

Lifeng Lin, PhD

Knowledge-driven Coding for Better Assays

Contact

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Professional Summary

Seasoned bioinformatics scientist with 15 years of expertise in nucleic acid assay development across NGS, qPCR, and single-cell technologies. Proven track record in leading engineering teams, architecting full-scale design workflows, and delivering hundreds of complex assays on industry-leading platforms.

Professional Experience

Principal Scientist - Bioinformatics | Cepheid inc. (A Danaher Company)

2020.10 - Present

- **Lead** and manage **Bioinformatics Engineering team**, orchestrating server infrastructure, code repository management, and workflow automation
- **Develop** and maintain in-house Python libraries, automated pipelines, and web applications for streamlined assay development
- **Advise** as Subject Matter Expert, providing strategic insights to company leadership on bioinformatics capabilities
- **Pioneer** advanced thermodynamic predictive models using machine learning approaches

Data Scientist III | Bio-Rad Laboratories

2019.04 - 2020.10

- **Optimized Python pipeline** for the Digital Assays Design Engine
- **Web app and database** design for the Digital Assays Web Portal (<https://www.bio-rad.com/digital-assays>)
- **Designed Assays** in-house infectious disease assays

Panel Design Lead / System Admin | Paragon Genomics

2017.12 - 2019.04

- **Architected web portal** for ParagonDesigner (https://www.paragongenomics.com/paragon_designer/)
- **Coded** high-throughput pipeline for RNA expression assay design (Bash + Python + R)
- **Administered** AWS clusters for data analysis and company web infrastructure
- **Restructured pipeline** using Snakemake and anaconda

Staff Scientist | Thermo Fisher Scientific

2015.04 - 2017.12

- **Designed** specialized panels, including patent-pending Immune Repertoire and plant barcoding solutions
- **Improved design protocols** for custom human NGS panels meeting FDA submission requirements
- **Coded** automated design pipelines for bacterial and viral target analysis

Senior Bioinformatics Scientist | Nanosphere inc (A Luminex Company)

2010.6 - 2015.4

- **Conducted genome analysis** for target pathogens
- **Large sequence database** construction and maintenance
- **Designed assays** for Verigene Enteric Pathogen panels, Sepsis panels and Respiratory Pathogen panels

PhD Student / Research Assistant | University of Georgia, Plant Genome Mapping Lab

2003.8 - 2010.5

- **Assembled** the first cotton genome (*G. raimondii*)
- **Mapped** cotton fiberless gene (*Li2*)

- **Dated** ancient genome duplication events in cotton-grape comparative genomics

Patents

- **Compositions and Methods for Immune Repertoire Sequencing**
Patent ID: WO2020018836
Inventors: Timothy Looney, Geoffrey Lowman, Lifeng Lin

Education

- **PhD** | University of Georgia (2010)
- **B.S.** | Fudan University (2003)

Selected Publications (full list available upon request)

1. Paterson, A. H., J. F. Wendell, et al. (2012). "Repeated polyploidization of Gossypium genomes and the evolution of spinnable cotton fibres." *Nature*, 492: 423-427
2. Lin, L., A. H. Paterson (2011). "Size variation in homologous segments across divergent plant genomes." *Mob Genet Elements*, 1(2): 92-96
3. Lin, L., G. J. Pierce, et al. (2010). "A draft physical map of a D-genome cotton species (*Gossypium raimondii*)." *BMC Genomics*, 11: 395