

Seznam vědeckých a odborných prací

doc. Ing. Petr Červa, Ph.D.

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1 Články v odborných časopisech

- [1] Polacek, M., Cerva, P., Zdansky, J.: Lightweight online punctuation and capitalization restoration for streaming ASR systems, In: Speech Communication, 173, art. no. 103269, 2025
- [2] Mateju, L., Nouza, J., Cerva, P., Zdansky, J.: Combining multilingual resources to enhance end-to-end speech recognition systems for Scandinavian languages, In: Speech Communication, 170, art. no. 103221, 2025
- [3] Kynych, F., Cerva, P., Zdansky, J., Svendsen, T., Salvi, G.: A lightweight approach to real-time speaker diarization: from audio toward audio-visual data streams, In: EURASIP Journal on Audio, Speech, and Music Processing, 2024 (1), art. no. 62, 2024
- [4] Cerva, P., Mateju, L., Zdansky, J., Safarik, R., Nouza, J.: Identification of related languages from spoken data: Moving from off-line to on-line scenario, In: Computer Speech and Language, 68, art. no. 101180, 2021
- [5] Bohac, M., Kucharova, M., Callejas, Z., Nouza, J., Cerva, P.: A cross-lingual adaptation approach for rapid development of speech recognizers for learning disabled users, In: EURASIP Journal on Audio, Speech, and Music Processing, 2014 (1), art. no. 39, pp. 1-13, 2014
- [6] Nouza, J., Cerva, P., Kucharova, M.: Cost-efficient development of acoustic models for speech recognition of related languages, In: Radioengineering, 22 (3), pp. 866-873, 2013
- [7] Cerva, P., Silovsky, J., Zdansky, J., Nouza, J., Seps, L.: Speaker-adaptive speech recognition using speaker diarization for improved transcription of large spoken archives, In: Speech Communication, 55 (10), pp. 1033-1046, 2013
- [8] Nouza, J., Blavka, K., Cerva, P., Zdansky, J., Silovsky, J., Bohac, M., Prazak, J.: Making Czech historical Radio archive accessible and searchable for wide public, In: Journal of Multimedia, 7 (2), pp. 159-169, 2012
- [9] Silovsky, J., Cerva, P., Zdansky, J.: Comparison of generative and discriminative approaches for speaker recognition with limited data, In: Radioengineering, 18 (3), pp. 307-316, 2009
- [10] Cerva, P., Nouza, J.: MAP based speaker adaptation in very large vocabulary speech recognition of Czech, In: Radioengineering, 13 (3), pp. 42-46, 2004

2 Příspěvky ve sbornících mezinárodních konferencí

- [11] Mateju, L., Nouza, J., Polacek, M., Cerva, P.: Efficient Enhancement of Norwegian ASR Model, In: Lecture Notes in Computer Science, 16029 LNAI, pp. 36-47, 2025
- [12] Kynych, F., Zdansky, J., Cerva, P., Mateju, L.: Online Speaker Diarization Using Optimized SE-ResNet Architecture, In: Lecture Notes in Computer Science, 14102 LNAI, pp. 176-187, 2023
- [13] Nouza, J., Mateju, L., Cerva, P., Zdansky, J.: Developing State-of-the-Art End-to-End ASR for Norwegian, In: Lecture Notes in Computer Science, 14102 LNAI, pp. 200-213, 2023
- [14] Polacek, M., Cerva, P., Zdansky, J., Weingartova, L.: Online Punctuation Restoration using ELECTRA Model for streaming ASR Systems, In: Proceedings of INTERSPEECH, 2023-August, pp. 446-450, 2023
- [15] Mateju, L., Nouza, J., Cerva, P., Zdansky, J., Kynych, F.: Combining Multilingual Resources and Models to Develop State-of-the-Art E2E ASR for Swedish, In: Proceedings of INTERSPEECH, 2023-August, pp. 3252-3256, 2023
- [16] Mateju, L., Kynych, F., Cerva, P., Malek, J., Zdansky, J.: Overlapped Speech Detection in Broadcast Streams Using X-vectors, In: Proceedings of INTERSPEECH, 2022-September, pp. 4606-4610, 2022
- [17] Nouza, J., Cerva, P., Zdansky, J.: Lexicon-based vs. Lexicon-free ASR for Norwegian Parliament Speech Transcription, In: Lecture Notes in Computer Science, 13502 LNAI, pp. 401-409, 2022
- [18] Chaloupka, J., Palecek, K., Cerva, P.: Audio-visual Broadcast Transcription System Using Artificial Neural Networks, In: 2021 IEEE International Workshop of Electronics, Control, Measurement, Signals and their Application to Mechatronics, ECMSM 2021, art. no. 9468830, 2021
- [19] Mateju, L., Kynych, F., Cerva, P., Zdansky, J., Malek, J.: Using X-vectors for speech activity detection in broadcast streams, In: Proceedings of INTERSPEECH, 6, pp. 4161-4165, 2021

- [20] Cerva, P., Mateju, L., Kynych, F., Zdansky, J., Nouza, J.: Identification of Scandinavian Languages from Speech Using Bottleneck Features and X-Vectors, In: Lecture Notes in Computer Science, 12848 LNAI, pp. 371-381, 2021
- [21] Chaloupka, J., Palecek, K., Cerva, P., Zdansky, J.: Optical character recognition for audio-visual broadcast transcription system, In: 11th IEEE International Conference on Cognitive Infocommunications, CogInfoCom 2020, art. no. 9237867, pp. 229-232, 2020
- [22] Cerva, P., Volna, V., Weingartova, L.: Dealing with Newly Emerging OOVs in Broadcast Programs by Daily Updates of the Lexicon and Language Model, In: Lecture Notes in Computer Science, 12335 LNAI, pp. 97-107, 2020
- [23] Nouza, J., Cerva, P., Zdansky, J.: Very fast keyword spotting system with real time factor below 0.01, In: Lecture Notes in Computer Science, 12284 LNAI, pp. 426-436, 2020
- [24] Mateju, L., Cerva, P., Zdansky, J.: An approach to online speaker change point detection using DNNs and WFSTs, In: Proceedings of INTERSPEECH, 2019-September, pp. 649-653, 2019
- [25] Malek, J., Zdansky, J., Cerva, P.: Robust recognition of speech with background music in acoustically under-resourced scenarios, In: ICASSP 2018, art. no. 8462674, pp. 5624-5628, 2018
- [26] Mateju, L., Cerva, P., Zdansky, J., Safarik, R.: Using deep neural networks for identification of slavic languages from acoustic signal, In: Proceedings of INTERSPEECH, 2018-September, pp. 1803-1807, 2018
- [27] Malek, J., Zdansky, J., Cerva, P.: Robust recognition of conversational telephone speech via multi-condition training and data augmentation, In: Lecture Notes in Computer Science, 11107 LNAI, pp. 324-333, 2018
- [28] Nouza, J., Cerva, P., Safarik, R.: Cross-Lingual Adaptation of Broadcast Transcription System to Polish Language Using Public Data Sources, In: Lecture Notes in Computer Science, 10930 LNAI, pp. 31-41, 2018
- [29] Malek, J., Zdansky, J., Cerva, P.: Robust Automatic Recognition of Speech with background music, In: ICASSP, art. no. 7953150, pp. 5210-5214, 2017
- [30] Mateju, L., Cerva, P., Zdansky, J., Malek, J.: Speech Activity Detection in online broadcast transcription using Deep Neural Networks and Weighted Finite State Transducers, In: ICASSP, art. no. 7953200, pp. 5460-5464, 2017
- [31] Mateju, L., Cerva, P., Zdansky, J.: Investigation into the Use of WFSTs and DNNs for Speech Activity Detection in Broadcast Data Transcription, In: Communications in Computer and Information Science, 764, pp. 341-358, 2017
- [32] Rott, M., Cerva, P.: Speech-to-text summarization using automatic phrase extraction from recognized text, In: Lecture Notes in Computer Science, 9924 LNCS, pp. 101-108, 2016
- [33] Mateju, L., Cerva, P., Zdansky, J.: Study on the use of deep neural networks for speech activity detection in broadcast recordings, In: ICETE 2016, 5, pp. 45-51, 2016
- [34] Malek, J., Cerva, P., Seps, L., Nouza, J.: Study on the use and adaptation of bottleneck features for robust speech recognition of nonlinearly distorted speech, In: ICETE 2016, 5, pp. 65-71, 2016
- [35] Nouza, J., Safarik, R., Cerva, P.: ASR for south slavic languages developed in almost automated way, In: Proceedings of INTERSPEECH, 08-12-September-2016, pp. 3868-3872, 2016
- [36] Malek, J., Silovsky, J., Cerva, P., Koldovsky, Z., Nouza, J., Zdansky, J.: Compensation of nonlinear distortions in speech for automatic recognition, In: TSP 2015, art. no. 7296378, 2015
- [37] Nouza, J., Blavka, K., Bohac, M., Cerva, P., Malek, J.: System for producing subtitles to internet audio-visual documents, In: TSP 2015, art. no. 7296415, 2015
- [38] Mateju, L., Cerva, P., Zdansky, J.: Investigation into the use of deep neural networks for LVCSR of Czech, In: ECMSM 2015, art. no. 7208708, 2015
- [39] Rott, M., Cerva, P.: Investigation of latent semantic analysis for clustering of czech news articles, In: DEXA, pp. 223-227, 2014
- [40] Nouza, J., Cerva, P., Zdansky, J., Blavka, K., Bohac, M., Silovsky, J., Chaloupka, J., Kucharova, M., Seps, L., Malek, J., Rott, M.: Speech-to-text technology to transcribe and disclose 100,000+ hours of bilingual documents from historical Czech and Czechoslovak radio archive, In: Proceedings of INTERSPEECH, pp. 964-968, 2014
- [41] Seps, L., Malek, J., Cerva, P., Nouza, J.: Investigation of deep neural networks for robust recognition of nonlinearly distorted speech, In: Proceedings of INTERSPEECH, pp. 363-367, 2014
- [42] Nouza, J., Cerva, P., Silovsky, J.: Dealing with bilingualism in automatic transcription of historical archive of Czech radio, In: Lecture Notes in Computer Science, 8158 LNCS, pp. 238-246, 2013
- [43] Kucharova, M., Nouza, J., Cerva, P.: Impact of microphone on computer applications with voice input modality, In: TSP 2013, art. no. 6613976, pp. 469-473, 2013

- [44] Nouza, J., Cerva, P., Silovsky, J.: Adding controlled amount of noise to improve recognition of compressed and spectrally distorted speech, In: ICASSP, art. no. 6639232, pp. 8046-8050, 2013
- [45] Rott, M., Cerva, P.: SummEC: A summarization engine for Czech, In: Lecture Notes in Computer Science, 8082 LNAI, pp. 527-535, 2013
- [46] Chaloupka, J., Nouza, J., Cerva, P., Malek, J.: DOWDATING lexicon and language model for automatic transcription of Czech historical spoken documents, In: Lecture Notes in Computer Science, 8082 LNAI, pp. 201-208, 2013
- [47] Chaloupka, J., Cerva, P., Silovsky, J., Zdansky, J., Nouza, J.: Modification of the speech feature extraction module for the improvement of the system for automatic lectures transcription, In: Proceedings Elmar, art. no. 6338511, pp. 223-226, 2012
- [48] Nouza, J., Cerva, P., Zdansky, J., Kucharova, M.: A study on adapting Czech automatic speech recognition system to Croatian language, In: Proceedings Elmar, art. no. 6338512, pp. 227-230, 2012
- [49] Cerva, P., Silovsky, J., Zdansky, J., Smola, O., Blavka, K., Palecek, K., Nouza, J., Malek, J.: Browsing, indexing and automatic transcription of lectures for distance learning, In: MMSP 2012, art. no. 6343440, pp. 198-202, 2012
- [50] Silovsky, J., Zdansky, J., Nouza, J., Cerva, P., Prazak, J.: Incorporation of the ASR output in speaker segmentation and clustering within the task of speaker diarization of broadcast streams, In: MMSP 2012, art. no. 6343426, pp. 118-123, 2012
- [51] Nouza, J., Blavka, K., Zdansky, J., Cerva, P., Silovsky, J., Bohac, M., Chaloupka, J., Kucharova, M., Seps, L.: Large-scale processing, indexing and search system for Czech audio-visual cultural heritage archives, In: MMSP 2012, art. no. 6343465, pp. 337-342, 2012
- [52] Silovsky, J., Cerva, P., Zdansky, J., Nouza, J.: Study on integration of speaker diarization with speaker adaptive speech recognition for broadcast transcription, In: INTERSPEECH 2012, 1, pp. 478-481, 2012
- [53] Cerva, P., Silovsky, J., Zdansky, J., Nouza, J., Malek, J.: Real-time lecture transcription using ASR for Czech hearing impaired or deaf students, In: INTERSPEECH 2012, 1, pp. 762-765, 2012
- [54] Nouza, J., Blavka, K., Bohac, M., Cerva, P., Zdansky, J., Silovsky, J., Prazak, J.: Voice technology to enable sophisticated access to historical audio archive of the Czech radio, In: Communications in Computer and Information Science, 247 CCIS, pp. 27-38, 2012
- [55] Cerva, P., Nouza, J., Silovsky, J.: Study on cross-lingual adaptation of a Czech LVCSR System towards Slovak, In: Lecture Notes in Computer Science, 6800 LNCS, pp. 81-87, 2011
- [56] Silovsky, J., Prazak, J., Cerva, P., Zdansky, J., Nouza, J.: PLDA-based clustering for speaker diarization of broadcast streams, In: Proceedings of INTERSPEECH, pp. 2909-2912, 2011
- [57] Cerva, P., Palecek, K., Silovsky, J., Nouza, J.: Using unsupervised feature-based speaker adaptation for improved transcription of spoken archives, In: Proceedings of INTERSPEECH, pp. 2565-2568, 2011
- [58] Cerva, P., Palecek, K., Silovsky, J., Nouza, J.: An investigation into VTLN for improved transcription of Czech broadcast programs, In: Proceedings Elmar, art. no. 6044296, pp. 201-204, 2011
- [59] Silovsky, J., Cerva, P., Zdansky, J.: Assessment of speaker recognition on lossy codecs used for transmission of speech, In: Proceedings Elmar, art. no. 6044294, pp. 205-208, 2011
- [60] Nouza, J., Cerva, P., Chaloupka, J.: Rainbow bridge: Training center based on voice technology for people with physical disabilities, In: HEALTHINF 2011, pp. 529-533, 2011
- [61] Nouza, J., Zdansky, J., Cerva, P.: System for automatic collection, annotation and indexing of Czech broadcast speech with full-text search, In: MELECON, art. no. 5476306, pp. 202-205, 2010
- [62] Nouza, J., Zdansky, J., Cerva, P., Silovsky, J.: Challenges in speech processing of Slavic languages (case studies in speech recognition of Czech and Slovak), In: Lecture Notes in Computer Science, 5967 LNCS, pp. 225-241, 2010
- [63] Nouza, J., Cerva, P., Zdansky, J.: Very large vocabulary voice dictation for mobile devices, In: Proceedings of INTERSPEECH, pp. 995-998, 2009
- [64] Silovsky, J., Cerva, P., Zdansky, J.: MLLR transforms based speaker recognition in broadcast streams, In: Lecture Notes in Computer Science, 5641 LNAI, pp. 423-431, 2009
- [65] Chaloupka, J., Nouza, J., Zdansky, J., Cerva, P., Silovsky, J., Kroul, M.: Voice technology applied for building a prototype smart room, In: Lecture Notes in Computer Science, 5398 LNAI, pp. 104-111, 2009
- [66] Callejas, Z., Nouza, J., Cerva, P., Lopez-Cozar, R.: Cost-efficient cross-lingual adaptation of a speech recognition system, In: Advances in Intelligent and Soft Computing, 57, pp. 331-338, 2009
- [67] Nouza, J., Silovsky, J., Zdansky, J., Cerva, P., Kroul, M., Chaloupka, J.: Czech-to-Slovak adapted broadcast news transcription system, In: Proceedings of INTERSPEECH, pp. 2683-2686, 2008

- [68] Cerva, P., Zdansky, J., Silovsky, J., Nouza, J.: Study on speaker adaptation methods in the broadcast news transcription task, In: Lecture Notes in Computer Science, 5246 LNAI, pp. 277-284, 2008
- [69] Cerva, P., Nouza, J.: Design and development of voice controlled aids for motor-handicapped persons, In: Proceedings of INTERSPEECH 2007, 2, pp. 1185-1188, 2007
- [70] Nouza, J., Zdansky, J., Cerva, P., Kolorenc, J.: Continual On-line monitoring of Czech spoken broadcast programs, In: INTERSPEECH 2006 - ICSLP, 4, pp. 1650-1653, 2006
- [71] Cerva, P., Nouza, J., Silovsky, J.: Two-step unsupervised speaker adaptation based on speaker and gender recognition and HMM combination, In: INTERSPEECH 2006 - ICSLP, 5, pp. 2326-2329, 2006
- [72] Nouza, J., Zdansky, J., Cerva, P., Kolorenc, J.: A system for information retrieval from large records of Czech spoken data, In: Lecture Notes in Computer Science, 4188 LNCS, pp. 485-492, 2006
- [73] Nouza, J., Zdansky, J., David, P., Cerva, P., Kolorenc, J., Nejedlova, D.: Fully automated system for Czech spoken broadcast transcription with very large (300K+) lexicon, In: 9th European Conference on Speech Communication and Technology, pp. 1681-1684, 2005
- [74] Cerva, P., Nouza, J.: Supervised and unsupervised speaker adaptation in large vocabulary continuous speech recognition of Czech, In: Lecture Notes in Computer Science, 3658 LNAI, pp. 203-210, 2005