

Prof. Dr. Bogdan BABYCH

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EMPLOYMENT / RESEARCH / ACADEMIC DEGREES / EDUCATION

Since 2020: Heidelberg University, Institute for Translation and Interpreting (IÜD)  
-- Professor of Translation Studies

2010 – 2020: University of Leeds, Centre for Translation Studies (CTS)  
-- Associate Professor (2014-2020); Lecturer (2010-2014)  
-- Principal Investigator for Leeds teams in funded research projects:  
- EU FP7 Marie Curie Industry-Academia Partnership and Pathways (IAPP)  
"HyghTra: Hybrid High-Quality Translation System" (2010-2014)  
- EU FP7 ICT ACCURAT: "Analysis and evaluation of Comparable Corpora  
for Under Resourced Areas of machine Translation" (2010-2012);  
-- Co-Investigator:  
- EU FP7 project "Translation, Terminology and Comparable Corpora" (TTC): 2010-2012

2005 – 2010: University of Leeds, CTS  
-- Research Fellow in EU FP7, Research Councils UK and industry-funded projects:  
-- Projects: - Assisting Translators in Indirect Lexical Transfer (EPSRC ASSIST): 2004-2007  
- Translation Equivalents in Comparable Corpora (Leverhulme Trust:  
*Leverhulme Early Career Research Fellowship*): 2007-2009  
- Intelligent access to shared translation resources (TAUS fellowship): 2009-2010  
- EU FP7 "Translation, Terminology and Comparable Corpora" (TTC): 2010-2012  
- EU FP7 "Analysis and evaluation of Comparable Corpora  
for Under Resourced Areas of machine Translation" (ACCURAT): 2010-2012

2002 – 2005: PhD in Machine Translation, University of Leeds  
Thesis title: "Information extraction technology in Machine Translation:  
IE methods for improving and evaluating MT quality"  
White Rose PhD studentship, supervisors: Anthony Hartley (Leeds), Yorick Wilks (Sheffield)

2000 – 2001: "Lernout & Hauspie Speech Products", Belgium  
Corporate R&D, Linguistic Engineering Department  
-- Computational Linguist at Text-to-Speech systems group

1996 – 2000: Candidate of Sciences in Ukrainian Linguistics,  
Ukrainian National Academy of Sciences, Institute for Language Information Research

1991 – 1996: Specialist in Computational Linguistics and Ukrainian Linguistics,  
Taras Shevchenko National University of Kyiv (Ukraine)

## RESEARCH GRANTS

### *EU Grants*

HyghTra (Hybrid High Quality Machine Translation System), EU FP7 Marie Curie IAPP  
Role: FP7 Project Co-ordinator, Principal Investigator (Leeds), Co-author of the project proposal  
Value: EUR 833,193 (total), including EUR 571,811 for the University of Leeds  
Funded by FP7 Marie Curie Industry-Academia Partnership and Pathways grant, 2010-2014

ACCURAT: Analysis and evaluation of Comparable Corpora for Under Resourced Areas  
of Machine Translation)  
Principal Investigator (CTS Leeds team), co-author of the project proposal  
Value EUR 341,110 (for Leeds)  
Funded by FP7 ICT STREP grant, 2010-2012

TTC: Translation, Terminology and Comparable Corpora  
Co-Investigator (CTS Leeds team), co-author of the project proposal  
Value: EUR 364,814 (for Leeds)  
Funded by FP7 ICT STREP grant, 2010-2012

### *German grant*

Philologie – Technologie – Translation, DAAD-Programm  
„Germanistische Institutspartnerschaften weltweit“, 01.01.2021-31.12.2023  
(with Prof. Dr. Vahram Atayan)  
Co-investigator  
Funded by the German Academic Exchange Service - DAAD

### *UK grants*

Leverhulme Early Career Research Fellowship (2007-2009)  
Principal Investigator, author of the project proposal  
Value GBP 40,000  
Project: “Translation Strategies in Comparable Corpora”

IntelliText: Intelligent Tools for Creating and Analysing Electronic Text Corpora for Humanities Research  
Main author of the proposal, Co-Investigator  
Value GBP 159,293  
Funded by UK AHRC grant (2010-2011)

### *Industrial funding*

Intelligent access to shared translation resources  
Author of the proposal, TAUS Fellow, Supervisor of TAUS PhD student  
Partners: TAUS, Spartan Software, and CTS - University of Leeds  
Value: GBP 30,000  
Funded by TAUS – Translation Automation User Society (2009-2011)

Usability evaluation of Machine Translation systems for an email communication service  
Co-author of the proposal, research fellow on the project  
Value: GBP 10,000  
Funded by Translution Ltd. (2003-2004)

### *Collaboration with industrial partners on research and development of translation technologies*

Lingenio GmbH (Germany) – Language engineering, Rule-based and hybrid Machine Translation  
Successful grant: FP7 HyghTra (2010-2014), Proposals: H2020 IntelliWrite, FT2MT  
Translation Automation User Society (TAUS, The Netherlands) – Shared translation resources  
Project: Intelligent access to shared translation resources (TAUS fellowship, 2009-2011)  
- research and development of the prototype for TAUS free terminology service at [www.tausdata.org](http://www.tausdata.org)  
Tilde (Latvia), Linguattec GmbH, (Germany), Zemanta d.o.o., (Slovenia),  
Sogitec Industries (France), Syllabs SARL (France).  
Co-partners in FP7 projects: ACCURAT, TTC (2010-2012)

## RESEARCH INTERESTS

- Machine Translation (MT), Automatic extraction of translation equivalents, Hybrid MT
- Human and Automated evaluation of Machine Translation systems
- Workflow design and evaluation for Computer-Assisted Translation technologies
- Information Extraction (IE) for MT, Improvement of translation quality with IE techniques
- Automatic multilingual detection of terrorist propaganda messages in electronic media
- Computational modelling of dialectological and historic variation in languages
- Ukrainian and Slavonic Linguistics: Morphology and Syntax, MT for under-resourced languages
- Corpus linguistics, Automatic extraction of translation equivalents from Comparable Corpora

*Representative publications (see RESEARCH PUBLICATIONS section for the full list):*

Atayan, Vahram and Bogdan Babych. (2022). Translating Argumentation: Distributional Semantic Analysis of Argumentation Resources in Parallel Corpora. *The Prague Bulletin of Mathematical Linguistics*, (119), 23-36.

Jakub Piskorski, Bogdan Babych, Zara Kancheva, Olga Kanishcheva, Maria Lebedeva, Michał Marcińczuk, Preslav Nakov, Petya Osenova, Lidia Pivovarova, Senja Pollak, Pavel Přibáň, Ivaylo Radev, Marko Robnik-Šikonja, Vasyl Starko, Josef Steinberger, Roman Yangarber (2021). Slav-NER: the 3rd Cross-lingual Challenge on Recognition, Normalization, Classification, and Linking of Named Entities across Slavic languages. In *Proceedings of the 8th Workshop on Balto-Slavic Natural Language Processing*. European Association for Computational Linguistics

Babych, Bogdan. (2019). "Unsupervised Induction of Ukrainian Morphological Paradigms for the New Lexicon: Extending Coverage for Named Entities and Neologisms using Inflection Tables and Unannotated Corpora." In *Proceedings of the 7th Workshop on Balto-Slavic Natural Language Processing at ACL 2019*, Florence, Italy. August 2019, pp. 1-11  
URL: <https://www.aclweb.org/anthology/W19-3701.pdf>

Bogdan Babych (2018). Development and evaluation of phonological models for cognate identification. EAMT-2018. *Proceedings of the 21st Annual Conference of the European Association for Machine Translation*. 28–30 May 2018. Universitat d'Alacant. Alacant, Spain  
URL: [https://ua.es/dspace/bitstream/10045/76019/1/EAMT2018-Proceedings\\_06.pdf](https://ua.es/dspace/bitstream/10045/76019/1/EAMT2018-Proceedings_06.pdf)

Bogdan Babych (2016) Graphonological Levenshtein edit distance: application for automated cognate identification. *Proceedings of the 19th annual conference of the European Association for Machine Translation (EAMT)*, Riga, Latvia, 2016; *Baltic J. Modern Computing* 4 (2), pp.115-128.

Bogdan Babych, Serge Sharoff (2016). Ukrainian part-of-speech tagger for hybrid MT: Rapid induction of morphological disambiguation resources from a closely related language. In: *Proc. of EAMT 2016 Fifth Workshop on Hybrid Approaches to Translation (HyTra)*.  
URL: [http://glicom.upf.edu/hytra2016/pdf/HyTra-5\\_paper2.pdf](http://glicom.upf.edu/hytra2016/pdf/HyTra-5_paper2.pdf)

Bogdan Babych, Anthony Hartley, Serge Sharoff, & Olga Mudraya (2007): Assisting translators in indirect lexical transfer. *ACL 2007: proceedings of the 45th Annual Meeting of the Association for Computational Linguistics*, Prague, Czech Republic, June 2007; pp. 136-143

Bogdan Babych and Anthony Hartley (2003). Improving Machine Translation quality with automatic Named Entity recognition. *Proc. of 7th International EAMT workshop on MT and other language technology tools at the 10th Conference of the European Chapter of the Association for Computational Linguistics EACL 2003*, Budapest, Hungary.

## RESEARCH AND TEACHING ADMINISTRATION

2017-2018: Subject Research Leader for the Centre for Translation Studies, University of Leeds  
- Co-ordinated research planning, mentoring and support, research leave applications and reports

2014-2017: Director of Impact for the School of Languages, Cultures and Societies (LCS),  
University of Leeds  
- Leading discussion with colleagues and research group in LCS on engagement with non-academic partners, industrial companies, museums, galleries, creative industries  
- Support with “Pathways to impact” sections in grant applications for LCS  
- Identification and support with Impact Case Studies for the UK Research Excellence Framework

2015 – 2016: Programme Director for MA programme in Applied Translation Studies (MAATS)  
CTS Leeds MAATS programme is part of European Master in Translation (EMT) network  
Co-ordinating modules and student feedback on the programme  
for ≈90 students on the programme

## SCHOLARSHIP

Co-organizer of a BSNLP 2021 Workshop:

The 8th Workshop on Balto-Slavic Natural Language Processing, April 2021.  
Collocated with EACL2021

Co-organizer of a HyTra workshop series on Hybrid Approaches to Translation (HyTra)

Chair of the organizing committee of HyTra-4 (at ACL-2015 Beijing, China).

Chair of the Program Committee in all editions: HyTra-1 (2012) to HyTra-5 (2016)

Reviewer and Member of the Programme Committees:

ACL – Association for Computational Linguistics conference

NLP\_HEALTHCARE

Machine Translation Journal, Springer

Language Resources and Evaluation (LRE) Journal, Springer

Machine Translation (MT) Summit conference

EAMT – European Association for Machine Translation conference

LREC – Language Resources and Evaluation conference

EACL – Conference of the European Chapter of the Association for Computational Linguistics

CICLing – Conference on Intelligent Text Processing and Computational Linguistics

WILDRE - Workshop on Indian Language Data: Resources and Evaluation

Peer review of grant applications:

Swiss National Science Foundation (SNF)

UK Engineering and Physical Sciences Research Council (EPSRC)

Research Foundation Flanders (FWO)

Research Council and IOF Council of the University of Leuven, Belgium

External examiner:

- Wei Liu, University of Bangor, UK (2016), PhD topic: “Evaluating parallel corpora and translation quality for Chinese and English”
- Patrick Corness, Warwick University, UK (2021), via portfolio
- Lifeng Han, Dublin City University, Ireland (2021), PhD topic: “Investigation into Multi-word Expressions in Machine Translation”

#### Research student supervision, topics:

- Oksana Lustenhouwer 2023- : Ideology in Ukrainian war discourse:  
identification of manipulative messages in German and British news corpora  
Current PhD student, Universität Heidelberg
- Sameer Olimat 2015-2019: "Intertextual and contextual methods for identification of euphemisms"  
PhD in 2019 from University of Leeds
- Marco Brunello, 2010-2014: "Domain and genre dependency in Statistical Machine Translation"  
PhD in 2014 from University of Leeds
- Yunfei Xu, 2019- "Use of Controlled Language in improving the quality of MT output  
in subtitling translation"  
Current PhD student (University of Leeds)
- Elizaveta Vasserman, 2017-2022: "The theory of translation by Andrei Fedorov,  
and its place in translation studies"  
PhD in 2022 from University of Leeds
- Linsey Clark (2009-2010) "The use of collaborative translation environment  
for translator training"  
MA by research 2010 from University of Leeds

TEACHING : Courses on Translation Technologies, Translation theory, Corpus Linguistics, Machine Translation Terminology management and extraction

PROGRAMMING : Python, Perl, Prolog, JavaScript/HTML/CGI, bash

LANGUAGES: English (C2), Ukrainian (native), German (B2), Spanish (B1)

#### RESEARCH PUBLICATIONS

2023

Oleg Kapanadze, Nunu Kapanadze, Bogdan Babych and Natia Putkaradze. 2023. Automatic Morphological Analysis and Syntactic Parsing for the Georgian Language. In: Proceedings of 14th Tbilisi Symposium on Logic, Language and Computation (TbiLLC 2023)

2022

Vahram Atayan, Bogdan Babych (2022). Translating argumentation: distributional semantic analysis of argumentation resources in parallel corpora. In: The Prague Bulletin of Mathematical Linguistics (to appear).

2021

Jakub Piskorski, Bogdan Babych, Zara Kancheva, Olga Kanishcheva, Maria Lebedeva, Michał Marcińczuk, Preslav Nakov, Petya Osenova, Lidia Pivovarov, Senja Pollak, Pavel Přibáň, Ivaylo Radev, Marko Robnik-Šikonja, Vasył Starko, Josef Steinberger, Roman Yangarber (2021). Slav-NER: the 3rd Cross-lingual Challenge on Recognition, Normalization, Classification, and Linking of Named Entities across Slavic languages. In Proceedings of the 8th Workshop on Balto-Slavic Natural Language Processing. European Association for Computational Linguistics

2019

Babych, Bogdan. (2019). "Unsupervised Induction of Ukrainian Morphological Paradigms for the New Lexicon: Extending Coverage for Named Entities and Neologisms using Inflection Tables and Unannotated Corpora." In Proceedings of the 7th Workshop on Balto-Slavic Natural Language Processing at ACL 2019, Florence, August 2019, pp. 1-11.

Babych, Bogdan, Fangzhong Su, Anthony Hartley, Ahmet Aker, Monica Lestari Paramita, Paul Clough, and Robert Gaizauskas. (2019). "Cross-Language Comparability and Its Applications for MT." In Using Comparable Corpora for Under-Resourced Areas of Machine Translation, pp. 13-53. Springer.

Babych, Bogdan, Yu Chen, Andreas Eisele, Sabine Hunsicker, Mārcis Pinnis, Inguna Skadiņa, Raivis Skadiņš et al. "(2019). Training, Enhancing, Evaluating and Using MT Systems with Comparable Data." In Using Comparable Corpora for Under-Resourced Areas of Machine Translation, pp. 189-254. Springer.

Rapp, Reinhard, Vivian Xu, Michael Zock, Serge Sharoff, Richard Forsyth, Bogdan Babych, Chenhui Chu, Toshiaki Nakazawa, and Sadao Kurohashi. (2019). "New Areas of Application of Comparable Corpora." In *Using Comparable Corpora for Under-Resourced Areas of Machine Translation*, pp. 255-290. Springer.

2018

Babych, Bogdan (2018). Development and evaluation of phonological models for cognate identification. EAMT-2018. Proceedings of the 21st Annual Conference of the European Association for Machine Translation. 28–30 May 2018. Universitat d'Alacant. Alacant, Spain URL: [https://rua.ua.es/dspace/bitstream/10045/76019/1/EAMT2018-Proceedings\\_06.pdf](https://rua.ua.es/dspace/bitstream/10045/76019/1/EAMT2018-Proceedings_06.pdf)

Babych, Bogdan (2018). Construction Grammar Corpus Annotation for Morphologically Rich Languages. Presentation at CAMRL2018: Workshop on Computational Approaches to Morphologically Rich Languages. Leeds, 3 July 2018.

Babych, Bogdan (2018). Unsupervised discovery of Construction Grammar representations for under-resourced languages. Presentation at LxGR2018 symposium: Corpus Approaches to Lexicogrammar. Edge Hill University, 16 June 2018 URL: <https://www.edgehill.ac.uk/english/files/2018/06/LxGr2018.Babych.slides.pdf>

2017

Babych, B. (2017). Unsupervised induction of morphological lexicon for Ukrainian. In: Proc. of CAMRL2017: Workshop on Computational Approaches to Morphologically Rich Languages. Leeds. 5 July 2017

Yu Yuan, Bogdan Babych and Serge Sharoff. (2017) Reference-free System for Automated Human Translation Quality Estimation. In.: Proc. of 12th Iberian Conference on Information Systems and Technologies (CISTI), 21-24 June 2017

Babych, B. (2017). Deconstruction of the Russian propaganda discourse in military history: Identifying and neutralizing linguistic means of falsifying history of the Ukrainian division "Halychyna". In: Proc. of 2<sup>nd</sup> International forum on crisis communications: "Information stream models as tactical instruments of communication content security". Military Institute of National Taras Shevchenko University, Kyiv, 22-23 May 2017, pp.: 80-89

2016

Babych, B. (2016). Graphonological Levenshtein Edit Distance: Application for automated cognate identification. *Baltic Journal of Modern Computing*. Vol.4 (2016), No.2 (EAMT-2016 volume), 115-128 URL: <http://anthology.aclweb.org/W/W16/W16-3402.pdf>

Babych, B., Sharoff, S. (2016). Rapid induction of morphological disambiguation resources from a closely related language. Fifth Workshop on Hybrid Approaches to Translation (HyTra-5), Riga, Latvia.

Babych, B. (2016) A hybrid machine translation system between English, Ukrainian, Arabic and Russian for automated terrorist activity detection. In: Proc. of XII International Conference "Military education and science: the present and the future" Military Institute of Taras Shevchenko National University, 25 November 2016, Kyiv, Ukraine.

Yuan, Y., Sharov, S., & Babych, B. (2016). MoBiL: A hybrid feature set for Automatic Human Translation quality assessment. In Proceedings of the Tenth International Conference on Language Resources and Evaluation (LREC 2016), Ljubljana, Slovenia.

Bogdan Babych (2016). Deconstruction of the totalitarian discourse as a factor of country's information security: Ukrainian post-2013 literature of Revolution and war as resistance to Russia's hybrid aggression in the cultural information space. Proc. of International forum on crisis communications, Military Institute of National Taras Shevchenko University, Kyiv, Ukraine, 9-10 June 2016, pp.: 153-157

2015

Babych, B., Atwell, E (2015). Multilingual Information Extraction framework for real-time detection of terrorist propaganda threats in on-line communication. In: Proc. of XI International Conference "Military education

and science: the present and the future" Military Institute of Taras Shevchenko National University, 27 November 2015, Kyiv, Ukraine.

2014

Babych, B. (2014). Automated MT evaluation metrics and their limitations. *Revista Tradumàtica: tecnologies de la traducció*. Desembre 2014: Número 12, Traducció i qualitat. ISSN: 1578-7559, pp. 464-470.

Bogdan Babych, Jonathan Geiger, Mireia Ginesti Rosell, Kurt Eberle (2014) Deriving de/het gender classification for Dutch nouns for rule-based MT generation tasks. *EACL 2014 Third Workshop on Hybrid Approaches to Translation (HyTra)*

Bogdan Babych, Anne Buckley, and Svitlana Babych (2014). Advanced learners' errors in correcting Machine Translation output: comparative corpus-based analysis. *TALC-2014. Teaching and Language Corpora conference*. Lancaster.

2013

Marta R. Costa-jussa`, Rafael E. Banchs, Reinhard Rapp, Patrik Lambert, Kurt Eberle, Bogdan Babych (2013). *Workshop on Hybrid Approaches to Translation: Overview and Developments*. In: *Proc of 2nd HyTra Workshop, ACL 2013*.

Svitlana Babych, Kurt Eberle, Bogdan Babych (2013). Development of hybrid Machine Translation systems for under-resourced languages: Automated creation of lexical and morphological resources for MT. In: *Proc. of 6th International Conference: Applied and Literary Translation and Interpreting: Theory, Methodology, Practice*. Kyiv, Ukraine 5-6 April 2013.

2012

Marcis Pinnis, Radu Ion, Dan Stefanescu, Fangzhong Su, Inguna Skadina, Andrejs Vasiljevs, Bogdan Babych (2012) *ACCURAT Toolkit for Multi-Level Alignment and Information Extraction from Comparable Corpora*. In *Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics (ACL 2012): Demo Session, July 8 - July 14, 2012, Jeju, Korea*.

Bogdan Babych, Anne Buckley, Richard Hughes, Svitlana Babych (2012) *Machine Translation technology in advanced language teaching and translator training: a corpus-based approach to post-editing MT output*. In: *Proceedings of TALC 2012 : Teaching and Language Corpora Conference*. Warsaw, Poland on 12th - 14th July 2012.

Bogdan Babych, Anthony Hartley, Kyo Kageura, Martin Thomas, and Masao Utiyama. (2012). *Scaffolding, capturing and preserving interactions in educating for collaborative translation*. In *Proceedings of 2012 International Conference 'The Making of a Translator'* Taiwan Normal University, Taipei, Taiwan, 28-29 April 2012.

Bogdan Babych, Anthony Hartley, Kyo Kageura, Martin Thomas, and Masao Utiyama. (2012). *MNH-TT: a collaborative platform for translator training*. [Aslib 2012] *Translating and the Computer* 34, 29-30 November 2012, One Birdcage Walk, London, UK; 18pp. ; [presentation by Martin Thomas]

Fangzhong Su and Bogdan Babych (2012) *Measuring Comparability of Documents in Non-Parallel Corpora for Efficient Extraction of (Semi-)Parallel Translation Equivalents*. In: *Proceedings of Joint Workshop on Exploiting Synergies between Information Retrieval and Machine Translation (ESIRMT) and Hybrid Approaches to Machine Translation (HyTra) at EACL-2012*. Pp. 10-19.

Kurt Eberle, Bogdan Babych, Johanna Geiger, Mireia Ginesti-Rosell, Anthony Hartley, Reinhard Rapp, Serge Sharoff and Martin Thomas (2012) *Design of a hybrid high quality machine translation system*. In: *Proceedings of Joint Workshop on Exploiting Synergies between Information Retrieval and Machine Translation (ESIRMT) and Hybrid Approaches to Machine Translation (HyTra) at EACL-2012*. Pp. 101-112

Fangzhong Su and Bogdan Babych (2012) *Development and Application of a Cross-language Document Comparability Metric*. In: *Proceedings of the 8th International Conference on Language Resources and Evaluation (LREC'12)*, 21-27 May 2012, Istanbul, Turkey; pp.3956-3962.

Reinhard Rapp, Serge Sharoff, Bogdan Babych and Richard Forsyth (2012) Identifying Word Translations from Comparable Documents without a Seed Lexicon. In: Proceedings of the 8th International Conference on Language Resources and Evaluation (LREC'12), 21-27 May 2012, Istanbul, Turkey; pp.460-466.

Inguna Skadina, Ahmet Aker, Nikos Glaros, Fangzhong Su, Dan Tufis, Mateja Verlic, Andrejs Vasiljevs and Bogdan Babych (2012) Collecting and Using Comparable Corpora for Statistical Machine Translation. In: Proceedings of the 8th International Conference on Language Resources and Evaluation (LREC'12), 21-27 May 2012, Istanbul, Turkey; pp.438-445.

2011

Babych, B. and Hartley, A. (2011). Meta-evaluation of comparability metrics using parallel corpora. *International Journal of Computational Linguistics and Applications*, Proceedings volume of CILCling-2011.

2010

Jo Drugan and Bogdan Babych. (2010). Shared resources, shared values? Ethical implications of sharing translation resources. JEC 2010: Second joint EM+/CNGL Workshop 'Bringing MT to the user: research on integrating MT in the translation industry', AMTA 2010, Denver, Colorado, November 4, 2010; pp.3-9.

2009

Babych, B. and Hartley, A. (2009). Automated error analysis for multiword expressions: using BLEU-type scores for automatic discovery of potential translation errors. *Linguistica Antverpiensia, New Series (8/2009): Journal of translation and interpreting studies. Special Issue on Evaluation of Translation Technology.*, 8, pp. 81-104.

Sharoff, S; Babych, B and Hartley, A (2009). 'Irrefragable answers' using comparable corpora to retrieve translation equivalents. *Language Resources and Evaluation* 43 (1), 15-25.

Babych, B., Hartley, A. & Sharoff, S. 2009. Evaluation-guided pre-editing of source text: improving MT-tractability of light verb constructions. EAMT-2009: Proceedings of the 13th Annual Conference of the European Association for Machine Translation, ed. Lluís Màrquez and Harold Somers, 14-15 May 2009, Universitat Politècnica de Catalunya, Barcelona, Spain; pp.36-43

2008

Mudraya, O., Piao, S.L., Rayson, P., Sharoff, S., Babych, B. and Lofberg, L. (2008). Automatic Extraction of Translation Equivalents of Phrasal and Light Verbs in English and Russian. In Granger, S. and Meunier, F. (eds.) *Phraseology : an interdisciplinary perspective*. Benjamins, Amsterdam. Pp. 293-309

Babych, B., Sharoff, S., and Hartley, A. (2008). Generalising Lexical Translation Strategies for MT Using Comparable Corpora. Proceedings of the Sixth International Language Resources and Evaluation (LREC'08). Marrakech, Morocco. 28-30 May 2008.

Babych, B., and Hartley, A. (2008). Sensitivity of Automated MT Evaluation Metrics on Higher Quality MT Output: BLEU vs Task-Based Evaluation Methods. Proceedings of the Sixth International Language Resources and Evaluation (LREC'08). Marrakech, Morocco. 28-30 May 2008.

Babych, B., and Hartley, A. (2008). Automated MT Evaluation for Error Analysis: Automatic Discovery of Potential Translation Errors for Multiword Expressions. Proceedings of the ELRA Workshop on Evaluation Looking into the Future of Evaluation: When automatic metrics meet task-based and performance-based approaches. Marrakech, Morocco. 27 May 2008. pp.6--11.

2007

*Babych, B., Sharoff, S., Hartley, A., and Mudraya, O. (2007). Assisting Translators in Indirect Lexical Transfer. Paper presented at the 45th International Conference of Association for Computational Linguistics ACL 2007, Prague, Czech Republic.*



Babych, B., Hartley, A., and Sharoff, S. (2007). Translating from under-resourced languages: comparing direct transfer against pivot translation. Paper presented at Machine Translation Summit XI, Copenhagen, Denmark.

Babych, B., Hartley, A. (2007). Sensitivity of automated models for MT evaluation: proximity-based vs. performance-based methods. MT Summit XI Workshop: Automatic procedures in MT evaluation, 11 September 2007, Copenhagen, Denmark, [Proceedings]; 22pp. of PPT presentation.

Babych B., Hartley, A and Sharoff, S. (2007). A dynamic dictionary for discovering indirect translation equivalents. *Translating and the Computer 29*. Proceedings of the twenty-ninth international conference on Translating and the Computer, 29-30 November 2007 (London: Aslib, 2007); 10pp.

2006

*Sharoff S, Babych B., Hartley A. (2006). Using comparable corpora to solve problems difficult for human translators. Paper presented at the joint conference of the International Committee on Computational Linguistics and the Association for Computational Linguistics COLING-ACL 2006, Sydney, Australia.*

Mudraya, O., Babych, B., Piao, S., Rayson, P., Wilson, A. (2006). Developing a Russian semantic tagger for automatic semantic annotation. In proceedings of Corpus Linguistics 2006, St. Petersburg, Russia, 10-14 October 2006, pp. 282-289 (in Russian) , pp. 290-297 (in English) .

Sharoff, S., Babych, B., Rayson, P., Mudraya, P. and Piao, S. (2006) ASSIST: Automated Semantic Assistance for Translators. In companion proceedings to the 11th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2006), Trento, Italy, April 3-7, 2006, pp. 139 - 142. ISBN 1-932432-60-4.

Sharoff, S., Babych, B., Hartley, A. (2006) Using collocations from comparable corpora to find translation equivalents. In Proc. of LREC2006, Genoa, May, 2006, pp. 465-470.

2005

Babych, B., Hartley, A., and Elliott, D. (2005). Estimating the predictive power of n-gram MT evaluation metrics across language and text types. Paper presented at Machine Translation Summit X, Phuket, Thailand.

2004

*Babych, B., and Hartley, A. (2004). Extending the BLEU MT Evaluation Method with Frequency Weightings. Paper presented at the 42nd International Conference of the Association for Computational Linguistics, ACL 2004: Barcelona, Spain.*

Babych, B. (2004). Weighted N-gram model for evaluating Machine Translation output. Paper presented at the 7th Annual Colloquium for the UK Special Interest Group for Computational Linguistics, CLUK'04 University of Birmingham, UK.

Babych, B., Elliott D., Hartley A. (2004). Extending MT evaluation tools with translation complexity metrics. Paper presented at the 20th International Conference on Computational Linguistics COLING 2004. University of Geneva, Switzerland.

Babych, B., Hartley A. (2004). Selecting Translation Strategies in MT using Automatic Named Entity Recognition. Paper presented at the European Association for Machine Translation (EAMT) Workshop, Malta.

Babych, B., Hartley A. (2004). Modelling legitimate translation variation for automatic evaluation of MT quality. Paper presented at the 4th International Conference on Language Resources and Evaluation LREC 2004, Lisbon, Portugal.

Babych, B., Elliott D., Hartley A. (2004). Calibrating resource-light automatic MT evaluation: a cheap approach to ranking MT systems by the usability of their output. Paper presented at the 4th International Conference on Language Resources and Evaluation LREC 2004, Lisbon, Portugal.

Babych, B., Hartley A. (2004). Comparative Evaluation of Automatic Named Entity Recognition from Machine Translation Output. Paper presented at the Workshop on Named Entity Recognition for Natural Language

Processing Applications. In Conjunction with the First International Joint Conference on Natural Language Processing IJCNLP-04, Sanya.

2003

Babych, B., and Hartley, A. (2003). Improving Machine Translation quality with automatic Named Entity recognition. Paper presented at the 7th International EAMT workshop on MT and other language technology tools at the 10th Conference of the European Chapter of the Association for Computational Linguistics EACL 2003, Budapest, Hungary. URL: <http://mt-archive.info/EAMT-2003-Babych.pdf>

Hartley, A., Babych, B and Elliott, D. (2003). Using corpora to evaluate Machine Translation. Paper presented at the Conference on Using corpora and databases in translation. University of Portsmouth, 14 November 2003. pp. 39-58.

Babych B., Hartley A., Atwell E., (2003). Statistical modelling of MT output corpora for Information Extraction. Paper presented at the Corpus Linguistics 2003 conference. Lancaster University, UK

1998

Babych, B. (1998). Systems of syntaxeme groups and their procedural semantics. *Movoznavstvo (Linguistics)* no. 6 (190), November-December 1998. Kyiv. (in Ukrainian)

#### CO-EDITED VOLUMES

Hybrid Approaches to Machine Translation

Costa-jussà, M.R., Rapp, R., Lambert, P., Eberle, K., Banchs, R.E., Babych, B. (Eds.)  
Springer (2016)

Using Comparable Corpora for Under-Resourced Areas of Machine Translation.

Springer (2019)

Skadiņa, Inguna, Robert Gaizauskas, Bogdan Babych, Nikola Ljubešić, Dan Tufiş, and Andrejs Vasiljevs, eds.

#### INVITED TALKS

July 2023. Machine Translation for literary texts. Experimental evaluation of translation quality and investigating limitations of the state-of-the-art MT systems. Invited talk at the Summer School of Translation, Kyiv Sikorsky Polytechnic University (online).

June 2021. Developing a Controlled Language for MT. Invited talk at the Summer School of Translation, Kyiv Sikorsky Polytechnic University (on-line)

July 2020. Principles of design, applications and evaluation of Machine Translation. Invited lecture at the Summer School of Translation, Kyiv Sikorsky Polytechnic University (on-line).

April 2016. Developing a Hybrid MT system from Rule-based architecture: Experience from HyghTra project. Invited talk at Workshop on Hybridisation of Machine Translation for Irish, Dublin City University (DCU), Dublin, Ireland (<http://www.abumatran.eu/?p=427>)

June 2014. Machine Translation evaluation for MT development: Improving MT quality with evaluation-oriented methods. QTLaunchPad Workshop on quality translation. 15 June 2014. EAMT 2014. Dubrovnik March, 2014.

Engineers' favourite toy? New perspectives of MT technology for professional translators. Centre for Translation Studies – CenTraS, UCL 18 March 2014. (Also published at: ITI Bulletin, July 2014. – By invitation from the editor, based on the invited talk at ULC).

September, 2007. Sensitivity of automated models for MT evaluation: proximity-based vs. performance-based methods. Invited talk at MT Summit XI Workshop: Automatic procedures in MT evaluation, 11 September 2007, Copenhagen, Denmark