leader of collaborative and commercial national projects. • Teacher and supervisor.
1/2005 – 12/2011 Senior researcher; Head of Technology group	**Czech Technical University in Prague, Faculty of Mechanical Engineering** Research Center of Manufacturing Technology (RCMT) • Leader of collaborative and commercial national projects and management and implementation of R&D projects. • Management of research project teams
2/2001 – 12/2005 Researcher	**Czech Technical University in Prague, Faculty of Mechanical Engineering** Research Center of Manufacturing Technology (RCMT) • Member of research teams in the RCMT of national and international research projects in the area of basic and applied research.

Selected significant research results in the last 5 years:

BOUZAKIS, Konstantin Dionysos et al. Effect of cutting edge preparation of coated tools on their performance in milling various materials. CIRP Journal of Manufacturing Science and Technology. 2014, 7(3), s. 264-273. ISSN 1755-5817. *Paper presents research results of application various cutting edge preparation for tool life. Research on milling TI6Al4V and AISI 304 materials. Head of the research team at CTU in Prague. Contribution 1/26. SJR: 1,349 (2014). 41 citations in SCOPUS, 27 citations in WoS.*

VILCEK, Igor, REHOR, Jan, CAROU, Diego, ZEMAN, Pavel. Residual stresses evaluation in precision milling of hardened steel based on the deflection-electrochemical etching technique. Robotics and Computer-Integrated Manufacturing. 2017, 47 112-116. ISSN 0736-5845. *Paper presents research results of residual stress distribution in a machined surface layer when milling hardened steel by electrochemical etching technique. Head of the research team at CTU in Prague. Contribution 1/3. Journal Impact Factor: 3,464 (2017). 8 citations in SCOPUS, 6 citations in WoS.*

ALAGAN, Nageswaran Tamil, ZEMAN, Pavel et al.: Investigation of micro-textured cutting tools used for face turning of alloy 718 with high-pressure cooling. Journal of Manufacturing Processes, 37 (2019), 606-616, ISSN 1526-6125. *Paper presents research results of application cutting tools with various surface microtextures when high pressure rake and flank cooling is carried out. Head of the research team at CTU in Prague. Contribution 1/5. Journal Impact Factor:* 3.462 *(2018). 11 citations in SCOPUS, 8 citations in WoS.*

MASEK, Petr, ZEMAN, Pavel, KOLAR, Petr, HOLESOVSKY, František: Edge trimming of C/PPS plates. 2019, International Journal of Advanced Manufacturing Technology, 101(1-4), pp. 157-170. ISSN 0268-3768. *Paper presents research results of development of cutting tool geometry and cutting conditions for composite machining. A member of the research team. Contribution 1/4. Journal Impact Factor: 2,496 (2018). 6 citations in SCOPUS, 5 citations in WoS.*

ALAGAN, Nageswaran Tamil, HOIER, Philipp, ZEMAN, Pavel et al. Effects of high-pressure cooling in the flank and rake faces of WC tool on the tool wear mechanism and process conditions in turning of alloy 718. Wear 434-435 (2019), ISSN 0043-1648. *Paper presents research results when high pressure cooling for turning of Inconel 718 was applied. The analysis of tool wear was carried out. Head of the research team at CTU in Prague. Contribution 1/6. Journal Impact Factor: 2,95 (2018). 0 citations in SCOPUS, 1 citations in WoS.*

Total result number within last 5 years

Conference papers: 4 | Journal papers: 8 | Prototype: 5 | Verified technology: 16 | Utility model: 3 | Functional sample: 5 | Patent: 2 | Software: 1 | Research report: 8

Total number of citations, excluding autocitations: WoS: 56 | SCOPUS: 86

H-index: 5 (WoS) | 5 (SCOPUS)

Education activity

Co-supervisor of 3 successfully Ph.D. candidates

Co-supervisor of 1 Ph.D. student

Invited lectures during last 5 years

Zeman, P., Kolář, P.: Machining of high-tech materials. In: 12th International Conference High Speed Machining. Nanjing, October 18-20 2015.

Scientific committee memberships

International Conference on High Speed Machining: member of the scientific committee since 2015, conference chairman of several scientific sections (2014, 2019)

Significant acquired research projects

Advanced laser technology. Project No. TA04011000, Technology Agency of Czech Republic, duration 7/2014 - 12/2017. Project focused on development of efficient and sustainable laser technologies. Project leader: VÚTS, a.s., other participant HOFMEISTER, s.r.o., Total budget of CZK 21 103 400, CTU budget of CZK 4 217 800, (CTU team leader).

Hybrid manufacturing of cutting tools made of ultra-hard materials. Project No. FV10282, Ministry of Industry and Trade, duration 8/2016 - 12/2018. Project focused on development of cutting tools fabricated by using laser. Project leader: ROTANA, a.s., other participant SANBORN, a.s., Total budget of CZK 17 620 000, CTU budget of CZK 6 015 000, (CTU team leader).

Laser technologies for microstructuring of bionic and functional surfaces of advanced materials. Project No. FV30265, Ministry of Industry and Trade, duration 4/2018 - 12/2021. Project focused on development of laser technologies for structuring and modification the surfaces for specific properties of wettability, adhesion, friction and biocompatibility. Project leader: HOFMEISTER, s.r.o., other participant VÚTS, a.s., Total budget of CZK 22 628 000, CTU budget of CZK 4 185 000, (CTU team leader).

New generation of cutting tools made from advanced materials with the usage of laser technology during their production. Project No. FV40324, Ministry of Industry and Trade, duration 7/2019 - 12/2022. Project focused on development of a new generation of the cutting tools made of super hard materials manufactured by optimized laser technology. Project leader: ROTANA, a.s., Total budget of CZK 17 576 800, CTU budget of CZK 5 484 800, (CTU team leader).

Information about evaluation panel membership

Since 2013 reviewer of MM Science Journal (indexed in Scopus).

Evaluator for the TRIO grant program (Ministry of Industry and Trade); Inter Excellence grant program (Ministry of Education, Youth and Sports).