

# Curriculum Vitae

Can Kockan

## Contact

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## Professional Experience

2021–Present Postdoctoral Associate, Yale University  
PI: Mark Gerstein

2019–2021 Pre-Doctoral Fellow, Cancer Data Science Laboratory  
National Cancer Institute, National Institutes of Health  
Chief: Eytan Ruppin, PI: S. Cenk Sahinalp

## Education

2016–2021 Ph.D., Computer Science, Indiana University  
Thesis: Privacy-Preserving Algorithms for Secure Genome Analysis in Trusted Execution Environments  
Supervisor: S. Cenk Sahinalp

2014–2016 M.Sc., Computer Science, Simon Fraser University  
Thesis: Methods for the Detection of Single Nucleotide Variants and Indels from Cell-Free DNA  
Supervisor: S. Cenk Sahinalp

2010–2014 B.Sc., Computer Science, Bilkent University

## Publications

- [1] Privacy-Preserving Genotype Imputation in a Trusted Execution Environment  
Natnatee Dokmai, Can Kockan, Kaiyuan Zhu, Xiaofeng Wang, S. Cenk Sahinalp and Hyunghoon Cho  
Cell Systems, 2021 [[Link](#)]  
Also appeared in RECOMB, 2021
- [2] Sketching Algorithms for Genomic Data Analysis and Querying in a Secure Enclave  
Can Kockan, Kaiyuan Zhu, Natnatee Dokmai, Nikolai Karpov, M. Oguzhan Kulekci, David P.

Woodruff and S. Cenk Sahinalp  
Nature Methods, 2020 [[Link](#)]  
Also appeared in RECOMB, 2019

- [3] Structural Variation and Fusion Detection Using Targeted Sequencing Data from Circulating Cell Free DNA  
Alexander R Gawronski, Yen-Yi Lin, Brian McConeghy, Stephane LeBihan, Hossein Asghari, Can Kockan, Baraa Orabi, Nabil Adra, Roberto Pili, Colin C Collins, S Cenk Sahinalp and Faraz Hach  
Nucleic Acids Research, 2019 [[Link](#)]
- [4] Toolkit for Automated and Rapid Discovery of Structural Variants  
Arda Soylev, Can Kockan, Fereydoun Hormozdiari and Can Alkan  
Methods, 2017 [[Link](#)]
- [5] SiNVICT: Ultra-Sensitive Detection of Single Nucleotide Variants and Indels in Circulating Tumour DNA  
Can Kockan, Faraz Hach, Iman Sarrafi, Robert H Bell, Brian McConeghy, Kevin Beja, Anne Haegert, Alexander W Wyatt, Stanislav V Volik, Kim N Chi, Colin C Collins and S Cenk Sahinalp  
Bioinformatics, 2017 [[Link](#)]

## Professional Activities

- Reviewer, Oxford Bioinformatics: 2018-2021.
- Reviewer, ISMB: 2020.
- Reviewer, RECOMB: 2018-2021.
- Reviewer, npj Genomic Medicine: 2018.
- Reviewer, Nature Communications: 2017.

## Software

- <https://github.com/ndokmai/sgx-genotype-imputation>
- <https://github.com/ckockan/skses-rust>
- <https://github.com/ndokmai/idadash-sgx-nn>
- <https://github.com/ndokmai/sgx-genome-variants-search>
- <https://github.com/BilkentCompGen/tardis>
- <https://github.com/vpc-ccg/svict>
- <https://github.com/sfu-compbio/sin vict>