Postdoctoral Fellowship in Machine Learning for Analysis of Radio Frequency Signals, Duke University

We are seeking up to two exceptional researchers to work with Rob Calderbank and Vahid Tarokh at the Information Initiative at Duke [https://bigdata.duke.edu/] on the applications of machine learning to analysis, detection and the design of radio frequency signals.

Applicants are expected to hold a Ph.D. degree in EE, Math, Stat, Physics or a closely related field. We are seeking mathematically sophisticated and intellectually curious researchers at an early stage of their scholarly careers. The successful candidate will have a background and familiarity with communications theory, radio frequency signals, probabilistic techniques and applications. Knowledge of at least one programming language is required.

This effort is funded by a generous grant from DARPA. The original appointment period is for one year, but may be extended for a second year. Position can begin as early as April 1, 2018.

Applicants are asked to submit (a) cover letter; (b) a vitae; and (c) a research statement describing current and past research (two page maximum). The applicant should request at least three letters of recommendation, but no more than five. Please submit your application to Ms. Kathy Peterson by email kathy.peterson@duke.edu.

Applications received by March 31, 2018 will be guaranteed full consideration; early application is advisable.

Duke University seeks to build a diverse faculty: women and under-represented minorities are encouraged to apply.

Duke University is an Affirmative Action/Equal Opportunity Employer committed to providing employment opportunity without regard to an individual's age, color, disability, genetic information, gender, gender identity, national origin, race, religion, sexual orientation, or veteran status.
We are seeking an exceptional candidate to work with Robert Calderbank and Vahid Tarokh on Data-Driven Optimization with non-conves time-varying objectives at the Information Initiative at Duke [https://bigdata.duke.edu/](https://bigdata.duke.edu/).

Applicants are expected to hold a Ph.D. degree in Math, Stat, EE, CS, Physics or a closely related field. We are seeking mathematically sophisticated and intellectually curious researchers at an early stage of their scholarly careers.

The successful candidate is expected to have a background and familiarity with some of these topics: Model Matching, Expert Systems, Information Theory, and Online Optimization Methods. Familiarity with at least one programming language is required.

This effort has been funded by a generous grant from DARPA. The original appointment period is for one year (beginning April 1, 2018).

Applicants are asked to submit (a) cover letter; (b) a vitae; and (c) a research statement describing current and past research (two page maximum). The applicant should request at least three letters of recommendation, but no more than five. Please submit your application to Ms. Kathy Peterson by email kathy.peterson@duke.edu.

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Postdoctoral Fellowship in Change Detection for Multimodal Data, Duke University

The postdoc is at the IID center at Duke University.

We are seeking an exceptional researcher to work on Change Detection for Multimodal Data, and Algorithm Design with Vahid Tarokh at the Information Initiative at Duke [https://bigdata.duke.edu/](https://bigdata.duke.edu/).

Applicants are expected to hold a Ph.D. degree in EE, Math, Stat, Physics or a closely related field. We are seeking mathematically sophisticated and intellectually curious researchers at an early stage of their scholarly careers.

The successful candidate will have a background and familiarity with change detection literature, algorithm design and knowledge of a programing language.

This effort is funded by a generous grant from US Army Research Lab (ARL). The applicant is expected to work closely with the ARL researcher, and participate in frequent meetings and teleconferences. Given the required security checks, US Citizenship or Permanent Residency is desired. The original appointment period is for one year (beginning July 1, 2018), but may be extended for a second year.

Applicants are asked to submit (a) cover letter; (b) a vitae; and (c) a research statement describing current and past research (two page maximum). The applicant should request at least three letters of recommendation, but no more than five. These letters should be uploaded, by their authors, at [mathjobs.org](http://mathjobs.org).

Applicants are encouraged to submit all of their materials electronically at this site. Applicants who do not have internet access may mail their materials to: Appointments Committee Department of Mathematics, Box 90320, Duke University Durham, NC 27708—0320.

Applications received by **June 1, 2018** will be guaranteed full consideration; early application is advisable.

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Postdoctoral Fellowship in Fundamental Limits of Learning, Duke University

The postdoc is at the IID center at Duke University.

We are seeking up to two exceptional researchers to work on calculation of Fundamental Limits of Learning for High Dimensional, Purely High dimensional data, Sparse Data, and the Design of Limit Achieving Algorithms to work with Vahid Tarokh at the Information Initiative at Duke [https://bigdata.duke.edu/](https://bigdata.duke.edu/).

Applicants are expected to hold a Ph.D. degree in Math, Stat, EE, CS, Physics or a closely related field. We are seeking mathematically sophisticated and intellectually curious researchers at an early stage of their scholarly careers.

The successful candidate is expected to have a background and familiarity with some of these topics: Model Matching, Expert Systems, Information Theory, and Online Optimization Methods. Familiarity with at least one programming language is required.

This effort has been funded by a generous grant from DARPA. The successful applicants are expected in frequent meetings, teleconferences, and to lead other postdocs and graduate students in the DARPA HACKATHON Challenge. The original appointment period is for one year (beginning April 1, 2018), but may be extended.

Applicants are asked to submit (a) cover letter; (b) a vitae; and (c) a research statement describing current and past research (two page maximum). The applicant should request at least three letters of recommendation, but no more than five. These letters should be uploaded, by their authors, at [mathjobs.org](http://mathjobs.org). Applicants are encouraged to submit all of their materials electronically at this site. Applicants who do not have internet access may mail their materials to: Appointments Committee Department of Mathematics, Box 90320, Duke University Durham, NC 27708-0320.

Applications received by **March 31, 2018** will be guaranteed full consideration; early application is advisable.

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Postdoctoral Fellowship in Non-Commutative Information Theory and Processing, Duke University

The postdoc is at the IID Center at Duke University. We are seeking an exceptional researcher to work with Vahid Tarokh at the Information Initiative at Duke on foundations of Non-Commutative Information Theory, and the Design of Algorithms for the Processing of Multimodal Data based on these theoretical findings. Applicants are expected to hold a Ph.D. degree in EE, Math, Stat, Physics or a closely related field. We are seeking mathematically sophisticated and intellectually curious researchers at an early stage of their scholarly careers.

The successful candidate will have a background and familiarity with probabilistic techniques and applications. Knowledge of free probability theory and random matrix theory is highly desired.

This effort is funded by a generous grant from US Army Research Office (ARO). The original appointment period is for one year, but may be extended for up to three years. Position can begin as early as March 1, 2018.

Applicants are asked to submit (a) cover letter; (b) a vitae; and (c) a research statement describing current and past research (two page maximum). The applicant should request at least three letters of recommendation, but no more than five. These letters should be uploaded, by their authors, at mathjobs.org. Applicants are encouraged to submit all of their materials electronically at this site. Applicants who do not have internet access may mail their materials to: Appointments Committee Department of Mathematics, Box 90320, Duke University Durham, NC 27708--0320.

Applications received by **Feb 28, 2018** will be guaranteed full consideration; early application is advisable. Duke University seeks to build a diverse faculty: women and under-represented minorities are encouraged to apply.

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