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## *Education*

**Doctor of Philosophy, Computer Science** University of Arizona · Tucson, AZ · 2016

Advisor: John Kececioglu.

Dissertation: “Parameter Advising for Multiple Sequence Alignment”

Minor: Ecology and Evolutionary Biology

**Master of Science, Computer Science** University of Central Florida · Orlando, FL · 2009

Advisor: Shaojie Zhang

Thesis: “New Computational Approaches to Multiple RNA Alignment and RNA Search”

**Bachelor of Science, Computer Science** University of Central Florida · Orlando, FL · 2007

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## *Professional Experience*

**Lane Fellow** Carnegie Mellon University · Pittsburgh, PA · 9/2016–present

Computational Biology Department, School of Computer Science

Advisor: Carl Kingsford

**Graduate Research Assistant** University of Arizona · Tucson, AZ · 8/2010–6/2016

Fellow of the NSF IGERT in Comparative Genomics Grant DGE-0654435 (2010-2013)

Funded under NSF Grant IIS-1217886 (2013-2016)

**Research Associate II** Sanford-Burnham Institute for Medical Research · Orlando, FL · 5/2010–8/2010

Software development and data analysis of RNA-Seq and Chip-Seq experiments related to melanoma classification.

**Graduate Research Assistant** University of Central Florida · Orlando, FL · 8/2007–8/2010

Department of Engineering Technology, College of Engineering and Computer Science

Project was to interface with local law enforcement to improve communication

**Developer** Cloudspace · Orlando, FL · 8/2005–8/2007

Develop and maintain web-based applications

Worked on both server side and client facing development

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## *Mentorship*

**Fiyinfoluwa Gbosibo** May–July 2017

iBRIC (Internship in Biomedical Research, Informatics and Computer Science) student

Currently an undergraduate student at Lincoln University

**Kwanho Kim** September 2017 – present

MSCB Student at CMU

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## *Book*

- [1] **Parameter advising for multiple sequence alignment.** Dan DeBlasio and John Kececioglu. Springer International Publishing, 2018.

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## Theses

- [1] **Parameter advising for multiple sequence alignment.** [Daniel F DeBlasio](#). PhD Thesis. University of Arizona, Tucson, Arizona, 2016.
- [2] **New Computational Approaches For Multiple RNA Alignment And RNA Search.** [Daniel F DeBlasio](#). Masters Thesis. University of Central Florida, Orlando, Florida, 2009.

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## Conference Publications

- [1] **Asymptotically optimal minimizers schemes.** Guillaume Marçais, [Dan DeBlasio](#), and Carl Kingsford. *Proceedings of the 26th International Conference on Intelligent Systems for Molecular Biology (ISMB)*, 2018.
- [2] **Boosting Alignment Accuracy by Adaptive Local Realignment.** [Dan DeBlasio](#) and John Kececioglu. *Proceedings of the 21st Conference on Research in Computational Molecular Biology (RECOMB)*, 2017.
- [3] **Predicting Core Columns of Protein Multiple Sequence Alignments for Improved Parameter Advising.** [Dan DeBlasio](#) and John Kececioglu. *Proceedings of the 16th International Workshop on Algorithms in Bioinformatics (WABI)*, 2016.
- [4] **Ensemble Multiple Sequence Alignment via Advising.** [Dan DeBlasio](#) and John Kececioglu. *Proceedings of the 6th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB)*, 2015.
- [5] **Learning Parameter Sets for Alignment Advising.** [Dan DeBlasio](#) and John Kececioglu. *Proceedings of the 5th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB)*, 2014.
- [6] **Estimating the accuracy of multiple alignments and its use in parameter advising.** [Dan F. DeBlasio](#), Travis J. Wheeler, and John D. Kececioglu. *Proceedings of the 16th Conference on Research in Computational Molecular Biology (RECOMB)*, 2012.
- [7] **PMFastR: A New Approach to Multiple RNA Structure Alignment.** [Daniel DeBlasio](#), Jocelyne Bruand, and Shaojie Zhang. *Proceedings of the 9th International Workshop on Algorithms in Bioinformatics (WABI)*, 2009.

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## Journal Publications

- [1] **Automatically eliminating errors induced by incorrect parameter choices for transcriptome assembly.** [Dan DeBlasio](#) and Carl Kingsford. *in preparation*.
- [2] **Boosting Alignment Accuracy by Adaptive Local Realignment.** [Dan DeBlasio](#) and John Kececioglu. *accepted to Journal of Computational Biology*, 25(7), July 2018.
- [3] **Core column prediction for protein multiple sequence alignments.** [Dan DeBlasio](#) and John Kececioglu. *Algorithms for Molecular Biology*, 12(1), April 2017.
- [4] **Genome Sequence of Ophidiomyces ophiodiicola, an Emerging Fungal Pathogen of Snakes.** Mana Ohkura, Robert R. Fitak, Jennifer H. Wisecaver, [Dan DeBlasio](#), Faheem Niazi, Michael Egholm, Steven D. Rounsley, Chinnappa D. Kodira, and Marc J. Orbach. *Genome Announcements*, 5(30), July 2017.
- [5] **SICLE: a high-throughput tool for extracting evolutionary relationships from phylogenetic trees.** [Dan F. DeBlasio](#) and Jennifer H. Wisecaver. *PeerJ*, 4, August 2016.
- [6] **Learning Parameter-Advising Sets for Multiple Sequence Alignment.** [Dan DeBlasio](#) and John Kececioglu. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 14(9), 2017. Online 2015.
- [7] **Accuracy estimation and parameter advising for protein multiple sequence alignment.** John Kececioglu and [Dan DeBlasio](#). *Journal of Computational Biology*, 20(4), April 2013.
- [8] **A Memory Efficient Method for Structure-Based RNA Multiple Alignment.** [Daniel DeBlasio](#), Jocelyne Bruand, and Shaojie Zhang. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 9(1), January 2012.
- [9] **Epigenetic regulation of microRNA-375 and its role in melanoma development in humans.** Joseph Mazar, [Dan DeBlasio](#), Subramaniam S Govindarajan, Shaojie Zhang, and Ranjan J Perera. *FEBS Letters*, 585(15), August 2011.

- [10] **Epigenetic regulation of microRNA genes and the role of miR-34b in cell invasion and motility in human melanoma.** Joseph Mazar, Divya Khaitan, [Dan DeBlasio](#), Cuncong Zhong, Subramaniam S Govindarajan, Sharmila Kopanathi, Shaojie Zhang, Animesh Ray, and Ranjan J Perera. *PLoS one*, 6(9), September 2011.
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## *Service Related Publication*

- [1] **Reflections on a journey: a retrospective of the ISCB Student Council symposium series.** Mehedi Hassan, Aishwarya Alex Namasivayam\*, [Dan DeBlasio](#)\*, Nazeefa Fatima\*, Benjamin Siranosian, R. Gonzalo Parra, Bart Cuypers, Sayane Shome, Alexander Miguel Monzon, Julien Fumey, and Farzana Rahman. *BMC Bioinformatics*, 19(12):347, Oct 2018.
- [2] **The ISCB Student Council Internship Program: Expanding computational biology capacity worldwide.** Jigisha Anupama, Margherita Francescato, Farzana Rahman, Nazeefa Fatima, Al berto Santos, Pandurang Kolekar, Avinash Kumar Shanmugam, Venkata Satagopam, [Dan DeBlasio](#), Magali Michaut, and Emre Guney. *PLOS Computational Biology*, 14(1), January 2018.
- [3] **Highlights of the second ISCB Student Council Symposium in Africa, 2017.** Candice N. Rafael, Efejiro Ashano, Yumna Moosa, Sayane Shome, and [Dan DeBlasio](#). *F1000Research*, 6(ISCB Comm J), 2017 (editorial without peer-review).
- [4] **Highlights from the 11th ISCB Student Council Symposium 2015.** Katie Wilkins, Mehedi Hassan, Margherita Francescato, Jakob Jespersen, R. Gonzalo Parra, Bart Cuypers, [Dan DeBlasio](#), Alexander Junge, Anupama Jigisha, and Farzana Rahman. *BMC Bioinformatics*, 17(3), Feb 2016 (editorial without peer-review).
- [5] **Highlights from the tenth ISCB Student Council Symposium 2014.** Farzana Rahman, Katie Wilkins, Annika Jacobsen, Alexander Junge, Esmeralda Vicedo, [Dan DeBlasio](#), Anupama Jigisha, and Tomás Di Domenico. *BMC Bioinformatics*, 16(Suppl 2):A1, January 2015 (editorial without peer-review).
- [6] **Parameter advising for multiple sequence alignment.** [Dan DeBlasio](#) and John Kececioglu. *BMC Bioinformatics*, 16(Suppl 2):A10, January 2015 (editorial without peer-review).
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## *Posters*

- [1] **The Bioinformatics Internship Program: An Initiative of The ISCB Student Council.** Emre Guney, Farzana Rahman, Nazeefa Fatima, Jigisha Anupama, and [Dan DeBlasio](#). ISMB 2018 – *F1000 Poster Award*.
- [2] **Automatically eliminating errors induced by suboptimal parameter choices in transcript assembly.** [Dan DeBlasio](#) and Carl Kingsford. ISMB 2018, ECCB 2018.
- [3] **Adaptive local realignment via parameter advising.** [Dan DeBlasio](#) and John Kececioglu. ISMB 2016, WABI 2016, ACM-BCB 2016.
- [4] **Ensemble multiple sequence alignment using advising.** [Dan DeBlasio](#) and John Kececioglu. ISMB/ECCB 2015.
- [5] **Learning parameter sets for alignment advising.** [Dan DeBlasio](#) and John Kececioglu. ACM-BCB 2014.
- [6] **Learning advisors for multiple sequence alignment.** [Dan DeBlasio](#) and John Kececioglu. ISMB 2014.
- [7] **FACET: a feature-based accuracy-estimation tool for protein multiple sequence alignments.** [Dan DeBlasio](#) and John Kececioglu. ISMB/ECCB 2013, MAGE 2013, IGERT Symposium on Deep Genomics.
- [8] **Improving the Quality of Protein Sequence Alignments.** [Dan DeBlasio](#) and John Kececioglu. IGERT online poster competition, 2013, video: <http://posterhall.org/igert2013/posters/350>.
- [9] **Estimating the Accuracy of Protein Multiple Alignments Without a Reference.** [Dan DeBlasio](#), Travis Wheeler, Vladamir Filkov, and John Kececioglu. ISMB/ECCB 2011.
- [10] **A New Approach to Multiple RNA Structure Alignment.** [Dan DeBlasio](#), Jocelyn Bruand, Vineet Bafna, and Shaojie Zhang. RECOMB 2009.

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## *Invited Talks*

- “Building an automated bioinformatician—More accurate, large-scale genomic discovery using parameter advising”  
· Biological Data Science · Cold Spring Harbor, NY · November 2018
- “Multiple sequence alignment accuracy estimation and its role in creating an automated bioinformatician”  
· StringBio 2018 · Orlando, FL · October 2018
- “Building an automated bioinformatician: More accurate, large-scale genomic discovery using parameter advising”  
· ESCS 2018 · Athens, Greece · September 2018
- “Building an automated bioinformatician: More accurate, large-scale genomic discovery using parameter advising”  
· ISMB 2018 · Chicago, IL · July 2018
- “Adaptive local realignment via parameter advising” · ISMB 2016 · Orlando, FL · July 2016.
- “Parameter advising for multiple sequence alignment” · Carnegie Mellon University · Pittsburgh, PA · May 2016.
- “Parameter advising for multiple sequence alignment” · Reed College · Portland, OR · March 2016.
- “Advising multiple sequence alignments” · ISCB Student Council Symposium 2014 · Boston, MA · July 2014.

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## *Released Software*

**Scallop Parameter Advising** [github.com/Kingsford-Group/scallopadvising](https://github.com/Kingsford-Group/scallopadvising)

**Feature-based Accuracy Estimator (Facet)** [facet.cs.arizona.edu](http://facet.cs.arizona.edu)

**Opal v3.0** [opal.cs.arizona.edu](http://opal.cs.arizona.edu)

**Sister Clade Extractor (SiCIE)** [eebweb.arizona.edu/sicle/](http://eebweb.arizona.edu/sicle/)

**Profile based Multiple Fast RNA alignment (PMFastR)** [genome.ucf.edu/PMFastR](http://genome.ucf.edu/PMFastR)

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## *Teaching Experience*

**Instructor** Carnegie Mellon University · Pittsburgh, PA  
Advanced Topics in Computational Genomics (02-715), Spring 2018.

**Instructor** University of Arizona · Tucson, AZ  
Evolutionary and Functional Genomics Lab (ECOL 553L), Fall 2012.

**Teaching Assistant** University of Arizona · Tucson, AZ  
Evolutionary and Functional Genomics (ECOL 553), Fall 2012.

**Teaching Assistant** University of Central Florida · Orlando, FL  
Burnett Honors College Summer Institute (high school programming summer camp), Summer 2008.  
Burnett Honors College Summer Institute (high school programming summer camp), Summer 2007.  
Introduction to C Programming, Fall 2006

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## *Honors and Awards*

Lane Fellowship, CMU CBD, 2016-present  
UA Department Fellowship, 2013,2014,2015  
UA Department Service award, 2013  
UA Department Scholarship award, 2016  
NSF IGERT Fellow, 2010-2013  
NSF REU in Computer Vision, 2006  
Travel Fellowships  
{Event} — {Location} — {Funding Agency}

ECCB 2018 — Athens, Greece — ISCB Student Council  
ISMB 2018 — Chicago, IL — ISCB  
ISMB/ECCB 2017 — Prague, Czech Republic — ISCB Student Council  
ISMB 2016 — Orlando, FL — ISCB Student Council  
ISMB/ECCB 2015 — Dublin, Ireland — ISCB Student Council  
ACM-BCB 2014 — Newport Beach, CA — NSF  
ISMB 2014 — Boston, MA — ISCB Student Council  
ISMB/ECCB 2013 — Berlin, Germany — NSF  
RECOMB 2012 — Barcelona, Spain — UA GPSC  
RECOMB 2012 — Barcelona, Spain — NSF  
ISMB/ECCB 2011 — Vienna, Austria — UA GPSC  
WABI 2009 — Philadelphia, PA — UCF Graduate Council  
RECOMB 2009 — Tucson, AZ — RECOMB  
RECOMB 2009 — Tucson, AZ — UCF Graduate Council

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## *Service and Leadership Activities*

### **Member** Professional organizations

International Society for Computational Biology (ISCB)  
Association for Computing Machinery (ACM), ACM SIGBio, ACM SIGAct  
Upsilon Pi Epsilon

### **Committee Member** International conferences and workshops.

**Organizing Committee** ISCB SCS 2014, 2015, 2017; ISCB SCS-Africa 2017; ISCB SCS-Latin America 2018; Workshop on the Future of Algorithms in Biology (FAB) 2018

**Program Committee** IEEE ICCABS 2017

**Student Activities Co-Chair** ACM-BCB 2016

### **Reviewer**

**Journals** Bioinformatics, PLOS One, PeerJ, Nucleic Acids Research, Journal of Health Informatics Research, Current Bioinformatics.

**Conferences** ISCB SCS (2014-18), ISCB SCS-LA (2014), ISCB ESCS (2016), RECOMB (2017-18), WABI (2017), ISMB/ECCB (2017), IEEE ICCABS (2017), ISMB (2018), ACM-BCB (2018).

**Competitions** ISCB Wikipedia Competition (2017-18)

**Other** ISCB SCS (2016-18), UA GPSC Travel Grants (various 2011-2014)

### **Board of Directors** International Society for Computational Biology · 2017–present

Student Council representative  
advocate for students needs within the society  
help make decisions on the societal operations

### **Executive Team** International Society for Computational Biology Student Council · 2017–present

oversee and advise on committee actions and conference planning  
help make decisions on the council operations

### **Web Committee Co-chair** International Society for Computational Biology Student Council · 2012-2017

managed a group of student volunteers to maintain the ISCB-SC website  
oversaw the development and maintenance of the conference submission system

### **AGCCS Computer Science Representative** University of Arizona · 7/2012–5/2013

Associate Graduate Council for the College of Science at the University of Arizona  
advocate for students in the Computer Science department in affairs to the deans and college administration

### **Chair, Graduate Student Council** University of Arizona · 7/2011–5/2012

organized events for graduate students and prospective students in the Computer Science Department  
coordinate discussions with the department administration

**Volunteer Coordinator, Graduate Student Council** University of Arizona · 7/2010–5/2011  
find volunteers to organize department seminar setup and tear down  
coordinate responsibilities for department events planned by the council

**Co-chair, Science Salon** University of Arizona · 7/2011–5/2013  
organized discussions about interdisciplinary science  
vetted topic ideas and assisted in their presentation  
guided discussion at events

**Conference Volunteer** ISMB 2012

**Conference Attendance**

ACM-BCB 2014, 2015, 2016

ECCB 2018

FoCS 2009

IGERT Symposium on Deep Genomics 2013

International Workshop on String Algorithms in Bioinformatics (StringBio) 2018

ISMB/ECCB 2011, 2013, 2015, 2017

ISMB 2012, 2014, 2016, 2018

MAGE 2013

RECOMB 2009, 2012, 2017

ISCB-SCS 2012, 2013, 2014, 2015, 2016

WABI 2009, 2015, 2016

Workshop on Emerging Technologies for Sequence Analysis 2018

Workshop on the Future of Algorithms in Biology 2018