

# Postdoctoral Research Scientist (computational)

<https://pa334.peopleadmin.com/postings/4133>

Columbia University's Department of Systems Biology is seeking a qualified candidate for a Postdoctoral Research Scientist (computational) position in Dr. Andrea Califano's laboratory <http://califano.c2b2.columbia.edu/>. Candidates should have outstanding scientific credentials, including first-author publications in journals relevant to the field of systems biology, and conference presentations. Candidates possessing a strong computational background combined with a good understanding of molecular biology will be especially well suited to fill this position, including background in machine learning, physics, mathematics, and related sciences. In addition, the optimal candidate will have significant experience and publications in network-based biology, including the reverse engineering and/or use of regulatory/signaling networks to elucidate the molecular determinants of specific cellular phenotypes and associated mechanisms for follow-up experimental validation.

Integration of quantitative analysis, high-throughput experimentation, and technology development is the hallmark of systems biology at Columbia. As such, the Postdoctoral Research Scientist will work collaboratively on multidisciplinary teams to develop or improve algorithms for the analysis of cell regulatory and signaling networks; use models to predict how the genomic and epigenomic diversity affect physiologic or pathologic phenotypes; and develop new methods and technologies for elucidating biological mechanisms at the systems level.

## Minimum Degree Required:

A PhD in one of the following disciplines: computational biology, physics, computer science, mathematics, or related quantitative science is required. Additional work-related experience will be a plus. A proven first-author publication track record is required to be considered for this position.

## Preferred Qualifications:

Knowledge of standard computer languages, including R, Java, PERL, and C/C++.

Familiarity with processing large genomic data sets and with a variety of reverse engineering techniques, including optimization-based, statistical, and integrative approaches.

Familiarity with network biology algorithms, including both network reverse engineering and analysis, as well as with the underlying biological knowledge related to transcriptional and post-translational interactions is critical to be considered for this position, as is in-depth knowledge of the foundations of machine learning and probability theory.

Excellent communication and writing skills.

Send resume to: Lila Lande ([ljl1@cumc.columbia.edu](mailto:ljl1@cumc.columbia.edu))

## Associate Research Scientist (computational)

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Columbia University's Department of Systems Biology is seeking a qualified candidate for a senior level research position of Associate Research Scientist (computational) in Dr. Andrea Califano's laboratory <http://califano.c2b2.columbia.edu/>. Candidates should have outstanding scientific and postdoctoral credentials, including first-author publications in journals relevant to the field of systems biology, and conference presentations. Candidates possessing a strong computational background combined with a good understanding of molecular biology will be especially well suited to fill this position, including background in machine learning, physics, mathematics, and related sciences. In addition, the optimal candidate will have significant experience and publications in network-based biology, including the reverse engineering and/or use of regulatory/signaling networks to elucidate the molecular determinants of specific cellular phenotypes and associated mechanisms for follow-up experimental validation.

Integration of quantitative analysis, high-throughput experimentation, and technology development is the hallmark of systems biology at Columbia. As such, the Associate Research Scientist will work collaboratively on multidisciplinary teams to develop or improve algorithms for the analysis of cell regulatory and signaling networks; use models to predict how the genomic and epigenomic diversity affect physiologic or pathologic phenotypes; and develop new methods and technologies for elucidating biological mechanisms at the systems level.

Minimum Degree Required:

A PhD in one of the following disciplines: computational biology, physics, computer science, mathematics, or related quantitative science is required, plus 2 to 3 years of postdoctoral research experience. A proven first-author publication track record is required to be considered for this position.

Preferred Qualifications:

Knowledge of standard computer languages, including R, Java, PERL, and C/C++.

Familiarity with processing large genomic data sets and with a variety of reverse engineering techniques, including optimization-based, statistical, and integrative approaches.

Familiarity with network biology algorithms, including both network reverse engineering and analysis, as well as with the underlying biological knowledge related to transcriptional and post-translational interactions is critical to be considered for this position, as is in-depth knowledge of the foundations of machine learning and probability theory.

Excellent communication and writing skills.

Strong project management skills and demonstrated mentoring skills with students and postdocs.

Send resume to: Lila Lande ([ljl1@cumc.columbia.edu](mailto:ljl1@cumc.columbia.edu))