Beth Ann Cimini, PhD

Associate Director for Bioimage Analysis, Imaging Platform
Broad Institute of MIT and Harvard
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EDUCATION

Broad Institute of MIT and Harvard
Postdoctoral fellowship, completed April 2017

University of California at San Francisco, San Francisco, CA
PhD in Biochemistry and Molecular Biology, completed May 2016

Boston University, Boston, MA
B.A. With Distinction in Biochemistry and Molecular Biology, completed May 2007

RESEARCH EXPERIENCE

Associate Director, Bioimage Analysis, Imaging Platform, Broad Institute 2023-present
Senior Group Leader 2021-2023

- ✧ Oversee a multifunctional research group creating (Piximi, Bilayers) and updating (CellProfiler) image analysis software tools, as well as creating workflows with dozens of academic and commercial collaborators each year
- ✧ Co-PI of the Center for Open Bioimage Analysis, directing Driving Biological Projects, Community Engagement, and deep learning research

Broad Institute - Anne Carpenter, Imaging Platform 2016-2021
Senior Computational Biologist 2020-2021
Computational Biologist 2017-2019

- ✧ Created a postdoctoral training program curriculum, and responsible for hiring, training, and daily supervision of multiple postdocs.
- ✧ Assisted and led negotiation of collaborations with 20+ academic labs and biotech companies per year.
- ✧ Broad Institute lead for Driving Biological Projects and Community Engagement teams of the Center for Open Bioimage Analysis (nihcoba.org)
- ✧ Co-maintainer of the lab's major software project (CellProfiler) and creator or maintainer of several smaller projects (Creator: Distributed-FIJI, Maintainer: Distributed-CellProfiler, CellProfiler-plugins).

Postdoctoral Researcher 2016-201

- ✧ Created image analysis pipelines for collaborators working in a variety of disease areas, including Alzheimer's disease, muscular dystrophy, malaria, and multiple sclerosis.
- ✧ Contributed to migration of lab computing infrastructure from local to cloud-based, as well as significant contributions to the CellProfiler software project.
- ✧ Updated and created training material for CellProfiler workshops.

University of California at San Francisco, San Francisco, CA 2008-2016
Graduate Researcher- Elizabeth Blackburn, Department of Biochemistry and Biophysics

- ✧ Research focused on the telomeric scaffold protein TIN2 and its role in regulating telomere damage, telomerase recruitment, telomere movement, and telomeric interaction with the nucleoskeleton
- ✧ Published microscopy collaborations with Stohr, Huang, and Mullins labs (UCSF); Also collaborated with Eyfjörd lab (University of Iceland)

Boston University, Boston, MA 2005-2007
Undergraduate Researcher- William Eldred, Biology Department

- ✧ Research focused on retinal signaling regulation, culminating in senior honors thesis entitled "Cholinergic Modulation of Nitric Oxide in the Salamander Retina" and a first-author paper

GRANTS

NIH R25 GM160672 "Training a new generation of biologists in quantitative bioimaging with Microtutor" 2025-2030
Role: Co-Principal Investigator (with Jennifer Waters)

NIH R24 GM158834 "The Center for Open Bioimage Analysis" 2025-2030
Role: Co-Principal Investigator (with Kevin Eliceiri)

NIH R33 CA291166 "Advanced Development of Patient Ascites Therapeutic Response Biosensors" 2025-2028
Role: Co-Principal Investigator (with Jesse Boehm and Samuel Klempner)

CZI 2024-349564 "Machine-learning pipeline to generate cell phenotomes from in vivo screens" 2024-2025
Role: Co-Principal Investigator (with Cody Smith and Beth Stevens)

Wellcome Trust "Removing barriers to advanced imaging and machine learning-based analysis" 2024-2026
Role: Co-Principal Investigator (with William Brackenbury, Laura Wiggins, Benedict Powell, and Peter O'Toole)

CZI 2023-321238 "Society for Knowledge Exchange in BioImage Analysis" 2023-2025
Role: Co-Principal Investigator (with Robert Haase, Kota Miura, Christian Tischer, Florian Levet, Paula Sampaio, Clara Prats, Julia Fernandez-Rodriguez, Rocco D'Antuono, Simon F. Nørrelykke, and Elnaz Fazeli)

CZI 2023-321227 "Curated Imaging Science Education for Learners and Trainers" 2023-2025
Role: Co-Principal Investigator (with Anna Jost, Jennifer Waters, Bryan Millis, Gleb Grebnev, Uri Manor, Abhishek Kumar, Michelle Itano, Martin Fischer, and Talley Lambert)

BI-BWH "Variant to Function for Coronary Artery Disease: Developing new methods for high-throughput cellular phenotyping with Cell Painting" 2023-2024
Role: Co-Principal Investigator (with Rajat Gupta)

CZI 2021-238657/2023-332002 "CZI Imaging Software Fellows Extension - CellProfiler" 2021-2025
Role: Principal Investigator
DOI: 10.13039/100014989

NIH P01 AI148102: "Differentiation of immune cells and fibroblasts in inflamed tissue in RA and SLE". Role: Principal Investigator of subcontract (PI: Michael Brenner) 2021-2026

CZI 2020-225720/2023-329649 "CZI Imaging Scientist- Dr. Beth Cimini, Broad Institute" 2020-2025
Role: Principal Investigator
DOI: 10.37921/977328pjvbca

NIH P41 GM135019: "Center for Open Bioimage Analysis". Role: Co-Principal Investigator (with Kevin Eliceiri and Anne Carpenter) 2019-2024

CZI 2018-192059 "CZI Imaging Software Fellows - CellProfiler" 2018-2021
Role: Co-Principal Investigator (with Allen Goodman)
DOI: 10.13039/100014989

AWARDS & HONORS

- ✧ Broad Institute Next Generation Award, 2024-2025
- ✧ BINA Michael W. Davidson Memorial Award, 2024 (inaugural recipient)
- ✧ ABRF Alan Smith "Mentor of the Year" Award, 2024
- ✧ National Academy of Sciences Kavli Fellow, 2024
- ✧ Boston University Distinguished Alumnus in Biochemistry and Molecular Biology, 2023
- ✧ President, Society of Biomolecular Imaging and Informatics, 2023
- ✧ CZI Imaging Scientist, 2020-2025
- ✧ Genentech Fellowship, 2009-2011
- ✧ NSF GRFP Honorable Mention, 2009
- ✧ College Prize for Excellence in Biochemistry and Molecular Biology, Boston University, 2007
- ✧ Phi Beta Kappa, Boston University Chapter, 2006
- ✧ Featured in Research at Boston University, 2006
- ✧ Arnold and Mabel Beckman Scholar, Boston University, 2005-2007
- ✧ Trustee Scholar, Boston University, 2003-2007

PUBLICATIONS

(ORCID 0000-0001-9640-9318 ; see broad.io/CiminiGoogleScholar for citation metrics. Bolded numbers indicate self or lab member as (co-)first or last author; + indicates (co-)corresponding. Numbers with (^) symbols indicate non-peer-reviewed publications. Asterisked authors are equal)

67. Siddiqui SM, Welch NL, Nguyen TG, Razmi A, Chang T, Senft R, Arizti-Sanz J, Mirhashemi ME, Stirling DR, Ackerman CM, **Cimini BA**, Blainey PC, Sabeti PC, Myhrvold C. Bead-based approaches for increased sensitivity and multiplexing of CRISPR diagnostics. *Nature Biomedical Engineering*. 2025. Sep 22. doi:10.1038/s41551-025-01498-2. (Research article)
66. Sivagurunathan S, Byrne P, Muñoz AF, Arevalo J, Carpenter AE, Singh S, Kost-Alimova M, **Cimini BA.** Alternate dyes for image-based profiling assays. *SLAS Discovery*. 2025. Aug 28;36:100268. doi: 10.1016/j.slasd.2025.100268. Epub ahead of print. PMID: 40885286. PMCID: In progress (Research article)
65. Boucau J, Ruelas Castillo J, Naidoo T, Liu Y, Dasgupta S, Jain N, Jacobson NE, Nargan K, **Cimini BA**, Eliceiri KW, Steyn AJC, Barczak AK. Inflammatory macrophages associate with tissue injury and fibrosis in a mouse model of tuberculosis. *J Infect Dis* 2025. jiaf361. doi: 10.1093/infdis/jiaf361 (Research article)
64. Chandrasekaran SN, Alix E, Arevalo J, Borowa A, Byrne PJ, Charles WG, Chen ZS, **Cimini BA**, Deng B, Doench JG, Ewald JD, Fritchman B, Fuller CJ, Gaetz J, Goodale A, Haghighi M, Han Y, Hanifehlou Z, Hennig H, Hernandez D, Jacob CB, James T, Jetka T, Kalinin AA, Komalo B, Kost-Alimova M, Krawiec T, Marion BA, Martin G, McCarthy NJ, Miller L, Monsees A, Moshkov N, Muñoz AF, Ogier A, Otrocka M, Rataj K, Root DE, Rubbo F, Scrace S, Selinger DW, Senft RA, Sommer P, Thibaudeau A, Trisorus S, Valiya Veettil R, Van Trump WJ, Wang S, Warchoł M, Weisbart E, Weiss A, Wiest M, Zaremba A, Zinovyev A, Singh S, Carpenter AE. Morphological map of under- and overexpression of genes in human cells. *Nature Methods* 2025. 22, 1742–1752. doi: 10.1038/s41592-025-02753-9 (Research article)
63. Tegtmeyer M, Liyanage D, Han Y, Hebert KB, Pei R, Way GP, Ryder PV, Hawes D, Tromans-Coia C, **Cimini BA**, Carpenter AE, Singh S, Nehme R. Combining phenomics with transcriptomics reveals

cell-type-specific morphological and molecular signatures of the 22q11.2 deletion. *Nature Communications*. 2025. 16(1):6332. doi: 10.1038/s41467-025-61547-x. (Research Article)

62. Garcia-Fossa F, Moraes-Lacerda T, Rodrigues-da-Silva M, Diaz-Rohrer B, Singh S, Carpenter AE, **Cimini BA,** de Jesus MB. Live-cell painting: Image-based profiling in live cells using acridine orange. *Mol Biol Cell*, 2025 https://doi.org/10.1091/mbc.E24-07-0308 (Research article)
61. Wiggins L, Lacy S, Park G, Marrison J, Powell B, **Cimini B**, O'Toole P, Wilson J, Brackenbury WJ. CellPhePy: A python implementation of the CellPhe toolkit for automated cell phenotyping from microscopy time-lapse videos. *J Microsc*. 2025 Apr 24. doi: 10.1111/jmi.13416. Epub ahead of print. (Research article)
60. Navidi Z, Ma J, Miglietta EA, Liu L, Carpenter AE, **Cimini BA**, Haibe-Kains B* & Wang B*. MorphoDiff: Cellular Morphology Painting with Diffusion Models. *Proceedings of The Thirteenth International Conference on Learning Representations*, 2025. https://doi.org/10.1101/2024.12.19.629451 (Conference paper)
59. Bajcsy P, Bhattiprolu S, Börner K, **Cimini BA**, Collinson L, Ellenberg J, Fiolka R, Giger M, Goscinski W, Hartley M, Hotaling N, Horwitz R, Jug F, Kemmer I, Kreshuk A, Lundberg E, Mathur A, Narayan K, Onami S, Plant AL, Prior F, Swedlow JR, Taylor A, Keppler A. Enabling global image data sharing in the life sciences. *Nat Methods*. 2025. doi: 10.1038/s41592-024-02585-z (Commentary)
58. Serrano E, Chandrasekaran SN, Bunten D, Brewer KI, Tomkinson J, Kern R, Bornholdt M, Fleming SJ, Pei R, Arevalo J, Tsang H, Rubinetti V, Tromans-Coia C, Becker T, Weisbart E, Bunne C, Kalinin AA, Senft R, Taylor SJ, Jamali N, Adeboye A, Abbasi HS, Goodman A, Caicedo JC, Carpenter AE, **Cimini BA**, Singh S, Way GP. (2025). Reproducible image-based profiling with Pycytominer. *Nat Methods*. 2025. doi: 10.1038/s41592-025-02611-8 (Research article)
57. Riendeau JM, Gillette A, Guzman EC, Cruz MC, Kralovec A, Udgata S, Schmitz A, Deming DA, **Cimini BA**, Skala MC. Cellpose as a reliable method for single-cell segmentation of autofluorescence microscopy images. *Sci Rep*. 2025. 15:5548 doi: 10.1038/s41598-024-82639-6 (Research article)
56. Ramezani M*, Weisbart E*, Bauman J*, Singh A*, Yong J, Lozada M, Way GP, Kavari SL, Diaz C, Leardini E, Jetley G, Pagnotta J, Haghighi M, Batista TM, Pérez-Schindler J, Claussnitzer M, Singh S, **Cimini BA,** Blainey PC, Carpenter AE, Jan CH, Neal JT. A genome-wide atlas of human cell morphology. *Nat Methods*. 2025. doi: 10.1038/s41592-024-02537-7 (Research article)
55. Cimini BA+, Bankhead P, D'Antuono R, Elnaz F, Fernandez-Rodriguez J, Fuster-Barceló C, Haase R, Jambor H, Jones ML, Jug F, Klemm A, Kreshuk A, Marcotti S, Martins GG, McArdle S, Muñoz Barrutia A, Murphy L, Nelson M, Nørrelykke S, Paul-Gilloteaux P, Pengo T, Pylvänäinen J, Pytowski L, Ravera A, Reinke A, Rekik Y, Strambio-De-Castillia C, Thédié D, Uhlmann V, Umney O, Wiggins L, Eliceiri KW. The Crucial Role of BioImage Analysts in Scientific Research and Publication. *J Cell Sci*. 2024; 137 (20): jcs262322. doi: 10.1242/jcs.262322 (Commentary)
54. Lacoste J, Haghighi M, Haider S, Reno C, Lin Z, Segal D, Qian WW, Xiong X, Teelucksingh T, Miglietta E, Shafqat-Abbasi H, Ryder PV, Senft R, **Cimini BA**, Murray RR, Nyirakanani C, Hao T, McClain GG, Roth FP, Calderwood MA, Hill DE, Vidal M, Yi SS, Sahni N, Peng J, Gingras A, Singh S, Carpenter AE, Taipale M. Pervasive mislocalization of pathogenic coding variants underlying human disorders. *Cell*. 2024. doi: 10.1016/j.cell.2024.09.003 (Research article)
53. IGVF Consortium. Deciphering the impact of genomic variation on function. *Nature*. 2024. doi: 10.1038/s41586-024-07510-0 (Commentary)
52. Weisbart E, Kumar A, Arevalo J, Carpenter AE, **Cimini BA**, Singh S. Cell Painting Gallery: an open resource for image-based profiling. *Nat Methods*. 2024. doi: 10.1038/s41592-024-02399-z (Research article)
51. **Cimini BA+**, Tromans-Coia C, Stirling DR, Sivagurunathan S, Senft RA, Ryder PV, Miglietta E, Llanos P, Jamali N, Diaz-Rohrer B, Dasgupta S, Cruz MC, Weisbart E, Carpenter AE. A postdoctoral training program in bioimage analysis. *Mol Biol Cell.* 2024. 35, e2. doi: 10.1091/mbc.E24-05-0214 (Research article)
50. Rakic M, Wong HE, Ortiz JJG, **Cimini B**, Guttag J, Dalca AV. Tyche: Stochastic In-Context Learning for Medical Image Segmentation. *IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR)* 2024. doi: 10.48550/arXiv.2401.13650 (Conference paper)

49. De Niz M, Escobedo García R, Terán Ramirez C, Pakowski Y, Abonza Y, Bialy N, Orr VL, Olivera A, Abonza V, Alleva K, Allodi S, Almeida MF, B49ecerril Cuevas AR, Bonnet F, Burgos Solorio A, Chew T, Chiabrando G, **Cimini B**, Cleret-Buhot A, Contreras Jiménez G, Daza L, De Sá V, De Val N, Delgado-Álvarez DL, Eliceiri K, Fiolka R, Grecco H, Hanein D, Hernández Herrera P, Hockberger P, Hernandez HO, Hernandez Guadarrama Y, Itano M, Jacobs CA, Jiménez-García LF, Jiménez Sabinina V, Kamaid A, Keppler A, Kumar A, Lacoste J, Lovy A, Luby-Phelps K, Mahadevan-Jansen A, Malacrida L, Mehta SB, Miller C, Miranda K, Moore JA, North A, O'Toole P, Olivares Urbano M, Pietrasanta LI, Portugal RV, Rossi AH, Sanchez Contreras J, Strambio-De-Castilla C, Soldevila G, Vale B, Vazquez D, Wood C, Brown CM, Guerrero A. Building momentum through networks: Bioimaging across the Americas', *J Microsc*. 2024. doi: 10.1111/jmi.13318 (Commentary)
48. Chandrasekaran SN, **Cimini BA**, Goodale A, Miller L, Kost-Alimova M, Jamali N, Doench JG, Fritchman B, Skepner A, Melanson M, Kalinin AA, Arevalo J, Haghighi M, Caicedo JC, Kuhn D, Hernandez D, Berstler J, Abbasi HS, Root DE, Swalley SE, Singh S, Carpenter AE. Three million images and morphological profiles of cells treated with matched chemical and genetic perturbations. *Nat Methods*. 2024. doi: 10.1038/s41592-024-02241-6 (Research article)
47. Cimini BA+. Creating and troubleshooting microscopy analysis workflows: Common challenges and common solutions. *J Microsc*. 2024. doi: 10.1111/jmi.13288 (Review)
46. Ma J, Xie R, Ayyadhury S, Ge C, Gupta A, Gupta R, Gu S, Zhang Y, Lee G, Kim J, Lou W, Li H, Upschulte E, Dickscheidm, de Almeida JG, Wang Y, Han L, Yang X, Labagnara M, Gligorovski V, Scheder M, Rahi SJ, Kempster C, Pollitt A, Espinosa L, Mignot T, Middeke JM, Eckardt J, Li W, Li Z, Cai X, Bai B, Greenwald NF, Van Valen D, Weisbart E, **Cimini BA**, Cheung T, Brück O, Bader GD, Wang B. The multimodality cell segmentation challenge: toward universal solutions. *Nat Methods*. 2024. doi: 10.1038/s41592-024-02233-6 (Research article)
45. Moshkov N, Bornholdt M, Benoit S, Smith M, McQuin C, Goodman A, Senft R, Han Y, Babadi M, Horvath P, **Cimini BA**, Carpenter AE, Singh S, Caicedo JC. Learning representations for image-based profiling of perturbations. *Nat Commun*. 2024. 15: 1594. doi: 10.1038/s41467-024-45999-1 (Research article)
44. Maier-Hein L, Reinke A, Godau P, Tizabi MD, Buettner F, Christodoulou E, Glocker B, Isensee F, Kleesiek J, Kozubek M, Reyes M, Riegler MA, Wiesenfarth M, Kavur AE, Sudre CH, Baumgartner M, Eisenmann M, Heckmann-Nötzel D, Rädsch T, Acion L, Antonelli M, Arbel T, Bakas S, Benis A, Blaschko MB, Cardoso MJ, Cheplygina V, **Cimini BA**, Collins GS, Farahani K, Ferrer L, Galdran A, van Ginneken B, Haase R, Hashimoto DA, Hoffman MM, Huisman M, Jannin P, Kahn CE, Kainmueller D, Kainz B, Karargyris A, Karthikesalingam A, Kofler F, Kopp-Schneider A, Kreshuk A, Kurc T, Landman BA, Litjens G, Madani A, Maier-Hein K, Martel AL, Mattson P, Meijering E, Menze B, Moons KGM, Müller H, Nichyporuk B, Nickel F, Petersen J, Rajpoot N, Rieke N, Saez-Rodriguez J, Sánchez CI, Shetty S, van Smeden M, Summers RM, Taha AA, Tiulpin A, Tsaftaris SA, Van Calster B, Varoquaux G, Jäger PF. Metrics reloaded: recommendations for image analysis validation. *Nat Methods*. 2024. 21: 195–212. doi: 10.1038/s41592-023-02151-z (Research article)
43. Reinke A, Tizabi MD, Baumgartner M, Eisenmann M, Heckmann-Nötzel D, Kavur AE, Rädsch T, Sudre CH, Acion L, Antonelli M, Arbel T, Bakas S, Benis A, Buettner F, Cardoso MJ, Cheplygina V, Chen J, Christodoulou E, **Cimini BA**, Farahani K, Ferrer L, Galdran A, van Ginneken B, Glocker B, Godau P, Hashimoto DA, Hoffman MM, Huisman M, Isensee F, Jannin P, Kahn CE, Kainmueller D, Kainz B, Karargyris A, Kleesiek J, Kofler F, Kooi T, Kopp-Schneider A, Kozubek M, Kreshuk A, Kurc T, Landman BA, Litjens G, Madani A, Maier-Hein K, Martel AL, Meijering E, Menze B, Moons KGM, Müller H, Nichyporuk B, Nickel F, Petersen J, Rafelski SM, Rajpoot N, Reyes M, Riegler MA, Rieke N, Saez-Rodriguez J, Sánchez CI, Shetty S, Summers RM, Taha AA, Tiulpin A, Tsaftaris SA, Van Calster B, Varoquaux G, Yaniv ZR, Jäger PF, Maier-Hein L. Understanding metric-related pitfalls in image analysis validation. *Nat Methods*. 2024. 21: 182–194. doi: 10.1038/s41592-023-02150-0 (Research article)
42. Tegtmeyer M*, Arora J*, Asgari S*, **Cimini BA**, Nadig A, Peirent E, Liyanage D, Way GP, Weisbart E, Nathan A, Amariuta T, Eggan K, Haghighi M, McCarroll SA, O'Conner L, Carpenter AE, Singh S^{+}, Nehme R^{+}, Raychaudhuri S^{+}. High-dimensional phenotyping to define the genetic basis of cellular morphology. *Nat Commun*. 2024. 15: 347. doi:10.1038/s41467-023-44045-w (Research article)

41. Gogoberidze N, **Cimini, BA+**. Defining the boundaries: challenges and advances in identifying cells in microscopy images. *Curr Opin Biotechnol*. 2024, 85: 103055. doi: 10.1016/j.copbio.2023.103055 (Review)

40. Tromans-Coia C*, Jamali N*, Abbasi HS, Giuliano KA, Hagimoto M, Jan K, Kaneko E, Letzsch S, Schreiner A, Sexton JZ, Suzuki M, Trask OJ, Yamaguchi M, Yanagawa F, Yang M, Carpenter AE, **Cimini BA+**. Assessing the performance of the Cell Painting assay across different imaging systems. *Cytometry* A. 2023. Nov;103(11):915-926. doi: 10.1002/cyto.a.24786 (Research article)

39. Kelley ME, Berman AY, Stirling DR, **Cimini BA**, Han Y, Singh S, Carpenter AE, Kapoor TM, Way GP. High-content microscopy reveals a morphological signature of bortezomib resistance. *eLife*. 2023. doi: 10.7554/eLife.91362 (Research article)

38. Sivagurunathan S, Marcotti S, Nelson CJ, Jones ML, Barry DJ, Slater TJA, Eliceiri KW, **Cimini BA+**. Bridging Imaging Users to Imaging Analysis - A community survey. *J Microsc*. 2023 Sep 20. doi: 10.1111/jmi.13229 (Research article)

37. Weisbart E*, Tromans-Coia C*, Diaz-Rohrer B*, Stirling DR*, Garcia-Fossa F*, Senft RA*, Hiner MC, de Jesus MB, Eliceiri KW, **Cimini BA+**. CellProfiler plugins - an easy image analysis platform integration for containers and Python tools. *J Microsc*. 2023 Sep 10. doi: 10.1111/jmi.13223 (Research article)

36. Haghighi M, Cruz MC, Weisbart E, **Cimini BA**, Singh A, Bauman J, Lozada ME, Kavari SL, Neal JT, Blainey PC, Carpenter AE, Singh S. Pseudo-Labeling Enhanced by Privileged Information and Its Application to In Situ Sequencing Images. In: Elkind E, editor. *Proceedings of the Thirty-Second International Joint Conference on Artificial Intelligence, IJCAI-23*. p. 4775–4784. doi: 10.48550/arXiv.2306.15898 (Conference paper)

35. Schmied C, Nelson M, Avilov S, Bakker G, Bertocchi C, Bischof J, Boehm U, Brocher J, Carvalho M, Chiritescu C, Christopher J, **Cimini BA**, Conde-Sousa E, Ebner M, Ecker R, Eliceiri K, Fernandez-Rodriguez J, Gaudreault N, Gelman L, Grunwald D, Gu T, Halidi N, Hammer M, Hartley M, Held M, Jug F, Kapoor V, Koksoy AA, Lacoste J, Dévédec SL, Guyader SL, Liu P, Martins G, Mathur A, Miura K, Llopis PM, Nitschke R, North A, Parslow AC, Payne-Dwyer A, Plantard L, Rizwan A, Schroth-Diez B, Schütz L, Scott RT, Seitz A, Selchow O, Sharma VP, Spitaler M, Srinivasan S, Strambio De Castillia C, Taatjes D, Tischer C, Jambor HK. Community-developed checklists for publishing images and image analysis. *Nat Methods*. 2023. doi:10.1038/s41592-023-01987-9 (Research article)

34. Ouyang W, Eliceiri KW, **Cimini BA**. Moving beyond the desktop: Prospects for Practical Bioimage Analysis via the Web. *Front Bioinf*. 2023. doi: 10.3389/fbinf.2023.1233748 (Commentary)

33. Moore J, Basurto-Lozada D, Besson S, Bogovic J, Bragantini J, Brown EM, Burel J, Moreno XC, Medeiros Gd, Diel EE, Gault D, Ghosh SS, Gold I, Halchenko YO, Hartley M, Horsfall D, Keller MS, Kittisopikul M, Kovacs G, Küpcü Yoldaş A, Kyoda K, Villegeorges AT, Li T, Liberali P, Lindner D, Linkert M, Lüthi J, Maitin-Shepard J, Manz T, Marconato L, McCormick M, Lange M, Mohamed K, Moore W, Norlin N, Ouyang W, Özdemir B, Palla G, Pape C, Pelkmans L, Pietzsch T, Preibisch S, Prete M, Rzepka N, Samee S, Schaub N, Sidky H, Solak AC, Stirling DR, Striebel J, Tischer C, Toloudis D, Virshup I, Walczysko P, Watson AM, Weisbart E, Wong F, Yamauchi KA, Bayraktar O, **Cimini BA**, Gehlenborg N, Haniffa M, Hotaling N, Onami S, Royer LA, Saalfeld S, Stegle O, Theis FJ, Swedlow JR. OME-Zarr: a cloud-optimized bioimaging file format with international community support. *Histochem. Cell Biol*. 2023. doi:10.1007/s00418-023-02209-1 (Research article)

32. Senft RA*, Diaz-Rohrer B*, Colarusso P, Swift L, Jamali N, Jambor H, Pengo T, Brideau C, Llopis PM, Uhlmann V, Kirk J, Gonzales KA, Bankhead P, Evans EL, Eliceiri KW, **Cimini BA+**. A biologist's guide to planning and performing quantitative bioimaging experiments. *PLoS Biol*. 2023. 21(6): e3002167. doi: 10.1371/journal.pbio.3002167 (Research article)

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30. Glunk V, Laber S, Sinnott-Armstrong N, Sobreira DR, Strobel SM, Batista TM, Kubitz P, Moud BN, Ebert H, Huang Y, Brandl B, Garbo G, Honecker J, Stirling DR, Abdennur N, Calabuig-Navarro V, Skurk T, Ocvirk S, Stemmer K, **Cimini BA**, Carpenter AE, Dankel SN, Lindgren CM, Hauner H, Nobrega MA, Claussnitzer M. A non-coding variant linked to metabolic obesity with normal weight affects actin remodelling in subcutaneous adipocytes. *Nat Metab.* 2023;5, 861–879 doi: 10.1038/s42255-023-00807-w (Research article)

29. Cimini BA+, Eliceiri KW. The Twenty Questions of Bioimage Object Analysis. *Nat Methods*. 2023; 20:976–8. doi: 10.1038/s41592-023-01919-7. (Commentary)

28. Carpenter AE, **Cimini BA**, Eliceiri KW. Smart microscopes of the future. *Nat Methods*. 2023. 20:962–4. doi: 10.1038/s41592-023-01912-0. (Commentary)

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OTHER RESEARCH OUTPUTS

(see more at our lab resources page)

4. Schmied C, Nelson M, Avilov S, Bakker G, Bertocchi C, Bischof J, Boehm U, Brocher J, Carvalho M, Chiritescu C, Christopher J, **Cimini BA**, Conde-Sousa E, Ebner M, Ecker R, Eliceiri K, Fernandez-Rodriguez J, Gaudreault N, Gelman L, Grunwald D, Gu T, Halidi N, Hammer M, Hartley M, Held M, Jug F, Kapoor V, Koksoy AA, Lacoste J, Dévédec SL, Guyader SL, Liu P, Martins G, Mathur A, Miura K, Llopis PM, Nitschke R, North A, Parslow AC, Payne-Dwyer A, Plantard L, Rizwan A, Schroth-Diez B, Schütz L, Scott RT, Seitz A, Selchow O, Sharma VP, Spitaler M, Srinivasan S, Strambio De Castillia C, Taatjes D, Tischer C, Jambor HK. Online guide to "Community-developed checklists for publishing images and image analysis." (Research article "living online resource")
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PRESS /OUTREACH

14. Outstanding New PI - Beth Cimini. (2025, March 1). New PI Slack. (Feature Interview)
13. Pfizer/Wonder Media Network. Science Will Win, S4E3 - How Computers Learn to Think Like Scientists. 2025. (Podcast - Interviewed in)

12. Cimini B, Narayan K, Rodgers J, O'Toole P. The Microscopists Mental Health Special. 2024. Youtube; 5 Sep 2024. (Video podcast - feature interview)
11. De Niz, M. Enhancing Global Access: interview with CZI grantee Beth Cimini. Focal Plane. (Feature Interview)
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CONFERENCE PRESENTATIONS

64. Shah R, Gogoberidze N, and Cimini BA. Bilayers: A Container Specification and CI/CD built for whole-biomage-analysis-community support. Virtual Poster, SciPy 2025.
63. Cimini BA. Technology and scaling: who (and what, how, and why). Talk, Building Towards Domain-Appropriate AI models from Bioimaging Data Workshop 2025.
62. Shah R, Gogoberidze N, and Cimini BA. Bilayers: Bilayers - an easy way to make your favorite deep learning tool more user-friendly. Talk, SLAS Annual Meeting 2025.
61. Shah R, Gogoberidze N, and Cimini BA. Bilayers: A Container Specification and CI/CD built for whole-community support. Poster, Images to Knowledge 2024.
60. Cimini BA and the GloBIAS Communications Working Group. Global BioImage Analysts' society. Poster, BioImaging North America annual meeting 2024.
59. Cimini BA. Thank you, we worked hard. Talk, BioImaging North America annual meeting 2024. [video]
58. Cimini BA. Making the most of your microscopy: high content image analysis, featuring CellProfiler and Piximi. Talk, XXII Congress of the Brazilian Society for Cell Biology 2024. [video]
57. Cimini BA. Piximi, an in-browser deep learning tool for bioimaging data. Talk, Contextualizing Cellular Physiology Workshop 2024.
56. Cimini BA. What is deep learning, and why might you want it in your core? Talk, ABRF Annual Meeting 2024. [video]
55. Cimini BA. Making the most of your microscopy: high content image analysis, featuring CellProfiler and Piximi. Talk, AIMS Annual Meeting 2024.
54. Cimini BA. Pushing the cutting edge without cutting anyone off - the Broad Institute Imaging (Analysis) Platform. Poster, Kavli Frontiers of Science Symposium 2024.
53. Cimini BA. Jupyter Book as a tool for multi-language teaching and training. Talk, Effectively Communicating Bioimage Analysis 2024.

52. Cimini BA. Cell Painting as a Rosetta Stone for Image-based profiling. Talk, SLAS High Content Screening Special Interest Group 2024.
51. Cimini BA. Working towards pick 5: strategies for scaling and distributing user-friendly containers. Talk, Emerging Issues in Bioimaging AI Publications and Research, Scholss Dagstuhl 2024. [post conference wrapup]
50. Cimini BA. Systems for scaling quantitative bioimage analysis. Talk + poster, ASCB Annual Meeting 2023.
49. Cimini BA. From images to discovery: making the most of your microscopy data with data science and AI. Talk, Crick Bioimage Analysis Symposium 2023. [video]
48. Cimini BA. Microscopes for the Cell Painting assay: It's all good. Talk, SBI2 Annual Meeting 2023.
47. Cimini BA. An Introduction to Deep Learning. Talk, SBI2 Education Day 2023.
46. Cimini BA. Training the trainers in bioimage analysis. Talk, Global Bioimaging Annual EoE 2023. [video]
45. Cimini BA. From images to discovery: making the most of your microscopy data with data science and AI. Talk, Northeast Bioimage Analysis 2023.
44. Cimini BA. Making more from your microscopy: advances in high-content image analysis. Talk, MidAtlantic Bioinformatics Conference 2023.
43. Cimini BA. From Images to Discovery: Making the Most of Your Microscopy Data with Data Science and AI. Talk, FutureLabs Live USA 2023.
42. Cimini BA. Bioimage analysis efforts in the United States and beyond. Talk, BioImaging North America annual meeting 2023. [video]
41. Cimini BA. Bioimage analysis as a career. Talk, Latin America BioImaging annual meeting, 2023.
40. Cimni BA. Community efforts and tools for bringing AI into the biology lab. Talk, Physics of Life BioImage Analysis Symposium, 2023.
39. Cimni BA. Making more from your microscopy: advances in high-content image analysis. Keynote talk, Bioconductor Annual Meeting 2023. [video]
38. Cimni BA. Making more from your microscopy: advances in high-content image analysis. Keynote talk, Van Andel Institute Bioinformatics Workshop 2023.
37. Cimini BA. Piximi – an in-browser tool for easy deep learning. Talk, ELMI Annual Meeting 2023.
36. Cimini BA. Making more from your microscopy: advances in high-content image analysis. Talk, Diversity In A Dish: Pluripotent Stem Cells In Genetic Analysis And Disease Modeling 2023.
35. Cimini BA. Making More From Your Microscopy: Advances In High-Content Image Analysis. Keynote talk, ABRF Annual Meeting 2023. [video]
34. Cimini BA. Piximi: an in-browser tool for easy deep learning. Talk, SLAS Annual Meeting 2023.
33. Cimini BA. The JUMP Consortium. Talk, SLAS Annual Meeting 2023.
32. Cimini BA. Getting the most of your microscopy data with high-content image analysis. Talk, Institute for Innovation in Imaging annual meeting (virtual). [video]
31. Weisbart EW, Cimini BA. The CellPainting Gallery - Resources and Lessons Learned. Talk, SLAS 2022 AI Data Pipelines for Life Sciences.
30. Cimini BA. Making the most of your imaging data with high-content image analysis. Talk, 2022 Biosciences Area Annual Meeting (virtual).
29. Cimini BA. Maximizing the value of your image data with high content image analysis and morphological profiling. Talk, XXI Congress of the Brazilian Society for Cell Biology 2022 (virtual).
28. Cimini BA. Getting the most of your microscopy data with high-content image analysis. Talk, American Association for Anatomy 2022.
27. Cimini BA, Dobson ETA, Rueden C, Goodman A, Ledford B, Jamali N, Stirling D, Lucas A, Eliceiri KW, Carpenter AE. The Center for Open Bioimage Analysis- COBA. Poster, SBI2 2020.
26. Cimini BA. Maximizing the value of your imaging data with high-content image analysis and deep learning. Talk (remote), 2020 World Congress on In Vitro Biology.
25. Goodman A*, Cimini BA*. Piximi: a free and open-source web app for object recognition. Talk, NEUBIAS Annual Meeting 2020.

24. Cimini BA, Carpenter AE. Discerning function from phenotype with high throughput image analysis. Talk, Advanced Imaging Methods 2020.
23. Cimini BA. High throughput imaging in eukaryotic cells, and analysis tools to help you mine them. American Society of Tropical Medicine and Hygiene pre-meeting course, 2019.
22. Cimini BA. Image segmentation and morphological profiling with user friendly tools like CellProfiler. Talk, Women in Computational Biology, Janelia Farms 2019.
21. Cimini BA. Discerning function from phenotype with high throughput image analysis. Talk, NIDA-NIAAA MiniConvention: Frontiers in Addiction Research 2019.
20. Cimini BA. Advanced image analysis: feature extraction, machine learning, and deep learning. Talk, SBI2 Education Day 2019.
19. Cimini BA, Carpenter AE. Discerning function from phenotype with high throughput image analysis. Talk, SLAS 2019.
18. Cimini BA, Carpenter AE. Getting the most from your images with morphological profiling. Talk, Advanced Imaging Methods 2019.
17. Cimini BA, Carpenter AE. Using morphological profiling to extract the most from your images. Talk, EMBL From Images To Knowledge, 2018.
16. Cimini BA, Carpenter AE. Discerning function from phenotype with high throughput image analysis. Talk, 2018 International Microscopy Congress 19.
15. Cimini BA, Singh S, Rohban M, Caicedo JC, McQuin C, Goodman A, Carpenter AE. Using CellProfiler and morphological profiling to extract the most from your microscopy images. Talk, 2018 European Light Microscopy Initiative Meeting.
14. Cimini BA, Carpenter AE. Bug-hunting, 1 (or 1000) images at a time. Talk, 2018 Broad Global Health Initiative.
13. Cimini BA, Carpenter AE. Using open-source image analysis software to expand the power of your experiments. Talk, 2018 ABRF Annual Meeting.
12. Cimini BA. High-Throughput Morphological Analysis of Complex Systems Using CellProfiler and CellProfiler Analyst. Talk, 2018 Trends in Microscopy Meeting.
11. Singh S, Cimini BA, Carpenter AE. A picture is worth a million numbers: The power of single-cell morphological measurements. Talk, 2018 FIMM High-Content Screening Symposium.
10. Cimini BA, Carpenter AE. Benefits and strategies for continuing integration of microscopy cores and open-source image analysis tools. Poster, 2018 Frontiers in Microscopy Technologies and Strategies for Bioimaging Centers Network
9. Cimini BA, Carpenter AE. High-Throughput Morphological Analysis of Complex Systems Using CellProfiler (and beyond). Talk, 2018 NEUBIAS Annual Meeting.
8. Cimini BA. High-Throughput Morphological Analysis of Complex Systems Using CellProfiler and CellProfiler Analyst. Talk, 2017 High Content Analysis & 3D Screening Summit.
7. Cimini BA, Blackburn EH. Analysis of specific roles of TIN2S vs TIN2L in telomere protection and regulation. Poster 21, 2016 EMBO Conference on Telomeres, Telomerase, and Disease.
6. Cimini BA, Blackburn EH. The roles of TIN2 splice forms in the regulation of human telomeres. Talk, Bay Area Aging Meeting, November 2015.
5. Cimini BA, Blackburn EH. Analysis of specific roles of TIN2S vs TIN2L in telomere protection and regulation. Talk, 2015 Cold Spring Harbor Meeting- Telomeres and Telomerase
4. Cimini BA, Blackburn EH. Responses to perturbations of TIN2 isoforms in human cells. Poster 49, 2013 Cold Spring Harbor Meeting- Telomeres and Telomerase
3. Cimini BA, Belin B.J, Mullins RD, Blackburn EH. Interaction of telomeres and nuclear actin. Poster 1637, 2011 American Society of Cell Biology Annual Meeting.
2. Eldred WD, Cimini B, Strang CE, Wotring VE, Keyser KT. Muscarinic modulation of the nitric oxide/cGMP signaling pathway in the salamander retina. Poster No. 47.15/G6. 2006 Society for Neuroscience Meeting.

1. Cimini BA, Eldred WD. Analysis of acetylcholine as a neurotransmitter in the retina. Poster Presentation, 2006 Beckman Scholars Symposium.

INVITED SEMINARS AND PANEL DISCUSSIONS

52. Global Bioimaging Career Series (virtual) 7/2025 [video]
51. GloBIAS BIA Seminar Series on "Current and future plans for essential BIA tools" (virtual) 4/2025
50. SLAS / SBI2 Special Interest Group, San Diego, CA, 1/2025
49. University of Maryland, Baltimore, MD (virtual) 1/2025
48. Panel discussion, I2K 2024, Milan IT 10/2024
47. PAIR-UP "Introduction to Bioimage Analysis" Webinar (virtual) 8/2024
46. Harvard Center for Biological Imaging, Cambridge, MA 8/2024 [video]
45. ASCB Practical Deep Learning for Microscopy Webinar, (virtual) 6/2024
44. Malaria@Broad, Cambridge MA 5/2024
43. Panel discussion on "Informatics careers", Minnesota Supercomputing Institute Research Exhibition, Minneapolis, MN 4/2024.
42. New York Stem Cell Foundation, NY, NY 4/2024
41. University of York, York, UK 2/2024
40. Harvard Medical School Center for Computational Bioscience, Boston, MA, 12/2023
39. University of Bath, Bath, UK 11/2023
38. Panel discussion on "The bigger picture: what is the future of bioimage analysis?", CBIAS 2023, London UK, 11/2023
37. Panel discussion on "Accelerating drug discovery in stem cell models", 2023 NYSCF Conference, New York NY 10/2023 [video]
36. Panel discussion on "Transformative technologies in drug discovery", FutureLabs Live USA, Philadelphia PA, 10/2023
35. Panel discussion on "Future of image analysis", CZI Imaging 2023, San Francisco CA, 7/2023
34. Panel discussion on "Interdisciplinary spaces for the development, access and training on advanced microscopy methods for biology", Shinya Inoué Symposium, Woods Hole MA, 7/2023
33. University of Wisconsin, Madison, WI 4/2023
32. Panel discussion on "Collecting and analyzing spatial data in translational research", Biotechniques (virtual) 3/2023
31. Salk Institute, San Diego, CA, 3/2023
30. SLAS / SBI2 Special Interest Group, San Diego, CA, 2/2023
29. North Carolina State University Molecular Biotechnology Training Program Symposium (virtual), 11/2022
28. Food and Drug Administration AI Working Group (virtual), 11/2022
27. EMBL Virtual Pub- Data in biological & biomedical imaging (winner for Best Talk) (virtual) 9/2022
26. Sciencepalooza Open Science Talks (virtual) 7/2022 [video]
25. Panel discussion on "Bioimaging & Analysis", Biotechniques (virtual) 5/2022
24. Panel discussion on "The Future of Cell Segmentation", Imaging Mass Cytometry Forum (virtual) 4/2022
23. Colorado State University, Fort Collins, Colorado (virtual) 3/2022
22. University of Sydney, Sydney, Australia (virtual), 2/2022
21. SLAS / SBI2 Special Interest Group, Boston, MA, 2/2022
20. Life Science Trainers "How I teach life scientists" series, (virtual), 1/2022 [video]
19. Uppsala University, Uppsala, Sweden (virtual), 11/2021
18. National Center for Advancing Translational Sciences Assay Guidance Manual Workshop (virtual), 11/2021
17. Panel discussion on "Cloud-Optimized Data Management and Analysis for High Content Screening", SBI2 2021 (virtual), 10/2021.
16. University of Connecticut, Storrs, Connecticut (virtual) 9/2021
15. Emory Integrated Cellular Imaging Microcourse in Image Analysis (virtual) 9/2021 [video]

14. Jawaharlal Nehru Centre for Advanced Scientific Research Images2Numbers (virtual workshop) 8/2021
13. SLAS Phenotypic Screening and Target Deconvolution Micro-Credential (virtual) 5/2021
12. Consortium for Innovative Drug Discovery and Development (virtual) 4/2021
11. European Society of Biomechanics (virtual) 1/2021. [video]
10. Drug Discovery News (virtual) 9/2020. [video]
9. Dana Farber CCBM Retreat (virtual) 9/2020
8. Panel discussion on "Artificial Intelligence for Imaging Applications". SBI2 2020 (virtual), 9/2020.
7. Harvard Center for Biological Imaging, Cambridge, MA 11/2019
6. Malaria@Broad, Cambridge, MA 7/2019
5. Monash University, Melbourne, Australia 9/2018.
4. Peter MacCallum Cancer Center, Melbourne, Australia 9/2018.
3. Helmholtz Zentrum Munich, Munich, Germany 9/2017.
2. Oxford University, Oxford, United Kingdom 12/2016.
1. King's College, London, United Kingdom 12/2016.

PROFESSIONAL SERVICE & SOCIETIES

- **Grant reviews:** European Open Science Cloud, Chan Zuckerberg Initiative, UKRI-BBSRC, NIGMS (ad-hoc)
- **Journal reviews**: Bioessays, Bioinformatics, Biological Imaging, Cell Reports Methods, Cytometry: Part A, Development, Digital Discovery, Frontiers in Bioinformatics, Frontiers in Computer Science, Gigascience, Journal of Cell Science, Journal of Microscopy, Microscopy Research and Technique, Molecular Biology of the Cell, Nature Biotechnology, Nature Cell Biology, Nature Chemistry, Nature Communications, Nature Methods, npj Systems Biology and Applications, PLoS Biology, Review Commons, Royal Society Open Science, Scientific Data, Scientific Reports
- **Conference paper reviews:** NeurIPS Datasets and Benchmarks (2022,2023), NeurIPS (2025)
- **Nonprofit advisory boards**: AI4Life 2022-present.
- **Editorial boards:** Biotechniques 2022-present, Journal of Microscopy 2024-present.
- **Major society contributions:**
  - **Society of Biomolecular Imaging and Informatics:** 2016-present. Councilor 2018-2021, President 2023, Past-President 2024. Annual Meeting Scientific Program Committee 2020,2024, Educational Committee 2020-2021,2023-2024.
  - **NEUBIAS/GloBIAS:** 2017-present. F1000 Research Gateway Advisor 2020-present. Steering committee 2023-present. Survey Working Group 2024-present, Training and Education Working Group 2024-present.
  - **Bioimaging North America:** 2018-present. Executive board 2025- . Communications Working Group 2019-2024, Image Informatics Working Group 2021-present, DEI Working Group 2025- .
  - **Society for Laboratory Automation and Screening:** 2019-present. Annual meeting Session Chair 2019. High content screening Special Interest Group co-chair, 2022-present.
  - **Quality Assessment and Reproducibility for Instruments & Images in Light Microscopy:** 2022-present. Working Group 12 (Image Visualization and Analysis) 2022- present. Working Group 7 (Metadata) 2023-present.
- **Other conference and workshop organization:**
  - Bioimage Analysis Beginnings Bootcamp, lead organizer, Cambridge, MA 2025
  - Cold Spring Harbor Quantitative Imaging course, image analysis co-organizer, Cold Spring Harbor, NY 2025
  - Virtual I2K 2024, lead organizer, virtual 2024
  - Images2Knowledge(I2K) 2024, scientific organizing committee and workshop committee chair, Milan Italy 2024
  - EMBO Current Methods in Cell Biology co-organizer, Heidelberg Germany 2024.

- ➢ Cold Spring Harbor Quantitative Imaging course, image analysis co-organizer, Cold Spring Harbor, NY 2024
- ➢ Effectively Communicating Bioimage Analysis, Company of Biologists workshop, lead organizer, Sussex UK 2024
  - Post-conference wrapup - Focal Plane newsletter
- ➢ Deep Learning and Artificial Intelligence in Cell Imaging, ASCB 2023 annual meeting subgroup, lead organizer, Boston, MA 2023
- ➢ Minisymposium: Deep Learning for Bioimage Analysis, lead organizer, Cambridge, MA 2023
- ➢ Halfway to I2K, lead organizer, virtual 2023
- ➢ Images2Knowledge(I2K) 2022, scientific organizing committee, conference steering committee, and session chair, virtual 2022

POSTDOCTORAL AND STAFF RESEARCH SUPERVISED

(Before July 2021, supervisees were joint supervision with Imaging Platform Director Dr. Anne Carpenter)

POSTDOCTORAL TRAINING PROGRAM IN BIOIMAGE ANALYSIS

- ✧ 2024-present: Kamal Hamid, Ph.D. Postdoctoral Researcher.
- ✧ 2023-present: Esteban Miglietta, Ph.D. Postdoctoral Researcher.
- ✧ 2023-present: Shatavisha Dasgupta, M.D., Ph.D. Postdoctoral Researcher.
- ✧ 2023-present: Paula Llanos, Ph.D. Postdoctoral Researcher.
- ✧ 2023-2025: Suganya Sivagurunathan, Ph.D. Postdoctoral Researcher, subsequently bioinformatician at SciLifeLab, University of Uppsala
- ✧ 2022-2023: Mario Costa Cruz, Ph.D. Postdoctoral Researcher, subsequently light microscopy specialist at University of Sao Paulo.
- ✧ 2022-2023: Callum Tromans-Coia, Ph.D. Postdoctoral Researcher, subsequently postdoctoral fellow at EMBL-EBI
- ✧ 2021-2023: Rebecca Senft, Ph.D. Postdoctoral Researcher, subsequently senior scientist at Merck
- ✧ 2021-2023: Barbara Diaz-Rohrer, Ph.D. Postdoctoral Researcher, subsequently image analysis scientist at Dyno Therapeutics
- ✧ 2020-2021: Pearl Ryder, M.D., Ph.D. Postdoctoral Researcher, subsequently data scientist at Wandrer.earth
- ✧ 2019-2022: Nasim Jamali, Ph.D. Postdoctoral Researcher, subsequently senior scientist at Dewpoint Therapeutics
- ✧ 2019-2021: David Stirling, Ph.D. Postdoctoral Researcher, subsequently biological data science specialist at Glencoe Software

OTHER SUPERVISEES

- ✧ 2025-present: Gaïa-Marie Gerbaka, Data science intern
- ✧ 2025: Sivalal Gopal, Software engineering intern; subsequently master's student at Northeastern University
- ✧ 2025-present: Kate Bowers, Image analysis associate
- ✧ 2025-present: Suraj Pathak, Associate software engineer
- ✧ 2024-present: Le Liu, Ph.D. Postdoctoral researcher
- ✧ 2024-2025: Rajavi Shah, Software engineering intern; subsequently Computational Associate, Claussnitzer Lab, Broad Institute
- ✧ 2022-present: Andréa Papaleo. Senior software engineer
- ✧ 2021-present: Nodar Gogoberidze. Principal software engineer
- ✧ 2019-present: Erin Weisbart, Ph.D. Senior computational scientist

- ✧ 2021-2022: Levin Moser. Software engineering intern, subsequently master's student at ETH.
- ✧ 2021-2022: Alice Lucas, Ph.D. Software engineer, subsequently Computer Vision Engineer at Meero.
- ✧ 2018-2019: Hamdah Shafqat Abbasi, Ph.D. Postdoctoral Researcher (Wallenberg fellowship), subsequently data scientist at Axle Informatics
- ✧ 2017-2019: Minh Doan, M.D., Ph.D., Postdoctoral Researcher, subsequently Head of Bioimaging Analytics at GlaxoSmithKline
- ✧ 2017-2018: Kyle Karhohs, Ph.D., Postdoctoral Researcher, subsequently data scientist at Wayfair

GRADUATE RESEARCH SUPERVISED

- ✧ 2023-2024: Levin Moser, MA thesis research, ETH Zurich, subsequently software engineer at Amazon Web Services

UNDERGRADUATE RESEARCH SUPERVISED

- ✧ 2023-2024: Eddy O Onyango, SuperUROP undergraduate internship, Massachusetts Institute of Technology
- ✧ 2022-2023: Melissa Gillis, undergraduate internship, Boston University, subsequently PhD student in Biomedical Engineering at the University of California San-Diego
- ✧ 2021-2022: Teresa Gao, SuperUROP undergraduate internship, Massachusetts Institute of Technology, subsequently Mitchell Scholar, Trinity College Dublin
- ✧ 2021: Jihyeon Je, summer undergraduate internship, Duke University, subsequently PhD student in Computer Science at Stanford University

VISITING RESEARCHERS SUPERVISED

LONG-TERM VISITORS (>1 MONTH)

- ✧ 2025-present: Jorge Gabriel Sousa Oliveira, visiting graduate student
- ✧ 2025-present: Marcelo Bispo de Jesus, visiting scientist
- ✧ 2025-present: Kaio de Souza Gomes, visiting postdoctoral scholar
- ✧ 2024: Le Liu, visiting graduate student; subsequently postdoctoral researcher, Broad Institute
- ✧ 2022-2023: Fernanda Garcia Fossa, visiting graduate student; subsequently Data Scientist, Max-Planck-Institut, Dortmund
- ✧ 2022: Marine Secchi, visiting graduate student; subsequently postdoctoral researcher, Stanford University

SHORT-TERM VISITORS

- ✧ 2025: Carola Millán, Faculty Sabbatical
- ✧ 2025: Sundana Marella, Bioimaging North America Exchange of Experience
- ✧ 2020: Debbi Olivier, Ph.D. NEUBIAS Short Term Scientific Mission
- ✧ 2018: Lorenzo Ascari. NEUBIAS Short Term Scientific Mission
- ✧ 2018: Laura Murphy, Ph.D. NEUBIAS Short Term Scientific Mission
- ✧ 2017-2018: Vasiliy Chernyshev, Ph.D., visiting Postdoctoral Researcher
- ✧ 2017: Gabriella Edfeldt, visiting Graduate Student

TEACHING AND OUTREACH EXPERIENCE

COURSE GUEST LECTURES

13. Cold Spring Harbor Laboratory "Quantitative Imaging: From Acquisition to Analysis", 4/2025
12. EMBO "Current Methods in Cell Biology", 9/2024

11. MBL "DL@MBL: Deep Learning for Microscopy Image Analysis" 8/2024
10. MBL "Advanced Quantitative Light Microscopy", 5/2024
9. Cold Spring Harbor Laboratory "Quantitative Imaging: From Acquisition to Analysis", 4/2024
8. University of Wisconsin "Microscopy of Life" (Physics 619) (virtual) 10/2023
7. MBL "DL@MBL: Deep Learning for Microscopy Image Analysis" (virtual) 9/2023
6. Icahn School of Medicine "Image Analysis 2023" (virtual) 7/2023
5. Cold Spring Harbor Laboratory "Quantitative Imaging: From Acquisition to Analysis", 4/2023
4. University of Wisconsin "Microscopy of Life" (Physics 619) (virtual) 10/2022
3. MIT "Frontiers of Interdisciplinary Science in Human Health and Disease" (5.64) (virtual) 4/2022
2. University of Wisconsin "Microscopy of Life" (Physics 619) (virtual) 10/2021
1. University of Wisconsin "Microscopy of Life" (Physics 619) (virtual) 10/2020

BIOIMAGING ANALYSIS WORKSHOPS PRESENTED

58. Quantitative Imaging, Cold Spring Harbor, NY 4/2025
57. EMBL-EBI Microscopy data analysis 2025 (virtual workshop) 4/2025
56. MIT, Cambridge, MA 1/2025
55. Images to Knowledge (I2K) 2024, Milan Italy 10/2024
54. SBI2 2024 Annual Meeting, Boston, MA 9/2024
53. EMBO Current Methods in Cell Biology, Heidelberg Germany 9/2024
52. Physiology Skills Week, Woods Hole, MA 6/2024
51. Advanced Quantitative Light Microscopy, Woods Hole, MA 5/2024
50. EMBL-EBI Microscopy data analysis 2024 (virtual workshop) 4/2024
49. Quantitative Imaging, Cold Spring Harbor, NY 4/2024
48. Arizona Imaging and Microanalysis Society, Phoenix AZ 3/2024
47. Francis Crick Institute, London, UK 2/2024
46. Halfway-to-I2K Conference (virtual workshop) 10/2023 [video]
45. Bioimaging North America, Laboratorio Nacional de Microscopía Avanzada, Mexico 9/2023
44. BroadE, Broad Institute, Cambridge MA 9/2023
43. Van Andel Institute, Grand Rapids, MI 7/2023
42. Jackson Laboratories, Bar Harbor, ME 5/2023
41. EMBL-EBI Microscopy data analysis 2023 (virtual workshop) 5/2023
40. Jackson Laboratories, Bar Harbor, ME 5/2023
39. Bioimaging North America, Broad Institute, Cambridge MA 4/2023
38. Advanced Imaging Methods, Berkeley, CA 1/2023
37. Bioimaging North America, Broad Institute, Cambridge MA 10/2022
36. EOSC Defragmentation Training School (virtual workshop series) 10/2022 [video]
35. Medical and Population Genetics, Broad Institute, Cambridge MA 10/2022 [video]
34. EMBL-EBI Microscopy data analysis 2022 (virtual workshop) 5/2022
33. Broad Institute/TU Eindhoven (virtual workshop) 3/2022
32. Broad Institute/TU Eindhoven (virtual workshop) 11/2021
31. Spanish and Portuguese Advanced Optical Microscopy (SPAOM) (virtual workshop) 11/2021
30. Cancer Program Bootcamp, Broad Institute, Cambridge MA 9/2021
29. Zurich Image and Data Analysis School (ZIDAS) (virtual workshop) 9/2021
28. EMBL-EBI Microscopy data analysis 2021 (virtual workshop) 7/2021
27. Advanced Imaging Methods (virtual workshop) 2/2021
26. University of California-San Francisco (virtual workshop) 7/2020
25. University of Cambridge, Cambridge, United Kingdom 3/2020
24. Advanced Imaging Methods, Berkeley, CA 1/2020
23. University of California-San Diego, San Diego, CA 1/2020

22. BroadE, Cambridge, MA 11/2019
21. BroadE, Cambridge, MA 5/2019
20. University of California-San Francisco, San Francisco, CA 3/2019
19. University of Cambridge, Cambridge, United Kingdom 12/2018
18. Harvard Medical School, Boston, MA 11/2018
17. Royal College of Surgeons in Ireland, Dublin, Ireland 6/2018
16. Finland Institute of Molecular Medicine, Helsinki, Finland 3/2018
15. University of Antwerp, Antwerp, Belgium 3/2018
14. Network of European BioImage Analysts (NEUBIAS) Training School 6- Szeged, Hungary 2/2018
13. University of Cambridge, Cambridge, United Kingdom 12/2017
12. University of Iceland, Reykjavik, Iceland 9/2017
11. King's College, London, United Kingdom 9/2017
10. Helmholtz Zentrum Munich, Munich, Germany 9/2017
9. Uppsala University, Uppsala, Sweden 9/2017
8. NEUBIAS Training School 4- Gothenburg, Sweden 9/2017
7. Canadian Light Microscopy Course, Calgary, Canada (virtual workshop) 7/2017
6. ISAC CYTO 2017- Boston, MA 6/2017
5. University of Glasgow, Glasgow, Scotland (virtual workshop) 1/2017
4. University of Cambridge, Cambridge UK 12/2016
3. King's College, London, United Kingdom 12/2016
2. BroadE, Cambridge, MA 11/2016
1. Nikon Imaging Center @UCSF Microscopy Users Meeting, 10/2011.

VIDEO TUTORIAL SERIES CREATED

- Ask Erin/Dear Beth video tutorial podcast. 2025-present.
  - List of episodes with links to associated images and files
  - Episode playlist

STANDALONE VIDEO TUTORIALS CREATED

- Introduction to CellProfiler Analyst. Images2Knowlege, 2023.
- The beginner's guide to morphological profiling. Center for Open Bioimage Analysis, 2022.
- Practical exploration of morphological profiling data. Center for Open Bioimage Analysis, 2022.
- Writing or modifying your own CellProfiler modules. NEUBIAS Academy@Home, 2020.
- Segmentation & CellProfiler- Principles, 2D, and 3D. Center for Open Bioimage Analysis, 2020.
- Headless CellProfiler/ DistributedCellProfiler Tutorial. Center for Open Bioimage Analysis, 2020.
- CellProfiler-Analyst Workshop. Center for Open Bioimage Analysis, 2020.
- CellProfiler Workshop. Center for Open Bioimage Analysis, 2020.

OTHER VIDEO CONTENT

- Image Analysis Ask Me Anything. Images2Knowledge, 2024.
- Introduction To Cell Image Analysis. Center for Open Bioimage Analysis, 2021.

INTERACTIVE TUTORIALS CREATED

- Developing Machine Learning Intuitions - 7/2025
- Developing Bioimage Analysis Intuitions - 6/2025

WRITTEN TUTORIALS CREATED

- Interfacing CellProfiler with other software tools via files and plugins- 05/2024
- Classifying images in the browser in Piximi- 4/2024

- ✧ Microscopy Images Are Powerful Data- 10/2021
- ✧ Quality Control - 12/2016
- ✧ Advanced Segmentation - 12/2016

IMAGE ANALYSIS BLOG POSTS

- ✧ Compiling collaborators for NSF Collaborators and Other Affiliations (COA) form - 11/2024
    - ✧ Associated Colab notebook for use
- ✧ Making it easy to share the CRediT on your collaborative research projects - 5/2023 (doi: 10.5281/zenodo.10498959)
    - ✧ Associated template CRediT sheet for use
- ✧ Getting started using CellProfiler from the command line - 4/2021
- ✧ When To Say 'Good Enough' - 10/2019 (doi: 10.5281/zenodo.10498984)
- ✧ The CellProfiler 2 User's Guide to CellProfiler 3.0 - Part 1 - Part 2 - 10/2017
- ✧ Help! Why do my output images seem all black? - 3/2017
- ✧ Making it easier to run image analysis in the cloud - 12/2016
- ✧ Help! What are these three different modules to identify objects? - 12/2016

OTHER TEACHING EXPERIENCE

Teaching Assistant, QB3/UCSF Course in Biological Light Microscopy 2012-2015

- ✧ Involved with lesson construction, logistics, sample preparation, and student assistance for 2012 inaugural session
- ✧ Assisted with lesson construction for 2013 session
- ✧ Created problem sets for 2015 course reorganization; additionally assisted in teaching discussion and lab sections

UCSF Science and Health Education Partnership 2008-2015

- ✧ Program connects UCSF scientists with local public school children to increase student access to science and hands-on experiments
- ✧ Participated in classroom program (2008-2011) and Bay Area Science Festival Discovery Days (2011-2015)

Teaching Assistant, Biological Regulatory Mechanisms, UCSF 2008