

Robert Hoehndorf

King Abdullah University of Science and Technology
Computer, Electrical and Mathematical Sciences & Engineering Division
4700 King Abdullah University of Science and Technology
Thuwal 23955-6900
Kingdom of Saudi Arabia

Phone: +966 2 808 1643
email: robert.hoehndorf@kaust.edu.sa
URL: <http://borg.kaust.edu.sa/>

Day of birth: May 30, 1980
Place of birth: Leipzig, Germany
Marital status: Single
Nationality: German

Education

- 2005-2009 PhD in Computer Science. University of Leipzig and Max Planck Institute for Evolutionary Anthropology.
- Member of graduate schools *Knowledge Representation* and *Leipzig School of Human Origins*
- 2001-2005 Diplom (M.Sc.) in Computer Science. University of Leipzig.
- Minor subject: Logics and Philosophy of Science

Professional appointments

- 2014-now *Assistant Professor* of Computer Science, King Abdullah University of Science and Technology, Thuwal, KSA.
- 2013-2014 *Research Fellow* in Bioinformatics, Department of Computer Science, Aberystwyth University, Aberystwyth, UK.
- 2012-2013 *Research associate*, Department of Physiology, Development and Neuroscience, University of Cambridge, Cambridge, UK.
- 2010-2012 *Research associate*, Department of Genetics, University of Cambridge, Cambridge, UK.

- 2009-2010 *Postdoctoral fellow*, European Bioinformatics Institute, Hinxton, UK.
- 2009 *Postdoctoral researcher*, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.

Refereed publications

REFEREED JOURNAL ARTICLES

- Alshahrani, M., **Hoehndorf, R.**, “Semantic Disease Gene Embeddings (SmuDGE): phenotype-based disease gene prioritization without phenotypes”. In: *Bioinformatics* (2018). in press.
- Boudellioua, I., Kulmanov, M., Schofield, P. N., Gkoutos, G. V., **Hoehndorf, R.**, “DeepPVP: phenotype-based prioritization of causative variants using deep learning”. In: *bioRxiv* (2018).
- Boudellioua, I., Kulmanov, M., Schofield, P. N., Gkoutos, G. V., **Hoehndorf, R.**, “OligoPVP: Phenotype-driven analysis of individual genomic information to prioritize oligogenic disease variants”. In: *bioRxiv* (2018).
- Kulmanov, M., Schofield, P. N., Gkoutos, G. V., **Hoehndorf, R.**, “Ontology-based validation and identification of regulatory phenotypes”. In: *Bioinformatics* (2018). in press.
- Linn, S. C., Mustonen, A. M., Silva, K. A., Kennedy, V. E., Sundberg, B. A., Bechtold, L. S., Alghamdi, S., **Hoehndorf, R.**, Schofield, P. N., Sundberg, J. P., “Nail abnormalities identified in an ageing study of 30 inbred mouse strains”. In: *Experimental Dermatology* (2018). in press.
- Rodríguez-García, M. Á., **Hoehndorf, R.**, “Inferring ontology graph structures using OWL reasoning”. In: *BMC Bioinformatics* 19.1 (2018), p. 7.
- Smaili, F. Z., Gao, X., **Hoehndorf, R.**, “Onto2Vec: joint vector-based representation of biological entities and their ontology-based annotations”. In: *Bioinformatics* 34.13 (2018), pp. i52–i60.
- Younis, S., Weiland, C., **Hoehndorf, R.**, Dressler, S., Hickler, T., Seeger, B., Schmidt, M., “Taxon and trait recognition from digitized herbarium specimens using deep convolutional neural networks”. In: *Botany Letters* 0.0 (2018), pp. 1–7.
- Alshahrani, M., Khan, M. A., Maddouri, O., Kinjo, A. R., Queralt-Rosinach, N., **Hoehndorf, R.**, “Neuro-symbolic representation learning on biological knowledge graphs”. In: *Bioinformatics* 33.17 (2017), pp. 2723–2730.
- Boudellioua, I., Mahamad Razali, R. B., Kulmanov, M., Hashish, Y., Bajic, V. B., Goncalves-Serra, E., Schoenmakers, N., Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “Semantic prioritization of novel causative genomic variants”. In: *PLOS Computational Biology* 13.4 (Apr. 2017), pp. 1–21.

- Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “The anatomy of phenotype ontologies: principles, properties and applications”. In: *Briefings in Bioinformatics* (2017).
- Hoehndorf, R.**, Queralt-Rosinach, N., “Data science and symbolic AI: Synergies, challenges and opportunities”. In: *Data Science* (2017).
- Kafkas, Ş., Sarntivijai, S., **Hoehndorf, R.**, “Usage of cell nomenclature in biomedical literature”. In: *BMC Bioinformatics* 18.17 (Dec. 2017), p. 561.
- Kulmanov, M., **Hoehndorf, R.**, “Evaluating the effect of annotation size on measures of semantic similarity”. In: *Journal of Biomedical Semantics* 8.1 (Jan. 2017), p. 7.
- Kulmanov, M., Khan, M. A., **Hoehndorf, R.**, “DeepGO: predicting protein functions from sequence and interactions using a deep ontology-aware classifier”. In: *Bioinformatics* (2017). in press, btx624.
- Motwalli, O., Essack, M., Jankovic, B. R., Ji, B., Liu, X., Ansari, H. R., **Hoehndorf, R.**, Gao, X., Arold, S. T., Mineta, K., Archer, J. A. C., Gojobori, T., Mijakovic, I., Bajic, V. B., “In silico screening for candidate chassis strains of free fatty acid-producing cyanobacteria”. In: *BMC Genomics* 18.1 (2017), p. 33.
- Rodríguez-García, M. Á., Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “Integrating phenotype ontologies with PhenomeNET”. In: *Journal of Biomedical Semantics* 8.1 (Dec. 2017), p. 58.
- Salhi, A., Negrão, S., Essack, M., Morton, M. J. L., Bougouffa, S., Mohamad Razali, R., Radovanovic, A., Marchand, B., Kulmanov, M., **Hoehndorf, R.**, Tester, M. A., Bajic, V. B., “DES-TOMATO: A Knowledge Exploration System Focused On Tomato Species”. In: *Scientific Reports* (2017).
- Bolleman, J. T., Mungall, C. J., Strozzi, F., Baran, J., Dumontier, M., Bonnal, R. P. J., Buels, R., **Hoehndorf, R.**, Fujisawa, T., Katayama, T., Cock, P. A. J., “FALDO: a semantic standard for describing the location of nucleotide and protein feature annotation”. In: *Journal of Biomedical Semantics* 7.1 (Apr. 2016), pp. 1–12.
- Boudellioua, I., Saidi, R., **Hoehndorf, R.**, Martin, M. J., Solovyev, V., “Prediction of Metabolic Pathway Involvement in Prokaryotic UniProtKB Data by Association Rule Mining”. In: *PLoS ONE* 11.7 (July 2016), pp. 1–16.
- Fisher, H. M., **Hoehndorf, R.**, Bazelato, B. S., Dadras, S. S., King, L. E., Gkoutos, G. V., Sundberg, J. P., Schofield, P. N., “DermO; an ontology for the description of dermatologic disease”. In: *Journal of Biomedical Semantics* 7.1 (June 2016), pp. 1–9.
- Henkel, R., **Hoehndorf, R.**, Kacprowski, T., Knüpfer, C., Liebermeister, W., Waltemath, D., “Notions of similarity for systems biology models”. In: *Briefings in Bioinformatics* (Oct. 2016).
- Hoehndorf, R.**, Alshahrani, M., Gkoutos, G. V., Gosline, G., Groom, Q., Hamann, T., Kattge, J., Oliveira, S. M., Schmidt, M., Sierra, S., Smets, E., Vos, R. A., Weiland, C., “The flora phenotype ontology (FLOPO): tool for integrating mor-

- phological traits and phenotypes of vascular plants”. In: *Journal of Biomedical Semantics* 7.1 (Nov. 2016), p. 65.
- Hoehndorf, R.**, Gkoutos, G. V., Schofield, P. N., “Datamining with Ontologies”. In: *Data Mining Techniques for the Life Sciences*. Ed. by Oliviero Carugo and Frank Eisenhaber. New York, NY: Springer New York, May 2016, pp. 385–397.
- Salhi, A., Essack, M., Radovanovic, A., Marchand, B., Bougouffa, S., Antunes, A., Simoes, M. F., Lafi, F. F., Motwalli, O. A., Bokhari, A., Malas, T., Amoudi, S. A., Othum, G., Allam, I., Mineta, K., Gao, X., **Hoehndorf, R.**, C. Archer, J. A., Gojobori, T., Bajic, V. B., “DESM: portal for microbial knowledge exploration systems”. In: *Nucleic Acids Research* 44.D1 (2016), pp. D624–D633.
- Slater, L., Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “Using AberOWL for fast and scalable reasoning over BioPortal ontologies”. In: *Journal of Biomedical Semantics* 7.1 (Aug. 2016), pp. 1–6.
- Angelis, M. H. “Analysis of mammalian gene function through broad-based phenotypic screens across a consortium of mouse clinics”. In: *Nature Genetics* (July 2015).
- Baran, J., Durgahee, B. S. B., Eilbeck, K., Antezana, E., **Hoehndorf, R.**, Dumontier, M., “GFVO: the Genomic Feature and Variation Ontology”. In: *PeerJ* 3 (May 2015), e933.
- Gkoutos, G. V., **Hoehndorf, R.**, Tsaprouni, L., Schofield, P. N., “Best behaviour? Ontologies and the formal description of animal behaviour”. English. In: *Mammalian Genome* (July 2015), pp. 1–8.
- Gottlieb, A., **Hoehndorf, R.**, Dumontier, M., Altman, B. R., “Ranking Adverse Drug Reactions With Crowdsourcing”. In: *J Med Internet Res* 17.3 (Mar. 2015), e80.
- Hoehndorf, R.**, Gruenberger, M., Gkoutos, G., Schofield, P., “Similarity-based search of model organism, disease and drug effect phenotypes”. In: *Journal of Biomedical Semantics* 6.1 (2015), p. 6.
- Hoehndorf, R.**, Schofield, P. N., Gkoutos, G. V., “The role of ontologies in biological and biomedical research: a functional perspective”. In: *Briefings in Bioinformatics* (Mar. 2015).
- Hoehndorf, R.**, Schofield, P. N., Gkoutos, G. V., “Analysis of the human diseasome using phenotype similarity between common, genetic, and infectious diseases”. In: *Scientific Reports* 5 (June 2015), p. 10888.
- Hoehndorf, R.**, Slater, L., Schofield, P. N., Gkoutos, G. V., “Aber-OWL: a framework for ontology-based data access in biology”. In: *BMC Bioinformatics* 16 (2015), p. 26.
- Oellrich, A., Walls, R., Cannon, E., Cannon, S., Cooper, L., Gardiner, J., Gkoutos, G., Harper, L., He, M., **Hoehndorf, R.**, Jaiswal, P., Kalberer, S., Lloyd, J., Meinke, D., Menda, N., Moore, L., Nelson, R., Pujar, A., Lawrence, C., Huala, E., “An ontology approach to comparative phenomics in plants”. In: *Plant Methods* 11.1

- (Feb. 2015). Anika Oellrich and Ramona L Walls contributed equally to this work., p. 10.
- Dumontier, M., Baker, C., Baran, J., Callahan, A., Chepelev, L., Cruz-Toledo, J., Del Rio, N., Duck, G., Furlong, L., Keath, N., Klassen, D., McCusker, J., Queralt-Rosinach, N., Samwald, M., Villanueva-Rosales, N., Wilkinson, M., **Hoehndorf, R.**, “The SemanticScience Integrated Ontology (SIO) for biomedical research and knowledge discovery”. In: *Journal of Biomedical Semantics* 5.1 (2014), p. 14.
- Hoehndorf, R.**, Hancock, J. M., Hardy, N. W., Mallon, A. M., Schofield, P. N., Gkoutos, G. V., “Analyzing gene expression data in mice with the Neuro Behavior Ontology”. In: *Mamm Genome* 25.1-2 (2014), pp. 32–40.
- Hoehndorf, R.**, Haendel, M., Stevens, R., Rebholz-Schuhmann, D., “Thematic series on biomedical ontologies in JBMS: challenges and new directions”. In: *Journal of Biomedical Semantics* 5.1 (2014), p. 15.
- Katayama, T., Wilkinson, M. D., Aoki-Kinoshita, K. F., Kawashima, S., Yamamoto, Y., Yamaguchi, A., Okamoto, S., Kawano, S., Kim, J.-D., Wang, Y., Wu, H., Kano, Y., Ono, H., Bono, H., Kocbek, S., Aerts, J., Akune, Y., Antezana, E., Arakawa, K., Aranda, B., Baran, J., Bolleman, J., Bonnal, R. J., Buttigieg, P. L., Campbell, M. P., Chen, Y.-A., Chiba, H., Cock, P. J., Cohen, K. B., Constantin, A., Duck, G., Dumontier, M., Fujisawa, T., Fujiwara, T., Goto, N., **Hoehndorf, R.**, Igarashi, Y., Itaya, H., Ito, M., Iwasaki, W., Kala, M., Katoda, T., Kim, T., Kokubu, A., Komiyama, Y., Kotera, M., Laibe, C., Lapp, H., Lütteke, T., Marshall, M. S., Mori, T., Mori, H., Morita, M., Murakami, K., Nakao, M., Narimatsu, H., Nishide, H., Nishimura, Y., Nystrom-Persson, J., Ogishima, S., Okamura, Y., Okuda, S., Oshita, K., Packer, N. H., Prins, P., Ranzinger, R., Rocca-Serra, P., Sansone, S., Sawaki, H., Shin, S.-H., Splendiani, A., Strozzi, F., Tadaka, S., Toukach, P., Uchiyama, I., Umezaki, M., Vos, R., Whetzel, P. L., Yamada, I., Yamasaki, C., Yamashita, R., York, W. S., Zmasek, C. M., Kawamoto, S., Takagi, T., “BioHackathon series in 2011 and 2012: penetration of ontology and linked data in life science domains.” In: *Journal of biomedical semantics* 5.1 (2014), p. 5.
- Vos, R., Biserkov, J., Balech, B., Beard, N., Blissett, M., Brenninkmeijer, C., Dooren, T., Eades, D., Gosline, G., Groom, Q., Hamann, T., Hettling, H., **Hoehndorf, R.**, Holleman, A., Hovenkamp, P., Kelbert, P., King, D., Kirkup, D., Lammers, Y., DeMeulemeester, T., Mietchen, D., Miller, J., Mounce, R., Nicolson, N., Page, R., Pawlik, A., Pereira, S., Penev, L., Richards, K., Sautter, G., Shorthouse, D., Tähtinen, M., Weiland, C., Williams, A., Sierra, S., “Enriched biodiversity data as a resource and service”. In: *Biodiversity Data Journal* 2 (2014), e1125.
- Vos, R., Biserkov, J., Balech, B., Beard, N., Blissett, M., Brenninkmeijer, C., Dooren, T., Eades, D., Gosline, G., Groom, Q., Hamann, T., Hettling, H., **Hoehndorf, R.**, Holleman, A., Hovenkamp, P., Kelbert, P., King, D., Kirkup, D., Lammers, Y., DeMeulemeester, T., Mietchen, D., Miller, J., Mounce, R., Nicolson, N., Page, R., Pawlik, A., Pereira, S., Penev, L., Richards, K., Sautter, G., Shorthouse, D.,

- Tähtinen, M., Weiland, C., Williams, A., Sierra, S., “Enriched biodiversity data as a resource and service”. In: *Biodiversity Data Journal* 2 (June 2014), e1125.
- Cook, D., Neal, M., **Hoehndorf, R.**, Gkoutos, G., Gennari, J., “Representing physiological processes and their participants with PhysioMaps”. In: *Journal of Biomedical Semantics* 4.Suppl 1 (2013), S2.
- Dumontier, M., Chepelev, L. L., **Hoehndorf, R.**, “Semantic Systems Biology: Formal Knowledge Representation in Systems Biology for Model Construction, Retrieval, Validation and Discovery”. In: *Systems Biology*. Springer Netherlands, 2013, pp. 355–373.
- Hoehndorf, R.**, Hardy, N. W., Osumi-Sutherland, D., Tweedie, S., Schofield, P. N., Gkoutos, G. V., “Systematic Analysis of Experimental Phenotype Data Reveals Gene Functions”. In: *PLoS ONE* 8.4 (Apr. 2013), e60847.
- Hoehndorf, R.**, Hiebert, T., Hardy, N. W., Schofield, P. N., Gkoutos, G. V., Dumontier, M., “Mouse model phenotypes provide information about human drug targets”. In: *Bioinformatics* (Oct. 2013).
- Hoehndorf, R.**, Schofield, P. N., Gkoutos, G. V., “An integrative, translational approach to understanding rare and orphan genetically based diseases”. In: *Interface Focus* 3.2 (2013).
- Rebholz-Schuhmann, D., Kafkas, S., Kim, J.-H., Li, C., Jimeno Yepes, A., **Hoehndorf, R.**, Backofen, R., Lewin, I., “Evaluating gold standard corpora against gene/protein tagging solutions and lexical resources”. In: *Journal of Biomedical Semantics* 4.1 (Oct. 2013), p. 28.
- Rebholz-Schuhmann, D., Kim, J.-H., Yan, Y., Dixit, A., Friteyre, C., **Hoehndorf, R.**, Backofen, R., Lewin, I., “Evaluation and Cross-Comparison of Lexical Entities of Biological Interest (LexEBI)”. In: *PLoS ONE* 8.10 (Oct. 2013), e75185.
- Gkoutos, G. V., **Hoehndorf, R.**, “Ontology-based cross-species integration and analysis of *Saccharomyces cerevisiae* phenotypes”. In: *Journal of Biomedical Semantics* 3.Suppl 2 (2012), S6.
- Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “Chapter Four - The Neurobehavior Ontology: An Ontology for Annotation and Integration of Behavior and Behavioral Phenotypes”. In: *Bioinformatics of Behavior: Part 1*. Ed. by Elissa J. Chesler and Melissa A. Haendel. Vol. 103. International Review of Neurobiology. Academic Press, 2012, pp. 69–87.
- Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “The Units Ontology: a tool for integrating units of measurement in science”. In: *Database* 2012 (2012).
- Hoehndorf, R.**, Dumontier, M., Gkoutos, G. V., “Evaluation of research in biomedical ontologies”. In: *Briefings in Bioinformatics* (Sept. 2012).
- Hoehndorf, R.**, Dumontier, M., Gkoutos, G. V., “Identifying aberrant pathways through integrated analysis of knowledge in pharmacogenomics”. In: *Bioinformatics* 28.16 (Aug. 2012), pp. 2169–2175.

- Hoehndorf, R.**, Harris, M. A., Herre, H., Rustici, G., Gkoutos, G. V., “Semantic integration of physiology phenotypes with an application to the Cellular Phenotype Ontology”. In: *Bioinformatics* 28.13 (2012), pp. 1783–1789.
- Hoehndorf, R.**, Oellrich, A., Rebholz-Schuhmann, D., Schofield, P. N., Gkoutos, G. V., “Linking PharmGKB to phenotype studies and animal models of disease for drug repurposing”. In: *Pacific Symposium on Biocomputing (PSB)* (2012), pp. 388–399.
- Jupp, S., Stevens, R., **Hoehndorf, R.**, “Logical Gene Ontology Annotations (GOAL): exploring gene ontology annotations with OWL”. In: *Journal of Biomedical Semantics* 3.Suppl 1 (2012), S3.
- Loebe, F., Stumpf, F., **Hoehndorf, R.**, Herre, H., “Towards improving phenotype representation in OWL”. In: *Journal of Biomedical Semantics* 3.Suppl 2 (2012), S5.
- Oellrich, A., Gkoutos, G. V., **Hoehndorf, R.**, Rebholz-Schuhmann, D., “Quantitative comparison of mapping methods between Human and Mammalian Phenotype Ontology”. In: *Journal of Biomedical Semantics* 3.Suppl 2 (2012), S1.
- Rebholz-Schuhmann, D., Oellrich, A., **Hoehndorf, R.**, “Text-mining solutions for biomedical research: enabling integrative biology”. In: *Nature Reviews Genetics* 13.12 (Dec. 2012), pp. 829–839.
- Schofield, P. N., **Hoehndorf, R.**, Gkoutos, G. V., “Mouse genetic and phenotypic resources for human genetics”. In: *Human Mutation* (2012).
- Wimalaratne, S. M., Grenon, P., **Hoehndorf, R.**, Gkoutos, G. V., Bono, B., “An infrastructure for ontology-based information systems in biomedicine: RICORDO case study”. In: *Bioinformatics* 28.3 (2012), pp. 448–450.
- Adams, N., **Hoehndorf, R.**, Gkoutos, G. V., Hansen, G., Hennig, C., “PIDO: The Primary Immunodeficiency Disease Ontology”. In: *Bioinformatics* (Sept. 2011).
- Bono, B., **Hoehndorf, R.**, Wimalaratne, S., Gkoutos, G. V., Grenon, P., “The RICORDO approach to semantic interoperability for biomedical data and models: strategy, standards and solutions.” In: *BMC Research Notes* 4.1 (2011), p. 313.
- Herre, H., **Hoehndorf, R.**, Kelso, J., Loebe, F., Schulz, S., “OBML - Ontologies in Biomedicine and Life Sciences”. In: *Journal of Biomedical Semantics* 2.Suppl 4 (Aug. 2011), p. I1.
- Hoehndorf, R.**, Batchelor, C., Bittner, T., Dumontier, M., Eilbeck, K., Knight, R., Mungall, C. J., Richardson, J. S., Stombaugh, J., Westhof, E., Zirbel, C. L., Leontis, N. B., “The RNA Ontology (RNAO): An Ontology for Integrating RNA Sequence and Structure Data”. In: *Applied Ontology* 6.1 (Jan. 2011), pp. 53–89.
- Hoehndorf, R.**, Dumontier, M., Gennari, J. H., Wimalaratne, S., Bono, B., Cook, D. L., Gkoutos, G. V., “Integrating systems biology models and biomedical ontologies”. In: *BMC Systems Biology* 5.1 (Aug. 2011), pp. 124+.
- Hoehndorf, R.**, Dumontier, M., Oellrich, A., Rebholz-Schuhmann, D., Schofield, P. N., Gkoutos, G. V., “Interoperability between biomedical ontologies through

- relation expansion, upper-level ontologies and automatic reasoning". In: *PLOS ONE* 6.7 (July 2011), e22006.
- Hoehndorf, R.**, Dumontier, M., Oellrich, A., Wimalaratne, S., Rebholz-Schuhmann, D., Schofield, P. N., Gkoutos, G. V., "A common layer of interoperability for biomedical ontologies based on OWL EL". In: *Bioinformatics* 27.7 (Apr. 2011), pp. 1001–1008.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Pyysalo, S., Ohta, T., Oellrich, A., Rebholz-Schuhmann, D., "Ontology design patterns to disambiguate relations between genes and gene products in GENIA". In: *Journal of Biomedical Semantics* 2.Suppl 5 (2011), S1.
- Hoehndorf, R.**, Schofield, P. N., Gkoutos, G. V., "PhenomeNET: a whole-phenome approach to disease gene discovery". In: *Nucleic Acids Research* 39.18 (July 2011), e119.
- Schofield, P. N., Sundberg, J. P., **Hoehndorf, R.**, Gkoutos, G. V., "New approaches to the representation and analysis of phenotype knowledge in human diseases and their animal models". In: *Briefings in Functional Genomics* 10.5 (2011), pp. 258–265.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Dannemann, M., Kelso, J., "Statistical tests for associations between two directed acyclic graphs." In: *PloS ONE* 5.6 (June 2010), e10996+.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Kelso, J., "Applying the functional abnormality ontology pattern to anatomical functions." In: *Journal of biomedical semantics* 1.1 (Mar. 2010), pp. 4+.
- Hoehndorf, R.**, Oellrich, A., Dumontier, M., Kelso, J., Rebholz-Schuhmann, D., Herre, H., "Relations as patterns: bridging the gap between OBO and OWL." In: *BMC Bioinformatics* 11.1 (Aug. 2010), pp. 441+.
- Hoehndorf, R.**, Oellrich, A., Rebholz-Schuhmann, D., "Interoperability between phenotype and anatomy ontologies". In: *Bioinformatics* 26.24 (Oct. 2010), pp. 3112–3118.
- Hoehndorf, R.**, Bacher, J., Backhaus, M., Gregorio, S. E., Loebe, F., Prüfer, K., Uciteli, A., Visagie, J., Herre, H., Kelso, J., "BOWiki: an ontology-based wiki for annotation of data and integration of knowledge in biology." In: *BMC Bioinformatics* 10 Suppl 5.Suppl 5 (2009), S5+.
- Hoehndorf, R.**, Kelso, J., Herre, H., "The ontology of biological sequences." In: *BMC Bioinformatics* 10.1 (Nov. 2009), pp. 377+.
- Hoehndorf, R.**, Loebe, F., Poli, R., Kelso, J., Herre, H., "GFO-Bio: A biomedical core ontology". In: *Applied Ontology* 3.4 (Dec. 2008), pp. 219–227.
- Hoehndorf, R.**, Loebe, F., Kelso, J., Herre, H., "Representing default knowledge in biomedical ontologies: Application to the integration of anatomy and phenotype ontologies". In: *BMC Bioinformatics* 8.1 (Oct. 2007).

Burek, P., **Hoehndorf, R.**, Loebe, F., Visagie, J., Herre, H., Kelso, J., “A top-level ontology of functions and its application in the Open Biomedical Ontologies.” In: *Bioinformatics* 22.14 (July 2006), e66–e73.

INTERNATIONAL CONFERENCES AND WORKSHOPS

- Alrashed, M., Alharbi, L., Al-Muhammadi, O. T., Bahadiq, S., **Hoehndorf, R.**, Mencil, L., “Interactively Exploring Graph Coloring Algorithms in a Bilingual Web Platform with Gamification”. In: *Proceedings of EdMedia: World Conference on Educational Media and Technology 2017*. Ed. by Joyce P. Johnston. Washington, DC: Association for the Advancement of Computing in Education (AACE), June 2017, pp. 298–302.
- Boudellioua, I., Kulmanov, M., Schofield, P. N., Gkoutos, G. V., **Hoehndorf, R.**, “Phenotype-driven discovery of digenic variants in personal genome sequences”. In: *Proceedings of VarI-SIG*. July 2017.
- García, M. A. R., Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “Integrating phenotype ontologies with PhenomeNET”. In: *Proceedings of Ontology Matching Workshop 2016*. Oct. 2016.
- Hoehndorf, R.**, Mencil, L., Gkoutos, G. V., Schofield, P. N., “Large-Scale Reasoning over Functions in Biomedical Ontologies”. In: *Formal Ontology in Information Systems*. Vol. 283. Frontiers in Artificial Intelligence and Applications. IOS Press, July 2016, pp. 299–312.
- Kulmanov, M., **Hoehndorf, R.**, “Evaluating the effect of annotation size on measures of semantic similarity”. In: *Proceedings of Bio-Ontologies SIG*. July 2016.
- Slater, L., Gkoutos, G. V., Schofield, P. N., **Hoehndorf, R.**, “To MIREOT or not to MIREOT? A case study of the impact of using MIREOT in the Experimental Factor Ontology (EFO)”. In: *International Conference on Biomedical Ontology and BioCreative (ICBO BioCreative 2016)*. Proceedings of the Joint International Conference on Biological Ontology and BioCreative (2016). ICBO and BioCreative. ICBO and BioCreative, Aug. 2016.
- Slater, L., Rodríguez-García, M. Á., O’Shea, K., Schofield, P. N., Gkoutos, G. V., **Hoehndorf, R.**, “Experiences with Aber-OWL, an Ontology Repository with OWL EL Reasoning”. In: *Ontology Engineering: 12th International Experiences and Directions Workshop on OWL, OWLED 2015, co-located with ISWC 2015, Bethlehem, PA, USA, October 9-10, 2015, Revised Selected Papers*. Ed. by Valentina Tamma, Mauro Dragoni, Rafael Gonçalves, and Agnieszka Ławrynowicz. Cham: Springer International Publishing, 2016, pp. 81–86.
- Slater, L., Gkoutos, G., Schofield, P. N., **Hoehndorf, R.**, “AberOWL: an ontology portal with OWL EL reasoning”. In: *Proceedings of International Conference on Biomedical Ontologies (ICBO)*. July 2015, pp. 127–128.

- Slater, L., Gkoutos, G., Schofield, P. N., **Hoehndorf, R.**, “Using Aber-OWL for fast and scalable reasoning over BioPortal ontologies”. In: *Proceedings of International Conference on Biomedical Ontologies (ICBO)*. July 2015, pp. 72–76.
- Hoehndorf, R.**, Dumontier, M., Gkoutos, G. V., “Integration of knowledge for personalized medicine: a pharmacogenomics case-study”. In: *Proceedings of the Virtual Physiological Human Conference 2012 (VPH2012)*. 2012.
- Hoehndorf, R.**, Gkoutos, G. V., “A translational medicine approach to orphan diseases”. In: *Proceedings of the Virtual Physiological Human Conference 2012 (VPH2012)*. 2012.
- Wyner, A., Riley, L., **Hoehndorf, R.**, Croset, S., “Argumentation to Represent and Reason over Biological Systems”. In: *Proceedings of the 3rd International Conference on Information Technology in Bio- and Medical Informatics (ITBAM 2012)*. 2012.
- Gkoutos, G. V., **Hoehndorf, R.**, “Ontology-based cross-species integration and analysis of *Saccharomyces cerevisiae* phenotypes”. In: *Proceedings of the 3rd Workshop for Ontologies in Biomedicine and Life sciences (OBML)*. Oct. 2011.
- Jupp, S., Stevens, R., **Hoehndorf, R.**, “Exploring Gene Ontology Annotations with OWL”. In: *Proceedings of the 13th Bio-Ontology Meeting*. July 2011.
- Loebe, F., Stumpf, F., **Hoehndorf, R.**, Herre, H., “Towards Improving Phenotype Representation in OWL”. In: *Proceedings of the 3rd Workshop for Ontologies in Biomedicine and Life sciences (OBML)*. Oct. 2011.
- Masuya, H., Gkoutos, G. V., Tanaka, N., Waki, K., Okuda, Y., Kushida, T., Kobayashi, N., Doi, K., Kozaki, K., **Hoehndorf, R.**, Wakana, S., Toyoda, T., Mizoguchi, R., “Investigation of the fundamental strategy for interoperability of description of biological measurements”. In: *Proceedings of the Second International Conference on Biomedical Ontology*. July 2011.
- Oellrich, A., **Hoehndorf, R.**, Gkoutos, G. V., Rebholz-Schuhmann, D., “Quantitative comparison of mapping methods between Human and Mammalian Phenotype Ontology”. In: *Proceedings of the 3rd Workshop for Ontologies in Biomedicine and Life sciences (OBML)*. Oct. 2011.
- Schulz, S., Brochhausen, M., **Hoehndorf, R.**, “Higgs bosons, mars missions, and unicorn delusions: How to deal with terms of dubious reference in scientific ontologies”. In: *Proceedings of the Second International Conference on Biomedical Ontology*. July 2011.
- Adams, N., Hennig, C., **Hoehndorf, R.**, Oellrich, A., Rebholz-Schuhmann, D., Hansen, G., “The Ontology of Primary Immunodeficiency Diseases (PIDs): Using PIDs to Rethink the Ontology of Phenotypes”. In: *Proceedings of the 2nd Workshop for Ontologies in Biomedicine and Life sciences (OBML)*. Sept. 2010.
- Dumontier, M., **Hoehndorf, R.**, “Realism for scientific ontologies”. In: *Formal Ontology in Information Systems, Proceedings of the Sixth International Conference, FOIS 2010*. Ed. by Antony Galton and Riichiro Mizoguchi. Vol. 209. Frontiers in

- Artificial Intelligence and Applications. Toronto, Canada: IOS Press, May 2010, pp. 387–399.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Pyysalo, S., Ohta, T., Oellrich, A., Rebholz-Schuhmann, D., “Applying ontology design patterns to the implementation of relations in GENIA”. In: *Proceedings of the Fourth Symposium on Semantic Mining in Biomedicine (SMBM 2010)*. Oct. 2010.
- Hoehndorf, R.**, Oellrich, A., Dumontier, M., Kelso, J., Herre, H., Rebholz-Schuhmann, D., “OWLDEF: Integrating OBO and OWL”. In: *Proceedings of the 13th Annual Bio-Ontologies Meeting*. July 2010.
- Hoehndorf, R.**, Oellrich, A., Dumontier, M., Kelso, J., Herre, H., Rebholz-Schuhmann, D., “Relational patterns in OWL and their application to OBO”. In: *OWL: Experiences and Directions (OWLED)*. June 2010.
- Hoehndorf, R.**, Kelso, J., Herre, H., “A Formal Ontology of Sequences”. In: *Proceedings of the First International Conference on Biomedical Ontologies (ICBO)*. 713. Nature Publishing Group, July 2009.
- Hoehndorf, R.**, Kelso, J., Herre, H., “Contributions to the formal ontology of functions and dispositions: an application of non-monotonic reasoning”. In: *Proceedings of the 12th Annual Bio-Ontologies Meeting*. June 2009.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Herre, H., “Developing Consistent and Modular Software Models with Ontologies”. In: *SoMeT*. Sept. 2009, pp. 399–412.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Kelso, J., “The application of an ontology design pattern for functional abnormalities to phenotype ontologies and the extraction of an ontology of anatomical functions”. In: *Proceedings of the The 3rd International Symposium on Languages in Biology and Medicine*. Oct. 2009.
- Hoehndorf, R.**, Bacher, J., Backhaus, M., Gregorio, S. E., Loebe, F., Prüfer, K., Uciteli, A., Visagie, J., Herre, H., Kelso, J., “BOWiki: An ontology-based wiki for annotation of data and integration of knowledge in biology”. In: *Proceedings of the 11th Annual Bio-Ontologies Meeting*. Ed. by Phillip Lord, Nigam Shah, Susanna-Assunta Sansone, and Matthew Cockerill. June 2008.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Dannemann, M., “Towards Ontological Interpretations for Improved Text Mining”. In: *Proceedings of the Third International Symposium on Semantic Mining in Biomedicine (SMBM 2008), Turku, Finland*. Ed. by Tapio Salakoski, Dietrich Rebholz-Schuhmann, and Sampo Pyysalo. Turku Centre for Computer Science (TUCS), Sept. 2008, pp. 165–166.
- Hoehndorf, R.**, Ngonga Ngomo, A.-C., Dannemann, M., Kelso, J., “From Terms to Categories: Testing the Significance of Co-occurrences between Ontological Categories”. In: *Proceedings of the Third International Symposium on Semantic Mining in Biomedicine (SMBM 2008), Turku, Finland*. Ed. by Tapio Salakoski, Dietrich Rebholz-Schuhmann, and Sampo Pyysalo. Turku Centre for Computer Science (TUCS), Sept. 2008, pp. 53–60.

Backhaus, M., Kelso, J., Bacher, J., Herre, H., **Hoehndorf, R.**, Loebe, F., Visagie, J., “BOWiki - a collaborative annotation and ontology curation framework”. In: *Proceedings of Workshop on Social and Collaborative Construction of Structured Knowledge*. May 2007.

Hoehndorf, R., Prüfer, K., Backhaus, M., Herre, H., Kelso, J., Loebe, F., Visagie, J., “A proposal for a gene functions wiki”. In: *OTM Workshops 2006*. Ed. by R. Meersman, Z. Tari, and P. Herrero. LNCS 4277. Springer-Verlag, Nov. 2006, pp. 669–678.

Hoehndorf, R., Prüfer, K., Backhaus, M., Visagie, J., Kelso, J., “The design of a wiki-based curation system for the Ontology of Functions”. In: *Proceedings of the Joint BioLINK and 9th Bio-Ontologies Meeting*. July 2006.

OTHER REFEREED PUBLICATIONS

Hoehndorf, R., Gkoutos, G. V., Schofield, P. N., “Datamining with Ontologies”. In: *Data Mining Techniques for the Life Sciences*. Ed. by Oliviero Carugo and Frank Eisenhaber. New York, NY: Springer New York, May 2016, pp. 385–397.

Schofield, P. N., **Hoehndorf, R.**, Smith, C. L., Eppig, J. T., Gkoutos, G. V., “Kaufmann’s Atlas of Mouse Development Supplement”. In: Amsterdam: Elsevier Academic Press, 2015. Chap. The Informatics of Developmental Phenotypes, pp. 307–318.

Hoehndorf, R. “What is an upper-level ontology?” In: *Ontogenesis blog*. Feb. 2010.

Kelso, J., **Hoehndorf, R.**, Prüfer, K., “Ontologies in Biology”. In: *Theory and Applications of Ontology: Computer Applications*. Ed. by Roberto Poli, Michael Healy, and Achilles Kameas. Springer Netherlands, July 2010, pp. 347–371.

Hoehndorf, R. “Basic considerations for improving interoperability between ontology-based biological information systems”. PhD thesis. University of Leipzig, June 2009.

Herre, H., Heller, B., Burek, P., **Hoehndorf, R.**, Loebe, F., Michalek, H., *General Formal Ontology (GFO) - A Foundational Ontology Integrating Objects and Processes [Version 1.0]*. Tech. rep. 8. Leipzig: Research Group Ontologies in Medicine, Institute of Medical Informatics, Statistics and Epidemiology, University of Leipzig, July 2006.

Hoehndorf, R. “Situoid Theory - An ontological approach to Situation Theory”. MA thesis. Institute for Informatics, University of Leipzig, Mar. 2005.

Awards & fellowships

2016 *First prize (shared)*. Ontology Alignment Evaluation Initiative 2016: Phenotype Track.

2009-2010 *Postdoctoral fellowship*, European Bioinformatics Institute, European Molecular Bi-

ology Laboratory, Hinxton, UK.

2005-2008 *PhD fellowship*, Graduate school “Knowledge Representation”, Department of Computer Science, University of Leipzig.

Funding

2018-2020 *Sequencing and computational analysis of MRSA samples.*

- Funding body: KACST
- PI: Robert Hoehndorf, Mohammed Al Fageeh
- Co-Investigators: Takashi Gojobori, Vladimir Bajic
- Total amount: 362,159 (362,159 USD to Robert Hoehndorf)

2018-2019 *Improvement of genetic variant prioritization technology.*

- Funding body: KAUST (Center Partnership Fund)
- PI: Robert Hoehndorf
- Co-Investigators: Paul Schofield, Georgios Gkoutos, Vladimir Bajic
- Total amount: 129,715 USD (9,500 USD to Robert Hoehndorf)

2018-2020 *Bio2Vec: Smart analytics infrastructure for the life sciences.*

- Funding body: KAUST (Competitive Research Grant)
- PI: Robert Hoehndorf
- Co-Investigators: Xin Gao, Michel Dumontier, Jens Lehmann
- Total amount: 399,986 USD (113,250 USD to Robert Hoehndorf)

2018-2020 *The Whale Shark 100: Applying Population Genomics to Understand Mysteries of the World’s Largest Fish.*

- Funding body: KAUST (Competitive Research Grant)
- PI: Takashi Gojobori
- Co-Investigators: Michael Berumen, Robert Hoehndorf
- Amount: 389,713 USD (105,838 USD to Robert Hoehndorf)

2016-2018 *Data integration and ontologies for microbial cell factories.*

- Funding body: KAUST (Center Competitive Funding)
- PI: Vladimir Bajic
- Role: WP leader
- Amount: 4,786,036 (115,691 USD to Robert Hoehndorf)

Invited talks

KEYNOTE AND DISTINGUISHED LECTURES

- 2018 *Genomics and AI*. AI Week Middle East, Dubai, UAE.
- 2012 *My ontology is better than your! Building and evaluating ontologies for integrative research*. Bio-Ontologies Meeting (co-located with ISMB 2012)

DEPARTMENTAL TALKS

- 2018 *Symbolic AI in Computational Biology*. Bioinformatics Research Seminar, University of Cambridge, UK.
- 2018 *Symbolic AI in Computational Biology*. Keynote lecture, the Eighth BEAR PGR Conference & Users Forum, University of Birmingham, UK.
- 2017 *Combining symbolic and statistical AI methods for biomedical data analysis*. Research seminar, IIIS, Tsinghua University.
- 2017 *Semantic prioritization of novel causative variants*. Research seminar, Peking University.
- 2017 *The Semantic Web – Bioinformatics applications*. Lecture in CS, Tsinghua University.
- 2017 *Symbolic AI in Computational Biology*. Special Research Seminar, Scripps Research Institute.
- 2017 *Symbolic AI in Computational Biology*. Biomedical Informatics Research Seminar, Stanford University.
- 2017 *Symbolic AI in Computational Biology*. Special Research Seminar, University of Colorado Denver.
- 2017 *Symbolic AI in Computational Biology*. Research Seminar, Maastricht University.
- 2017 *Ontologies in Biology*. Colloquium in Honor of Prof. Dr. Heinrich Herre on the Occasion of his 75th Birthday, University of Leipzig.

- 2016 *Ontologies of phenotypes and their applications in personalized medicine.* CS Seminar, University of Murcia.
- 2016 *Mobilizing and integrating phenotype data.* Biodiversity-Informatics Seminar, Senckenberg Institute for Biodiversity.
- 2013 *From ontologies to translational medicine.* CS Seminar, University of Rostock.
- 2012 *From ontologies to translational medicine.* Invited External Speaker, European Bioinformatics Institute.
- 2012 *Phenotype informatics and translational research.* IMISE Kolloquium, Institute for Medical Informatics, Statistics and Epidemiology, University of Leipzig.
- 2012 *Ontologies for integrating and analyzing phenotypes.* Department of Computer Science, University of Birmingham.
- 2011 *Exploring phenotype data for information about rare diseases.* Department of Computer Science, University of Capetown.
- 2011 *Ontologies for representing, integrating and analyzing phenotypes.* AIC Seminar, Stanford Research Institute.
- 2011 *Towards integration of biomedical ontologies and systems biology.* Computational Modeling in Biology Network (COMBINE).
- 2011 *Integrating systems biology and biomedical ontologies.* Workshop on Modelling interoperability, European Bioinformatics Institute.
- 2010 *Interoperability between biomedical ontologies.* Knowledge Representation and Knowledge Management Research Group, University Mannheim.
- 2010 *The ontology of biomedical sequences.* IMISE Kolloquium, Institute for Medical Informatics, Statistics and Epidemiology, University of Leipzig.
- 2010 *Perspectives for the ontology of phenotypes.* Ontology Interest Group, European Bioinformatics Institute.
- 2010 *An introduction to formal ontology.* Ontology Interest Group, European Bioinformatics Institute.
- 2008 *Towards interoperability between anatomy and phenotype ontologies.* Dagstuhl seminar *Ontologies and Text Mining for Life Sciences : Current Status and Future Perspectives.*
- 2007 *Interoperability, non-monotonicity and core ontologies.* Dagstuhl seminar *Towards Interoperability of Biomedical Ontologies.*

TUTORIALS

- 2018 *Ontologies in Computational Biology*. University of Cambridge.
- 2018 *Ontologies in Computational Biology*. 26th Conference on Intelligent Systems in Molecular Biology (ISMB) (with Michel Dumontier).
- 2017 *Ontologies in Computational Biology*. 25th Conference on Intelligent Systems in Molecular Biology (ISMB) (with Michel Dumontier).
- 2016 *Bio-ontologies and their role in analyzing personal genome data*. 15th European Conference on Computational Biology (with Paul Schofield, Luke Slater, Imene Boudellioua).
- 2011 *Reasoning over biomedical ontologies*. 19th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB) and 10th European Conference on Computational Biology (ECCB) (with Michel Dumontier).
- 2011 *A little semantics goes a long way: getting more from Linked Data with OWL*. OWL: Experiences and Directions (OWLED) 2011 (with Michel Dumontier).

Teaching experience

COURSES

- 2018 *Instructor for Applied Ontology*, Computer Science Program, King Abdullah University of Science and Technology.
- 2017-2018 *Instructor for Knowledge Representation and Reasoning*, Computer Science Program, King Abdullah University of Science and Technology.
- 2016-2017 *Instructor for Applied Ontology*, Computer Science Program, King Abdullah University of Science and Technology.
- 2015-2016 *Instructor for Knowledge Representation and Reasoning*, Computer Science Program, King Abdullah University of Science and Technology.
- 2015 *Organizer for Computer Science Graduate Seminar*, Computer Science Program, King Abdullah University of Science, and Technology.
- 2014 *Instructor in Object-Oriented Programming*, Software Engineering College, Northeastern University, Shenyang, China.
- 2013-2014 *Instructor in Professional And Personal Development*, Department of Computer Science, Aberystwyth University.
- 2013 *Instructor in Object-Oriented Programming*, Software Engineering College, North-

eastern University, Shenyang, China.

2013 *Co-instructor* in *Machine learning*, Department of Computer Science, Aberystwyth University.

2005-2008 *Co-instructor* for seminars on *Ontology in medical information systems*, Department of Computer Science, University of Leipzig.

2006-2007 *Instructor* and co-organizer for seminars on *Computer science and society and Information*, Department of Computer Science, University of Leipzig.

STUDENT SUPERVISION

2017-2018 *Supervision of master thesis*, Computer Science, King Abdullah University of Science and Technology

- Topic: Ontology Design Patterns for Combining Pathology and Anatomy: Application to Study Ageing and Longevity in Inbred Mouse Strains

2016-2017 *Co-supervision of master thesis*, Life Sciences Division, Hamad Bin Khalifa University, Qatar

- Topic: deep learning on biological knowledge graphs

2014 *Supervision* (3) and *Co-supervision* (2) for final year *BSc Computer Science* projects, Department of Computer Science, Aberystwyth University

2008-2009 *Co-supervision of master thesis*, Department of Computer Science, University of Leipzig and Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.

- Topic: ontology-based collaborative tagging in biomedicine.

2006-2008 *Co-supervision of master thesis*, Institute for Logics and Philosophy of Science, University of Leipzig and Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.

- Topic: use of automated reasoning in a semantic wiki for life science data.

2006-2008 *Co-supervision of master thesis*, Department of Computer Science, University of Leipzig and Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.

- Topic: representing n -ary relations and roles in a semantic wiki.

Service to profession

EDITORIAL WORK

2018–2021	Member of Editorial Board: <i>PLoS ONE</i>
2017–now	Associate Editor: <i>Applied Ontology</i>
2017–now	Associate Editor: <i>BMC Bioinformatics</i>
2016–now	Member of Editorial Board: <i>Data Science</i>
2012–now	Associate Editor: <i>Journal of Biomedical Semantics</i>
2012	Editor: Special Issue on Ontologies in Biomedicine and Life Sciences in <i>Journal of Biomedical Semantics</i>
2011	Editor: Special Issue on Ontologies in Biomedicine and Life Sciences in <i>Journal of Biomedical Semantics</i>
2010	Editor: Special Issue on Ontologies in Biomedicine and Life Sciences in <i>Journal of Biomedical Semantics</i>

REVIEWING FOR SCIENTIFIC JOURNALS

I have reviewed manuscripts for

- *Applied Ontology*
- *Bioinformatics*
- *BMC Bioinformatics*
- *BMC Complementary and Alternative Medicine*
- *Briefings in Bioinformatics*
- *Central European Journal of Computer Science*
- *Computational and Structural Biotechnology Journal*
- *Data Science*
- *Database*
- *Genetics in Medicine*
- *Genome Medicine*
- *Genomics, Proteomics & Bioinformatics*
- *Human Mutation*
- *International Journal on Semantic Web and Information Systems*
- *Journal of Bioinformatics and Computational Biology*

- *Journal of Biomedical Informatics*
- *Journal of Biomedical Semantics*
- *Journal of Engineering*
- *Journal of Web Semantics*
- *Knowledge-based Systems*
- *Natural Language Engineering*
- *PLoS ONE*
- *Scientific Reports*

REVIEWING FOR FUNDING ORGANIZATIONS

I have reviewed research grant applications for

- German Federal Ministry of Education and Research (BMBF)
- German Research Foundation (DFG)
- National Research Fund Luxembourg (FNR)
- Dr Hadwen Trust
- European Commission Horizon 2020: ERA-Net for Research Programmes on Rare Diseases

and have been a panel member for grant programs at

- German Federal Ministry of Education and Research (BMBF)
 - i:DSem – Integrative Data Semantics
 - Computational Life Sciences

CONFERENCE ORGANIZATION

- 2018 *PC member* of the 17th European Conference on Computational Biology (ECCB)
- 2018 *PC Member* for Semantic Web Applications and Tools in Health Care and Life Sciences (SWAT4HCLS) 2018
- 2018 *PC Member* for Function-SIG 2018
- 2018 *PC Member* for Data Integration in the Life Sciences (DILS 2018)
- 2018 *PC Member* for FOIS 2018: 10th International Conference on Formal Ontologies in Information Systems
- 2018 *PC member* of the Extended Semantic Web Conference (ESWC), 2018

2018 *PC Member* for International Semantic Web Conference (ISWC) 2018

2018 *PC Member and Co-Organizer* for Bio-Ontologies SIG 2018

2018 *PC Member* for Intelligent Systems in Molecular Biology (ISMB) 2018

2018 *PC Member* for Semantic Web Solutions for Large-scale Biomedical Data Analytics (SeWeBMeDA) 2018

2017–2020 *Steering Committee member* for International Conference on Biological and Biomedical Ontologies (ICBO)

2017 *PC Member* for Semantic Web Applications and Tools in Life Sciences (SWAT4LS) 2017

2017 *Reviewer* for the AMIA 2018 Informatics Summit, 2018

2017 *Organizing committee member* for the International Conference on Biomedical Ontology (ICBO) 2017

2017 *PC member* for the Workshop on Ontologies and Databases in Life Sciences 2017 (ODLS)

2017 *PC member* of the Function SIG 2017

2017 *PC member and Co-organizer* of the Bio-Ontologies SIG 2017

2017 *PC member* of the International Semantic Web Conference (ISWC), 2017

2017 *PC Member* for International Workshop on Biological Data Mining and Knowledge Discovery (BioKDD 2017)

2017 *PC Member* for 25th Conference on Intelligent Systems for Molecular Biology (ISMB) and the 16th European Conference on Computational Biology

2017 *PC member* of Medinfo 2017

2017 *PC member* of the Extended Semantic Web Conference (ESWC), 2017

2016 *PC Member* for Semantic Web Applications and Tools in Life Sciences (SWAT4LS) 2016

2016 *PC member* for the Workshop on Ontologies and Databases in Life Sciences 2016 (ODLS)

2016 *PC Chair* for the International Conference on Biological Ontology 2016 (ICBO)

2016 *PC member* for the Bio-Ontologies SIG 2016

2016 *PC member* for the 15th International Semantic Web Conference (ISWC)

2016 *PC member* of the 15th European Conference on Computational Biology (ECCB)

2016 *PC Member* for 24th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB)

2016 *PC Member* for Know@LOD 2016

2016 *PC Member* for FOIS 2016: 9th International Conference on Formal Ontologies in Information Systems

2015 *PC Member* for Semantic Web Applications and Tools in Life Sciences (SWAT4LS) 2015

2015 *PC member* for the 14th International Semantic Web Conference (ISWC)

2015 *PC member* for Bio-Ontologies SIG 2015

2015 *PC Member* for 23rd Annual International Conference on Intelligent Systems for Molecular Biology (ISMB)

2015 *PC Member* for 15th World Congress on Health and Biomedical Informatics (MED-INFO'15)

2015 *PC Member* for 4th Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data (Know@LOD)

2015 *PC Member* for 29th AAAI Conference on Artificial Intelligence (AAAI-2015)

2014 *PC Member* for Ontologies and Data in the Life Sciences (ODLS) 2014

2014 *PC Member* for Semantic Web Applications and Tools in Life Sciences (SWAT4LS) 2014

2014 *PC Member* for Conference and Labs of the Evaluation Forum (CLEF) 2014

2014 *Reviewer* for 22nd Annual International Conference on Intelligent Systems for Molecular Biology (ISMB)

2014 *PC member* of Bio-Ontologies SIG 2014

2014 *PC member* of the 13th European Conference on Computational Biology (ECCB)

2014 *PC member* of the 8th International Workshop on Modular Ontologies (WoMO)

2014 *Workshop chair* of FOIS 2014: 8th International Conference on Formal Ontologies in Information Systems

2014 *PC member* of CSHALS2014: Conference on Semantics in Healthcare and Life Sciences

2014 *PC member* of the International Symposium on Inconsistency Robustness 2014

2013 *PC member* of the 7th International Workshop on Modular Ontologies (WoMO)

2013 *PC member* of the 12th International Semantic Web Conference (ISWC)

2013 *Program chair* of the Fourth International Conference on Biomedical Ontologies (ICBO)

2012 *PC member* of the Third Workshop on the use of Semantic Web Technology for Mobile and Ubiquitous Applications (SWUMA)

2012 *PC member* of Bio-Ontologies SIG 2012

2012 *PC member* of the 11th European Conference on Computational Biology (ECCB)

2012 *Chair* of the 4th Workshop on Ontologies in Biology and Life Sciences (OBML)

2012 *PC member* of the 6th International Workshop on Modular Ontologies (WoMO)

2012 *PC member* of the International Symposium on Inconsistency Robustness

2012 *PC member* of Intelligent Systems in Molecular Biology (ISMB) 2012

2012 *PC member* of FOIS 2012: 7th International Conference on Formal Ontology in Information Systems

2012 *PC member* of ICBO 2012: 3rd International Conference on Biomedical Ontologies

2011 *Chair* of the 3rd Workshop on Ontologies in Biology and Life Sciences (OBML)

2011 *PC member* of the International Symposium on Inconsistency Robustness

2011 *PC member* of the Workshop on Working with Multiple Biomedical Ontologies (WoMBO)

2011 *PC member* of the 5th International Workshop on Modular Ontologies (WoMO)

2011 *PC member* of OWL: Experiences and Directions (OWLED) 2011

2011 *PC member* of the 2nd International Conference on Biomedical Ontologies (ICBO)

2010 *Program Chair* of the 2nd Workshop on Ontologies in Biology and Life Sciences

(OBML)

- 2010 *PC member* of the NETTAB 2010 Workshop on Biological Wikis
- 2010 *PC member* of the Extended Semantic Web Conference (ESWC), 2010
- 2010 *PC member* of Intelligent Systems in Molecular Biology (ISMB) 2010
- 2009 *Reviewer* for the 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)
- 2009 *PC member* of Medical Informatics Europe (MIE), 2009
- 2008 *PC member* of Intelligent Systems in Molecular Biology (ISMB) 2008
- 2008 *PC member* of Medical Informatics Europe (MIE), 2008
- 2007 *PC member* of Intelligent Systems in Molecular Biology (ISMB) and European Conference on Computational Biology (ECCB), 2007

University service

- 2018–now *Steering committee member* of Women in Data Science and Technology, King Abdullah University of Science and Technology.

Professional memberships

- 2006–now International Society of Computational Biology (ISCB)
- 2009–2013 International Organization for Ontology and its Applications (IAOA)
- 2009–2012
 - sub-chair of education committee for Doctoral Consortia

Last updated: September 5, 2018 •

<http://leechuck.de/cv.pdf>