## Steven Kelk

## List of Publications by Year in descending order

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Version: 2024-02-01


Reflections on kernelizing and computing unrooted agreement forests. Annals of Operations
Research, $2022,309,425-451$. Research, 2022, 309, 425-451.

Maximum parsimony distance on phylogenetic trees: A linear kernel and constant factor approximation algorithm. Journal of Computer and System Sciences, 2021, 117, 165-181.

Applicability of several rooted phylogenetic network algorithms for representing the evolutionary
history of SARS-CoV-2. Bmc Ecology and Evolution, 2021, 21, 220.

New Reduction Rules for the Tree Bisection and Reconnection Distance. Annals of Combinatorics, 2020, 24, 475-502.

A Machine Learning Approach to Algorithm Selection for Exact Computation of Treewidth.
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$6 \quad$ Integrality gaps for colorful matchings. Discrete Optimization, 2019, 32, 73-92.
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7 Deciding the existence of a cherry-picking sequence is hard on two trees. Discrete Applied
Mathematics, 2019, 260, 131-143.

A Third Strike Against Perfect Phylogeny. Systematic Biology, 2019, 68, 814-827.
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A Tight Kernel for Computing the Tree Bisection and Reconnection Distance between Two
Phylogenetic Trees. SIAM Journal on Discrete Mathematics, 2019, 33, 1556-1574.

Finding a most parsimonious or likely tree in a network with respect to an alignment. Journal of Mathematical Biology, 2019, 78, 527-547.

Treewidth of display graphs: bounds, brambles and applications. Journal of Graph Algorithms and
Applications, 2019, 23, 715-743.

Treewidth distance on phylogenetic trees. Theoretical Computer Science, 2018, 731, 99-117.
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On Unrooted and Root-Uncertain Variants of Several Well-Known Phylogenetic Network Problems.
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A Resolution of the Static Formulation Question for the Problem of Computing the History Bound. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2017, 14, 404-417.
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On the challenge of reconstructing level-1 phylogenetic networks from triplets and clusters. Journal
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A note on convex characters, Fibonacci numbers and exponential-time algorithms. Advances in Applied Mathematics, 2017, 84, 34-46.

ToTo: An open database for computation, storage and retrieval of tree decompositions. Discrete
Applied Mathematics, 2017, 217, 389-393.
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On the Complexity of Computing MP Distance Between Binary Phylogenetic Trees. Annals of
Combinatorics, 2017, 21, 573-604.

Reduction rules for the maximum parsimony distance on phylogenetic trees. Theoretical Computer
Science, 2016, 646, 1-15.

Do Branch Lengths Help to Locate a Tree in a Phylogenetic Network?. Bulletin of Mathematical Biology, 2016, 78, 1773-1795.

Hybridization Number on Three Rooted Binary Trees is EPT. SIAM Journal on Discrete Mathematics, 2016,
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On the Maximum Parsimony Distance Between Phylogenetic Trees. Annals of Combinatorics, 2016, 20,
87-113.

Kernelizations for the hybridization number problem on multiple nonbinary trees. Journal of
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Phylogenetic incongruence through the lens of Monadic Second Order logic. Journal of Graph
Algorithms and Applications, 2016, 20, 189-215.
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On Computing the Maximum Parsimony Score of a Phylogenetic Network. SIAM Journal on Discrete
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On Low Treewidth Graphs and Supertrees. Journal of Graph Algorithms and Applications, 2015, 19, 325-343.

Approximation Algorithms for Nonbinary Agreement Forests. SIAM Journal on Discrete Mathematics,
2014, 28, 49-66.

Constructing Minimal Phylogenetic Networks from Softwired Clusters is Fixed Parameter Tractable.
Algorithmica, 2014, 68, 886-915.

A practical approximation algorithm for solving massive instances of hybridization number for binary
and nonbinary trees. BMC Bioinformatics, 2014, 15, 127.

The agreement problem for unrooted phylogenetic trees is FPT. Journal of Graph Algorithms and
Applications, 2014, 18, 385-392.

31 Networks: expanding evolutionary thinking. Trends in Genetics, 2013, 29, 439-441.
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32 Phylogenetic Networks: Concepts, Algorithms and Applications. Systematic Biology, 2012, 61, 174-175.
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Cycle Killer...Qu'est-ce que c'est? On the Comparative Approximability of Hybridization Number and
Directed Feedback Vertex Set. SIAM Journal on Discrete Mathematics, 2012, 26, 1635-1656.

On the Elusiveness of Clusters. IEEE/ACM Transactions on Computational Biology and Bioinformatics,
2012, 9, 517-534.

A Practical Approximation Algorithm for Solving Massive Instances of Hybridization Number. Lecture
Notes in Computer Science, 2012, , 430-440.
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Constructing the Simplest Possible Phylogenetic Network from Triplets. Algorithmica, 2011, 60,
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38 Worst-case optimal approximation algorithms for maximizing triplet consistency within phylogenetic networks. Journal of Discrete Algorithms, 2010, 8, 65-75.
Phylogenetic networks do not need to be complex: using fewer reticulations to represent conflicting

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Shorelines of Islands of Tractability: Algorithms for Parsimony and Minimum Perfect Phylogeny <br>
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44 The Complexity of the Single Individual SNP Haplotyping Problem. Algorithmica, 2007, 49, 13-36. ..... 1.3 ..... 45

