



Viktor Senderov

Academic Curriculum Vitæ

My vision is to harness Human Intelligence for biodiversity informatics using semantic databases and probabilistic programming languages

Professional experience

- 2022 – 2024 **Postdoctoral researcher in computational phylogenetics**, *École normale supérieure (ENS-PSL)*, Paris, Morlon lab
Leading the [Q-T-Birds project](#): Quantitative tools for assessing the correlated evolution of genes and phenotypes: application to birds color patterns at the [Morlon Lab](#).
- 2022 **Researcher in computer science**, *KTH Royal Institute of Technology*, Stockholm, Broman lab
Front-end compiler design of the probabilistic programming language for phylogenetics [TreePPL](#) at the [Broman Lab](#)
- 2020 – 2022 **Marie Skłodowska-Curie postdoctoral researcher in bioinformatics**, *Swedish Museum of Natural History*, Stockholm, Ronquist Lab
Leading the EU-funded [PhyPPL](#) project: First applications of universal probabilistic programming to hard problems in phylogenetics at the [Ronquist Lab](#)
- 2018 – 2020 **Postdoctoral researcher in bioinformatics**, *Swedish Museum of Natural History*, Stockholm, Ronquist lab
Proof of concept for universal probabilistic programming languages for phylogenetics
- 2015 – 2018 **Marie Skłodowska-Curie Ph.D. student and data scientist**, *Pensoft Publishers*, Sofia, Bulgaria
Developed the OpenBiodiv-O ontology and the [OpenBiodiv](#) knowledge-management system for biodiversity information at [Pensoft Publishers](#)
- 2015 **Intern**, *Harrison CST Holdings GmbH*, Munich, Germany
Legal research and Microsoft Visual Basic programming (clinical trials industry)
- 2014 – 2015 **Guest scientist in bioinformatics**, *Max-Planck-Institute for Biochemistry*, Munich, Habermann Lab
Worked on viPer and PEANuT: graphical tools for creating and analyzing focus networks to identify cross-talk between molecules and pathways at the [Habermann Lab](#)
- 2006 – 2010 **Unix software engineer level II**, *Hewlett-Packard*, Sofia, Bulgaria
German clients integration, HP-UX 11.31

Education

Degrees

- 27 Jul 2019 **Ph.D. in Computer Science**, *Bulgarian Academy of Sciences*, Sofia, Bulgaria
Doctoral thesis: *The Open Biodiversity Knowledge Management System in Scholarly Publishing*
DOI: [10.13140/RG.2.2.34687.18081](https://doi.org/10.13140/RG.2.2.34687.18081)
- 10 Aug 2014 **Master's of Science in Biostatistics**, *Ludwig-Maximilians University*, Munich
Master's thesis: *Estimating population genetic parameters of complex evolutionary models from sequenced regions by means of approximate Bayesian computation*
- 30 Jul 2009 **B.Sci. degree in Computational Mathematics**, *Otto-von-Guericke University*, Magdeburg, Germany
Bachelor's thesis: *A theoretical and experimental evaluation of selected separation bounds*

Graduate studies

- 2015 – 2018 **Marie Skłodowska-Curie Ph.D. student in biodiversity informatics**, *Bulgarian Academy of Sciences and Pensoft Publishers*, Sofia, Bulgaria
BIG4 training network: *Biosystematics, informatics and genomics of the big 4 insect groups*
- 2012 – 2014 **Master's student in Biostatistics (DAAD scholarship)**, *LMU*, Munich
- 2010 – 2011 **Graduate student (Ph.D. track) in Biostatistics**, *University of California*, Davis
Due to unfavorable financial conditions, transferred to LMU Munich with a DAAD scholarship

Undergraduate studies

- 2002 – 2004, 2007 – 2009 **Undergraduate student in Computermathematik**, *Otto-Von-Guericke-University*, Magdeburg, Germany
Leave of absence between 2004 to 2007 due to medical reasons. In 2006 started working at HP Sofia and continued to work remotely till 2010 simultaneously with resuming my studies at the OvGU in 2007
- 2001 **Undergraduate student**, *International University Bremen (now Jacobs)*, Germany
Transferred to OvGU due to private reasons

Distinctions, prizes, awards

- April 2024 **Keynote Speech**, *14th Annual Research Day of the School of Mathematical and Statistical Sciences of the University of Galway*, Galway, Ireland
- April 2022 **Distinguished Artifact Award**, *European Symposium on Programming (ESOP)*
for the paper *Compiling Universal Probabilistic Programming Languages with Efficient Parallel Sequential Monte Carlo Inference*
- 2020 – 2022 **Marie Skłodowska-Curie Postdoctoral Fellowship**, *National Museum for Natural History*, Stockholm, Sweden
- 13 Feb 2018 **Featured article**, *Journal of Biomedical Semantics*, OpenBiodiv-O paper
- 2019 **Hall of FameLab winner (first place)**, *Natural History Museum*, London
World Wide Webs: science communication competition
- 11 Feb 2018 **Silver medalist (second-place) of #Datathon18**, *Data analysis competition*
- 26 Mar 2017 **Gold medalist Winner (first place) of #Datathon17**, *Data analysis competition*
- 2015 – 2018 **Marie Skłodowska-Curie Ph.D. Position**, *Pensoft Publishers and Bulgarian Academy of Sciences*, Sofia, Bulgaria
- 2012 – 2014 **Full DAAD scholarship Master's**, *Ludwig-Maximilians-Universität*, Munich
- 2001 **Full scholarship for Bachelor's**, *International University Bremen (Jacobs)*, Bremen
- 1999 **Golden medal (summa cum laude)**, *The U.S.A. National Latin Exam*

Scientific output

Full list of publications, talks, and other contributions

See Supplement 1 (Summary of Scientific Achievements)

Selected publications

See Supplement 2 (List of Selected Publications)

Teaching experience and science communication

See Supplement 3 (Summary of Pedagogical Achievements)

Leadership, innovation, and organizational experience

Leadership and organizational experience

See Supplement 4 (Presentation of Other Merits)

Participation in industrial innovation and software

See Supplement 4 (Presentation of Other Merits)