

## NSF BIOGRAPHICAL SKETCH

NAME: Koenig, Jérémie

POSITION TITLE & INSTITUTION: Associate Research Scientist, Yale University

### (a) PROFESSIONAL PREPARATION -(see PAPPG Chapter II.C.2.f.(a))

INSTITUTION	LOCATION	MAJOR / AREA OF STUDY	DEGREE (if applicable)	YEAR YYYY
Université de Strasbourg	Strasbourg, France	Computer Science	BS	2010
Université de Strasbourg	Strasbourg, France	Computer Science and Imaging Sciences	MS	2012
Yale University	New Haven, CT	Computer Science	MS	2015
Yale University	New Haven, CT	Computer Science	MPHIL	2015
Yale University	New Haven, CT	Computer Science	PHD	2020
Yale University	New Haven, CT		Postdoctoral Fellow	2020 - 2021

### (b) APPOINTMENTS -(see PAPPG Chapter II.C.2.f.(b))

2021 - present Associate Research Scientist, Yale University, New Haven, CT

### (c) PRODUCTS -(see PAPPG Chapter II.C.2.f.(c))

#### Products Most Closely Related to the Proposed Project

- Gu R, Koenig J, Ramananandro T, Shao Z, Wu X, Weng S, Zhang H, Guo Y. Deep Specifications and Certified Abstraction Layers. ACM SIGPLAN Notices. 2015 May 11; 50(1):595-608. Available from: <https://dl.acm.org/doi/10.1145/2775051.2676975> DOI: 10.1145/2775051.2676975
- Gu R, Shao Z, Kim J, Wu X, Koenig J, Sjöberg V, Chen H, Costanzo D, Ramananandro T. Certified concurrent abstraction layers. ACM SIGPLAN Notices. 2018 December 02; 53(4):646-661. Available from: <https://dl.acm.org/doi/10.1145/3296979.3192381> DOI: 10.1145/3296979.3192381
- Koenig J, Shao Z. Refinement-Based Game Semantics for Certified Abstraction Layers. Proceedings of the 35th Annual ACM/IEEE Symposium on Logic in Computer Science. LICS '20: 35th Annual ACM/IEEE Symposium on Logic in Computer Science; 08 0 20; Saarbrücken Germany. New York, NY, USA: ACM; c2020. Available from: <https://dl.acm.org/doi/10.1145/3373718.3394799> DOI: 10.1145/3373718.3394799
- Koenig J, Shao Z. CompCertO: compiling certified open C components. Proceedings of the 42nd ACM SIGPLAN International Conference on Programming Language Design and Implementation. PLDI '21: 42nd ACM SIGPLAN International Conference on Programming Language Design and Implementation; 20 0 21; Virtual Canada. New York, NY, USA: ACM; c2021. Available from: <https://dl.acm.org/doi/10.1145/3453483.3454097> DOI: 10.1145/3453483.3454097

5. Refinement-Based Game Semantics for Certified Components. US; 2020. Available from: <https://flint.cs.yale.edu/certikos/publications/koenig-thesis.html>

**Other Significant Products, Whether or Not Related to the Proposed Project**

1. Feigenbaum J, Koenig J. On the Feasibility of a Technological Response to the Surveillance Morass. Lecture Notes in Computer Science [Internet] Cham: Springer International Publishing; 2014. Chapter Chapter 23239-252p. Available from: [http://link.springer.com/10.1007/978-3-319-12400-1\\_23](http://link.springer.com/10.1007/978-3-319-12400-1_23) DOI: 10.1007/978-3-319-12400-1\_23
2. Ramananandro T, Shao Z, Weng S, Koenig J, Fu Y. A Compositional Semantics for Verified Separate Compilation and Linking. Proceedings of the 2015 Conference on Certified Programs and Proofs. POPL '15: The 42nd Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages; 13 0 15; Mumbai India. New York, NY, USA: ACM; c2015. Available from: <https://dl.acm.org/doi/10.1145/2676724.2693167> DOI: 10.1145/2676724.2693167
3. Alipourfard O, Gao J, Koenig J, Harshaw C, Vahdat A, Yu M. Risk based planning of network changes in evolving data centers. Proceedings of the 27th ACM Symposium on Operating Systems Principles. SOSP '19: ACM SIGOPS 27th Symposium on Operating Systems Principles; 27 1 19; Huntsville Ontario Canada. New York, NY, USA: ACM; c2019. Available from: <https://dl.acm.org/doi/10.1145/3341301.3359664> DOI: 10.1145/3341301.3359664
4. Gu R, Shao Z, Chen H, Kim J, Koenig J, Wu X, Sjöberg V, Costanzo D. Building certified concurrent OS kernels. Communications of the ACM. 2019 September 24; 62(10):89-99. Available from: <https://dl.acm.org/doi/10.1145/3356903> DOI: 10.1145/3356903

**(d) SYNERGISTIC ACTIVITIES -(see PAPPG Chapter II.C.2.f.(d))**

1. Member of the External Review and Artifact Evaluation Committee for OOPSLA 2022