

Christine P. Hendon, PhD

Columbia University
Electrical Engineering
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DATE PREPARED APRIL 4, 2023

A. FIELD OF SPECIALIZATION

Biomedical optics, optical coherence tomography, optical spectroscopy, image processing, cardiac electrophysiology

B. ACADEMIC TRAINING

Case Western Reserve University

PhD, Biomedical Engineering.....May 2010
Dissertation: Characterization of Cardiac Tissue using Optical Coherence Tomography
Advisor: Andrew M. Rollins, PhD

Case Western Reserve University

MS, Biomedical Engineering.....August 2007

Massachusetts Institute of Technology

BS, Electrical Engineering and Computer Science.....June 2004

C. ACADEMIC POSITIONS

Columbia University

Associate ProfessorJanuary 2018 - present
Assistant ProfessorSeptember 2012 – December 2017
School of Engineering and Applied Sciences, Department of Electrical Engineering

Harvard Medical School and Massachusetts General Hospital

Postdoctoral Research Fellowship.....January 2010 – September 2012
Biomedical Optics Wellman Center for Photomedicine

D. HONORS, DISTINCTIONS AND SOCIETY MEMBERSHIPS

1. Honors, Distinctions, and Fellowships

1. Columbia University Provost Teaching Scholar2022-2023
2. Columbia University Provost Service Award.....2022
3. SPIE Fellow2021
4. The Optical Society (OSA) Fellow.....2021
5. Election to the College of Fellows for American Institute for Medical and Biological Engineering (AIMBE)2020
6. Presidential Early Career Awards for Scientists and Engineers (PECASE).....2017
7. Rodriguez Family Junior Faculty Development Award, Columbia University SEAS.....2015
8. NSF CAREER Award.....2015
9. NIH DP2 New Innovators.....2014

10. MIT Technology Review: 35 Innovators under 35.....2013
11. Forbes 30 under 30 for Science and Healthcare.....2012
12. Loan Repayment Award. National Institute of Health/National Heart Lung and Blood Institute...2012 – 2014
13. Wellman-Bullock Postdoctoral Fellowship. Massachusetts General Hospital. “Optical myocardial biopsy using micro-Optical Coherence Tomography.”2012
14. Diversity Supplement Postdoctoral Fellowship. National Institute of Health/National Heart Lung and Blood Institute. “Chemical Analysis of Coronary Atherosclerosis in Patients.”2009 – 2012
15. National Research Service Award, Predoctoral Fellowship. National Institute of Health/National Heart Lung and Blood Institute. “3D functional and structural imaging of cardiac tissue,” F31HL085939.....2006 – 2009
16. Carl Storm Minority Fellowship: Gordon Research Conferences.....2006
17. The Medtronic Foundation Fellowship for Medtronic Scholars.....2005-2006
18. Case Prime Fellowship: Case Western Reserve University.....2004-2005
19. McNair Scholar: Black Alumni/ae of MIT.....2004
20. Torchbearer: National Society of Black Engineers.....2004

2. Significant Service

Columbia University - Department of Electrical Engineering

- PhD Admissions Committee.....member, 2012 – 2015, chair 2015-present
- Diversity, Equity and Inclusion Committee.....member, 8/2020 – present

Columbia University – School of Engineering and Applied Sciences

Commission on Diversity, Equity, and Inclusion

- co-chair Student Recruitment, Pipeline and Retention sub-committee.....8/2020 – 5/2021
- Amazon SURE Admissions Committee and Advisor.....2021, 2022, 2023

Columbia University

- Anti-Bullying commission.....9/2021 – 5/2022
- SEAS Dean Search Committee.....11/2021 – 5/2022

OSA/Optica Diversity, Equity and Inclusion Rapid Action Committee

- Committee member.....7/2020 – 8/2021

Conferences and Workshops Organized

OSA Biomedical Optics Congress

- Chair, OSA Biophotonics: Biomed Congress.....2024
- Chair, Bio-optics: Design and Application (BODA).....2023
- OSA Board of Meetings.....1/2019 – 1/2023
- Biomedical optics OSA conferences representative to the board of meetings. monthly meetings
- Chair, Biophotonics Strategic Planning Committee.....7/2020 – 1/2023
- Vice-Chair, OSA Biophotonics: Biomed Congress.....2022
- Program Chair, Bio-optics: Design and Application (BODA).....2021
- Co-Chair, Optical Coherence Tomography Conference.....2020
- Program Chair, Optical Tomography and Spectroscopy Conference.....2018
- Conference Committee, Clinical and Translational Biophotonics Conference.....2016

SPIE Photonics West

Conference Committee, Optical Elastography and Tissue Biomechanics V Conference.....2018-2023
Program Committee, Diagnostic and Therapeutic Applications of Light in Cardiology.....2018-2023
Program Committee, Surgical Guidance.....2019-2023

SPIE Medical Imaging

Program Committee, Image Processing.....2018, 2019, 2020

OSA Frontiers in Optics

Conference Committee, Laser Science Conference.....2016

Service to the Discipline

Editor

Associate Editor, Cardiovascular Engineering and Technology (CVET).....2021 - present
Associate Editor, Biomedical Optics Express BIOMED Special Issue.....2018, 2020, 2023

External Reviewer

NIH Advisory Council permanent memberJanuary 2022 - present
NIH Advisory Council ad hoc member2021
NIH CMT, Cellular and Molecular Technologies study section, standing committee member.
Three study section meetings per year.....October 2017 – June 2020
NIH EBIT, *Enabling Bioanalytical and Imaging Technologies* study section, standing committee member.
Three study section meetings per year..... July 2016 – September 2017
MIT Technology Review 35 Innovators under 35, reviewer.....2015, 2016, 2017, 2018, 2019, 2020

E. GRANTS AND CONTRACTS AWARDED

Multidimensional OCT Imaging Enabled by Compressed Sensing (**CP Hendon, PI**)

NIH 1R03EB032097-01. 06/01/2022 – 05/31/2024

Role: Principal Investigator

“In these Hallowed Halls” - Alumni Showcase Project (**CP Hendon, H Lu**)

Columbia University, Provost Office: Addressing Racism Seed Grant Initiative

Near infrared spectroscopy ventricular substrate mapping catheter. (**CP Hendon PI, D Saluja PI**)

Columbia University, SEAS: STAR Award. 9/01/2021 – 8/31/2023

Role: Principal Investigator

Auditory Mechanics and Cochlear Amplification. (EA Olson, PI)

NIH 2R01DC015362-06. 03/01/2021 – 02/28/2026. My portion: 0.5 summer months, co-advise GRA

Role: Co-Investigator

Evaluating the role of photobiomodulation in human cervical remodeling in pregnancy

JS Vink, MPI; **CP Hendon, MPI**; KM Myers, MPI

NIH 1R21HD106061-01. 07/01/2021 – 06/30/2023

Role: Principal Investigator

Optically guided catheter ablation of atrial fibrillation (**CP Hendon MPI**, K Laurita MPI, AM Rollins MPI)
NIH 1R01HL149369-01. 08/01/2019 - 07/31/2023. \$2,841,635. My portion: \$840,795
Role: Principal Investigator

A Computational Framework for the Clinical Evaluation of the Soft Tissue Mechanics in Pregnancy. (KM Myers, PI)
NIH 1R01HD091153-01. 9/01/2017 - 5/31/2023. \$1,880,241.
My portion: 0.5 summer months, 6 months graduate research assistant
Role: Co-Investigator

Tissue Oracle (**CP Hendon PI**, H Hibshoosh PI)
Columbia Biomedical Engineering Technology Accelerator (BiomedX). 8/1/2020 - 7/31/2021. \$75,000
Role: Engineering and Lead Investigator

High Resolution Imaging of the Myocardium. (**CP Hendon**, PI).
NIH Roadmap Initiative 4DP2HL127776-02. 07/01/2019 - 06/30/2020. \$486,000
Role: Principal Investigator

CAREER: Structure-Functional Imaging of the Atrial Myocardium. (**CP Hendon**, PI).
NSF CAREER. 1454365. 3/1/2015 - 2/29/2020. \$500,000
Role: Principal Investigator

High Resolution Imaging of the Myocardium. (**CP Hendon**, PI).
NIH Director's New Innovator Award. 1DP2HL127776-01. 9/30/2014-6/30/2019 \$2,400,000
Role: Principal Investigator

Deep Learning for Computer Aided Identification of Breast Cancer Margins within Optical Images. (**CP Hendon PI**,
R Ha co-PI).
Irving Institute Collaborative and Multidisciplinary Pilot Research award for Basic Science and
Clinical/Translational Investigators (CaMPR-BASIC). 8/1/2017 - 7/31/2018. \$40,000
Role: Principal Investigator

Optical coherence tomography imaging for the early detection of ductal carcinoma in situ. (**CP Hendon**, S Feldman,
co-PIs)
Research Initiatives in Science and Engineering (RISE). 7/1/2014 - 6/30/2016. \$160,000
Role: Principal Investigator

Potential of optical coherence tomography on detecting early breast cancer via intraductal route. (S Feldman PI).
Dr. Susan Love Research Foundation Pilot Grant. 2015. \$17,000
Role: Co-Investigator

Three-dimensional correlated electrical conduction and tissue microstructure. (**CP Hendon**, PI).
Feldstein Medical Foundation. 5/15/2014 - 5/14/2015. \$60,000
Role: Principal Investigator

BRIGE: Characterization of the human myocardium by optical coherence tomography. (**CP Hendon**, PI)
NSF EEC-1342273 10/1/2013 - 9/30/2015. \$175,000
Role: Principal Investigator

Optical Imaging of the Heart for Substrate Characterization and Therapy Monitoring. (**CP Fleming**, PI)
Provost's Small Grants Program for Junior Faculty who Contribute to the Diversity Goals of the University.
Columbia University. 7/1/2013 - 6/30/2014. \$25,000

F. TEACHING EXPERIENCE

1. Courses Taught

Optical Systems, Electrical Engineering

Instructor, Columbia University, Fall 2013, 2014, 2015, 2016, 2018, 2019, 2020, 2021, 2023

Undergraduate and Graduate level course

Digital Image Processing, Electrical Engineering

Instructor, Columbia University, Spring 2014, 2016, 2017, 2019, 2020, 2021, 2022

Undergraduate and Graduate level course

Introduction to Optical Coherence Tomography, SEAS Short Course

Instructor, Columbia University, Summer 2020

Undergraduate and graduate level short summer course

Optics in Cardiology and Neuroscience, Electrical and Biomedical Engineering

Instructor, Columbia University, Spring 2013

Graduate level seminar course

Signals and Systems, Biomedical Engineering

Teaching Assistant, Case Western Reserve University, Fall 2007, 2008

Junior level, undergraduate course.

Biomedical Optical Diagnostics, Biomedical Engineering

Teaching Assistant, Case Western Reserve University, Spring 2005

Graduate level course

Guest Lectures

Art of Engineering. Spring 2023. Lecture (1)

Biological Microscopy. Spring 2019. Lecture (1)

Egleston Scholars Seminar Series, Columbia University. Fall 2013, Fall 2015, Fall 2018. Lectures (3)

The Center for Neural Engineering and Computation. Spring 2015. Lecture (1)

Advanced Microscopy Course, Columbia University. Spring 2013. Lecture (1)

Biomedical Engineering Seminar Series, Columbia University. Spring 2013. Lecture (1)

Cardiology Fellows Seminar Series, Columbia University. Spring 2013. Lecture (1)

Teaching Evaluations

Semester	Course	Enrollment	Course	Instructor
				<i>Max 5</i>
Fall 2013	Optical Systems	17	4.65	4.88
Spring 2014	Digital Image Processing	33	4.5	4.57
Fall 2014	Optical Systems	17	4.07	4.5
Spring 2015	Parental Leave			

Fall 2015	Optical Systems	27	4.08	4.08
Spring 2016	Digital Image Processing	34	4.79	4.73
Fall 2016	Optical Systems	8	5	5
Spring 2017	Digital Image Processing	30	4.47	4.56
Fall 2017	Medical Leave			
Spring 2018	Parental Leave			
Fall 2018	Optical Systems	12	4.38	4.5
Spring 2019	Digital Image Processing	62	4.21	4.13
Fall 2019	Optical Systems	11	4.14	4.29
Spring 2020	Digital Image Processing	39	N/A	N/A
Fall 2020	Optical Systems	15	4.27	4.36
Spring 2021	Digital Image Processing	30	4	4
Fall 2021	Optical Systems	18	4	4
Spring 2022	Digital Image Processing	44	4.42	4.32
Fall 2022	Optical Systems	26	4.13	3.88
Spring 2023	Sabbatical			

2. Advising

Doctoral Students

1. Jonah Majumder. MD/PhD candidate. Biomedical Engineering.....6/1/2022 - present
2. Aidan Therien. MS/PhD candidate. Electrical Engineering.....9/1/2021 - present
3. Arielle Joasil. PhD candidate. Electrical Engineering.....9/1/2021 - present
4. Haiqiu Yang. PhD candidate Electrical Engineering.....9/1/2020 - present
5. Diego Song Cho. MS/PhD candidate. Biomedical Engineering.....9/1/2019 - present
6. Ziyi Huang, MS Electrical Engineering, PhD.....9/2018 - 12/2022
Starting position: Postdoctoral Fellow, Columbia University
7. Soo Young Park, MS Electrical Engineering, PhD1/2018 - 12/2021
Starting position: Military Officer, South Korea
8. Diana Mojahed. Biomedical Engineering, PhD.....9/2016 - 10/2021
Starting position: Postdoctoral fellow, Massachusetts Institute of Technology
9. James McLean, PhD. Electrical Engineering.....9/2016 - 3/2021
Starting position: Imaging Scientist, SpectraWAVE Inc,
10. Rajinder Singh-Moon, PhD. Electrical Engineering.....9/2014 - 5/2019
Postdoctoral fellowship.....5/2019 - 1/2020
Starting position: Research Scientist, Modulim
11. Theresa Lye, PhD. Electrical Engineering.....9/2013 - 5/2019
Postdoctoral fellowship.....5/2019 - 12/2019
Starting position: Research Scientist, Riverside Research
12. Yuye Ling, PhD. Electrical Engineering,.....9/2013 - 12/2017
Postdoctoral fellowship.....1/2018 - 8/2018
Starting position: Assistant Professor, Shanghai Jiao Tong University Electronic Engineering
13. Xinwen Yao, PhD. Electrical Engineering,.....7/2013 - 11/2017
Starting position: Postdoctoral Fellow, Johns Hopkins Electrical Engineering
14. Yu Gan, PhD. Electrical Engineering,1/2013 - 2/2017
Postdoctoral fellowship.....2/2017 - 8/2018
Starting position: Assistant Professor, University of Alabama, Electrical Engineering and Computer Science

Co-Advised Doctoral Students

1. Brian Frost. Electrical Engineering, MS-PhD Candidate.....9/2019 – present
Co-advised with Elizabeth Olson, PhD
2. Ching Lin, MS. Electrical Engineering, PhD.....9/2013 – 5/2019
Co-advised with Elizabeth Olson, PhD
Starting position: Imaging Algorithms Scientist, iTomography Corporation

Medical Students

1. Ernest Chang, PhD. Columbia University College of Physicians and Surgeons.....7/2015 – 5/2017
Starting position: Resident, New York University

Master's Student Researchers

1. Danyang Cheng, Electrical Engineering.....1/2023 - present
2. Zizheng Jia, Electrical Engineering.....1/2023 - present
3. Manuel Jenkins, Electrical Engineering.....1/2022 - present
4. Yunhe Liu, Electrical Engineering.....6/2022 – 12/2022
5. Jingpeng Hu, Electrical Engineering.....1/2022 – 12/2022
6. Nisha Gandhi, Biomedical Engineering.....6/2021 – 5/2022
Position after graduation: Researcher, Dana-Farber Cancer Institute
7. Yiyi Chen. Electrical Engineering.....6/2021 – 5/2022
8. Zvi Goldstein. Electrical Engineering9/2021 - 5/2022
Position after graduation: Machine Learning Engineer, PathAI
9. Isaac Donnis. Electrical Engineering.....6/2020 – 5/2021
Position after graduation: Machine Learning Engineer, Qualcomm
10. Haiqiu Yang. Electrical Engineering.....1/ 2019 – 8/2020
MS Research Specialization
Position after graduation: Columbia University EE PhD Program
11. Rohan Bareja. Data Sciences.....9/2018 – 8/2020
Position after graduation: Software Engineer, Case Western Reserve University Biomedical Engineering
12. Fue Feng. Electrical Engineering.....1/2019 – 5/2020
MS Research Specialization
Position after graduation: Virginia Tech Computer Engineering PhD Program
13. Abhyuday Puri. Electrical Engineering.....1/2019 – 12/2019
MS Thesis
Position after graduation: Software Engineer, Kodiak Robotics
14. Victoria Matthieu. Biomedical Engineering.....9/2018 – 5/2019
Position after graduation: Clinical Research Coordinator Massachusetts General Hospital
15. Cindy Yu. Biomedical Engineering.....9/2017 – 12/2018
Position after graduation: Siemens Healthcare
16. Soo Young Park. Electrical Engineering1/2017- 12/2017
Position after graduation: Columbia University EE PhD Program
17. Brigid Angelini. Electrical Engineering1/2017 – 8/2017
Position after graduation: Clinical Research Coordinator Massachusetts General Hospital
18. Mohammad Zaryab. Electrical Engineering.....1/2016 – 7/2017
Position after graduation: Technical Advisor, Haley Guiliano LLP
19. Jiaqi Guo. Electrical Engineering.....6/2016 – 12/2016
Position after graduation: Engineer, DJI Robomasters
20. Wantong Li. Electrical Engineering.....9/2016 – 12/2016
Position after graduation: SoC Design Verification Engineer, Micron Technology
21. Long Yang. Electrical Engineering.....9/2016 – 12/2016

- Position after graduation: Columbia University Materials PhD Program*
22. Priya Balasubramanian. Electrical Engineering.....8/2015 – 8/2016
Position after graduation: Cornell University EE PhD Program
23. Syed Bin Amir. Electrical Engineering.....9/2013 – 5/2015
Position after graduation: University of Connecticut BME PhD Program
24. Dustin Tran. Electrical Engineering.....9/2014 – 5/2015
Position after graduation: University of Arizona EE PhD Program
25. Christopher Hermawi. Electrical Engineering.....5/2014 – 12/2014
Position after graduation: Intel Engineer
26. Christine Fung. Biomedical Engineering.....1/2014 – 12/2014
Position after graduation: Columbia University BME PhD Program
27. Rajinder Singh-Moon. Electrical Engineering.....9/2012 – 5/2014
Position after graduation: Columbia University EE PhD Program
28. Yang Zhao. Electrical Engineering.....4/2013 – 5/2014
Position after graduation: Duke BME PhD Program

Post-baccalaureate researchers

1. Abdul Leite. Electrical Engineering Columbia University.....6/2015 – 8/2015
2. Andres Medina. Electrical Engineering Columbia University.....6/2015 – 7/2015
3. Jocelyn Eckert. Wellman Center for Photomedicine Massachusetts General Hospital..... 6/2010 – 3/2011

Undergraduates researchers

1. Sunny Hu. Electrical Engineering.....2/2023 – present
2. Shilpita Mitra-Behura. Electrical Engineering.....1/2023 – present
3. Xinran Gao. Electrical Engineering.....1/2023 – present
4. Margherita Firenze. Electrical Engineering.....1/2021 – present
5. Vincent Kinget, Biomedical Engineering Case Western Reserve University.....Summer 2020
6. Angel Estigarribia. Electrical Engineering.....Summer 2019
7. Agastya Vaidya. Chemistry Emory University..... Summers 2017, 2018
8. Rhiana Rivas. Biomedical Engineering.....9/2016 – 2/2018
9. Tonye Brown. Computer Science.....6/2016 – 12/2016
10. Diego Song. Electrical Engineering.....1/2016 – 5/2016
11. Jillian Ross. Chemical Engineering.....9/2015 – 5/2016
12. Alexandra Della Santina. Electrical Engineering.....9/2015 – 12/2015
13. Antonio Basukoski. Electrical Engineering9/2015 – 12/2015
14. Gary Lin. Electrical Engineering.....11/2013 – 5/2014
15. Maria Van Keulen. Electrical Engineering.....10/2013 – 5/2014
16. Akachi Ukwu. Chemical Engineering.....3/2013 – 5/2015
17. Linda Sun. Electrical Engineering.....4/2013 – 5/2014
18. Melissa Haskell. Wellman Center for Photomedicine.....6/2011 – 8/2011

High School Students

1. Agastya Vaidya HYPOTHEkids.....6/2017 – 8/2017
2. Helen Nazarenko, HYPOTHEkids.....6/2016 – 8/2016
3. Kevin Li, Scarsdale High School.....6/2015 – 5/2016
4. Bryan Webb, Horizon Science Academy.....12/2007 – 5/2009

Experience as an Examiner

1. Mateus Zanarella, Electrical Engineering. Thesis committee.....2023
2. Eric Pollmann, Electrical Engineering. Thesis committee.....2023
3. Aneek James, Electrical Engineering. Thesis committee.....2023

4. Prachi Patel, Electrical Engineering. Thesis committee.....	2023
5. Han Yu, Electrical Engineering. Proposal Committee.....	2022
6. Ken Yau, Biomedical Engineering. Thesis committee. The University of Western Australia.....	2022
7. Kaveri A. Thakoor, Biomedical Engineering. Thesis Committee.....	2022
8. Jaebin Choi, Electrical Engineering. Thesis Committee.....	2021
9. Kaveri A. Thakoor, Biomedical Engineering. Proposal Committee.....	2021
10. Jeffrey Elloian, Electrical Engineering. Thesis Committee.....	2021
11. Henry Kuo, Electrical Engineering. Thesis Committee.....	2021
12. Jeffrey Elloian, Electrical Engineering. Thesis Committee.....	2020
13. Aneek James, Electrical Engineering. Proposal Committee.....	2020
14. Nathan Abrams, Electrical Engineering. Thesis Committee.....	2020
15. Kevin Renehan, Electrical Engineering. Proposal Committee.....	2020
16. Yishen Huang, Electrical Engineering. Thesis Committee.....	2020
17. Chen Shi, Electrical Engineering. Thesis Committee.....	2019
18. Linbi Hong, Electrical Engineering. Thesis Committee.....	2019
19. Kripa Patel, Biomedical Engineering. Proposal Committee.....	2019
20. Chen Shi, Electrical Engineering. Doctoral Thesis Committee.....	2019
21. Venkata Voleti, Biomedical Engineering. Doctoral Thesis Committee.....	2019
22. Wenze Li, Electrical Engineering. Doctoral Thesis Committee.....	2019
23. Dovina Qu, Biomedical Engineering. Doctoral Thesis Committee.....	2018
24. Hao Yang, Electrical Engineering. Doctoral Thesis Committee.....	2018
25. Venkata Voleti, Biomedical Engineering. Proposal Committee.....	2018
26. Asif Ahmed, Electrical Engineering. Doctoral Thesis Committee.....	2018
27. Youngwan "Willis" Kim, Electrical Engineering. Proposal Committee.....	2017
28. Alex Meng, Electrical Engineering. Doctoral Thesis Committee.....	2017
29. Wenze Li, Electrical Engineering. Proposal Committee.....	2017
30. Jinyu Liao, Electrical Engineering. Doctoral Thesis Committee.....	2017
31. Wang (Frank) Yao, Mechanical Engineering. Doctoral Thesis Committee.....	2017
32. Lev Givon, Electrical Engineering. Doctoral Thesis Committee.....	2016
33. Abdulkadir Elmas, Electrical Engineering. Doctoral Thesis Committee.....	2016
34. Henry Kuo, Electrical Engineering. Proposal Committee.....	2016
35. Dat Tien Hoang, Chemistry. Doctoral Thesis Committee.....	2016
36. Christine Chen, Electrical Engineering. Doctoral Thesis Committee.....	2016
37. Jinyu Liao, Electrical Engineering. Proposal Committee.....	2015
38. Daniel Bellin, Electrical Engineering. Doctoral Thesis Committee.....	2015
39. Lee Zhu, Electrical Engineering. Doctoral Thesis Committee.....	2015
40. Qi Li, Electrical Engineering. Doctoral Thesis Committee.....	2015
41. Wang (Frank) Yao, Mechanical Engineering. Proposal Committee.....	2014
42. Zhi-De Deng, Electrical Engineering. Doctoral Thesis Committee.....	2013
43. Yevgeniy Slutskiy, Electrical Engineering. Doctoral Thesis Committee.....	2013

Student Group Advising

National Society of Black Engineers Columbia University Student Chapter Faculty Advisor.....	2016 – present
SPIE Columbia University Student Chapter Faculty Advisor.....	2014 – present

Student Group Meetings

- Coalition on Race and Ethnicity in Engineering CORE^2. Spring 2023 (1)
- Society of Women Engineers. Spring 2013, Spring 2019, Spring 2020, Fall 2020, Fall 2021, Spring 2023. (6).
- Columbia University R&D: Research and Diversity. Fall 2020 (1)
- Bridge to PhD Scholars. Spring 2017, Spring 2020. (2)
- Grad Society of Women Engineers, Columbia University. Spring 2013, Spring 2014. (2).

Diversity in Graduate Education Group, Columbia University. Fall 2013. (1).
Minority Postdoc Coalition, Columbia University. Summer 2013. (1).
National Society of Black Engineers, Columbia University. Spring 2013. (1).

G. INVITED TALKS

1. Gordon Conference on Cardiac Arrhythmia. Cardiac Imaging in the Electrophysiology Laboratory. March 2023
2. Florida International University. Biomedical Engineering Seminar Series, Heart Day. February 2023
3. CLEO: Spectroscopy for Biosensing and Imaging. May 2022
4. Heart Rhythm Society. New Technologies in the EP Lab. May 2022
5. Columbia University, Department of Biomedical Engineering. Tissue talks. December 2021
6. University of Washington. Cardiovascular Breakfast Club Seminar Series, September 2021
7. Machine Learning in OCT Imaging. Center for Biomedical OCT Research & Translation at MGH. May 2021
8. Future Faculty Workshop Speaker at Notre Dame. May 2021
9. University of Houston. Electrical and Computer Engineering Seminar. February 2021
10. Wellman Center for Photomedicine. Wellman Research Tutorial. July 2020
11. Clinical and Translational Biophotonics Meeting. OSA BIOMED Congress. April 2020
12. Cornell University. Biomedical and Electrical Engineering Seminar. October 4, 2019
13. Tufts University. Biomedical Engineering. September 30, 2019
14. Washington University in St. Louis. Biomedical Engineering. September 26, 2019
15. NIH High Risk High Reward Symposium. (HRHR) June 5, 2019
16. Bio-Optics Design and Application (BODA) Conference at OSA's Biophotonics Congress April 2019
17. SciViz. Mount Sinai. November 16, 2018
18. Biophotonics Seminar Series. Vanderbilt. Scheduled October 16, 2018
19. Frontiers in Optics. OSA Conference. September 17, 2018
20. University of Georgia. UGA College of Engineering Lecture Series. Scheduled August 24, 2018
21. Advances in Biomedical Optics (ABO) seminar series. Physics and Radiology University of Pennsylvania. May 24, 2018
22. Bioengineering Seminar University of Illinois Urbana Champaign. May 1, 2018
23. Biomedical Engineering Seminar Series. Johns Hopkins University. March 12, 2018
24. Bioengineering Seminar Rutgers. November 27, 2017
25. Optics in Cardiology Conference. Rotterdam, the Netherlands. April 6, 2017
26. Society of America (OSA) Frontiers in Optics Conference. October 19, 2016
27. Lasers in Medicine and Biology: Gordon Conference. July 14, 2016
28. Commencement Keynote Address. DeWitt Clinton High School. Bronx, NY. June 27, 2016
29. Womensphere Global Leaders Summit. New York Academy of Sciences. March 2, 2016
30. New York University Radiology Department Seminar Series. March 1, 2016
31. Radiology Imaging Seminar Series. Yale University December 2015
32. Biomedical Engineering Seminar Series. George Washington University November 2015
33. Purdue University, Distinguished Lecturer for the Weldon School of Biomedical Engineering Seminar Series. November 4, 2015
34. CAARMS. Princeton University. June 12, 2014
35. University of California San Diego. Bioengineering Seminar. February 7, 2014
36. Columbia Engineering TEDx. October 25, 2013
37. SPIE Photonics West BiOS. San Francisco, CA. February 2013
38. University of Florida, Biomedical Engineering. Young Investigators Seminar Series. Gainesville, FL. February 6, 2012.
39. NIH National Heart Lung and Blood Institute (NHLBI) 18th Annual Cardiovascular Diversity Research Supplement Awardees' Session, Chicago, IL November 13, 2010.
40. 40th Anniversary Case Western Biomedical Engineering. October 22, 2009.

- 41. Washington University in St. Louis' Biomedical Engineering Seminar Series. September 8, 2009.
- 42. University's Biomedical Engineering Seminar Series. February 5, 2009. Ithaca, NY.
- 43. University of Wisconsin Madison. Biomedical Engineering Seminar. October 27, 2008. Madison, WI.
- 44. Ohio State's Biomedical Engineering Seminar Series. April 30, 2008. Columbus, OH.

H. PROFESSIONAL AND ACADEMIC SERVICE

1. Society Membership

American Institute for Medical and Biological Engineering (AIMBE), Fellow
 National Society of Black Engineers (NSBE)
 The Optical Society (OSA), Fellow
 The International Society for Optics and Photonics (SPIE), Fellow

2. Service to the Discipline

Grant Reviewer

NSF Career2021
 NSF CBET Grant Review Panel Biophotonics, ad hoc.....2012, 2020
 The Netherlands Organisation for Scientific Research, NOWJuly 2017
 NSF SBIR/STTR Phase 1: Medical Imaging Technologies, ad hoc.....2016
 NIH Medical Imaging Study Section (MEDI), ad hoc..... June 2016
 King's College London. King's Health Partners Challenge Fund. Ad hoc reviewer.March 2016
 NIH Enabling Bioanalytical and Imaging Technologies (EBIT-R) study section, ad hoc.October 2015
 NIH Biomedical Imaging Technology Study Section (BMIT-A), ad hoc.June 2014
 NSF SBIR/STTR Medical Imaging Review Panel, ad hoc..... March 2014
 Heart Research UK Grant Review, ad hoc.....September 2013

Journal Reviewer

American Journal of Physiology: Heart and Circulatory Physiology, Biomedical Optics Express, Biophysical Journal, Computers in Biology and Medicine, Current Medical Imaging Reviews, Expert Systems with Applications, IEEE Transactions on Biomedical Engineering, IEEE, IET Image Processing, IEEE Sensors, International Journal of Biomedical Imaging, Journal of Biomedical Optics, Journal of Biophotonics, Lasers in Surgery and Medicine, Light: Science and Applications, Medical Physics, Nature, Nature Scientific Reports, Optica, Optics Express, Optics Letters Photoacoustics

Session Chair

SPIE Photonics West BioS
 Optical Elastography and Tissue Biomechanics VII / Tissue Mechanics.....February 2020
 Diagnostics and Therapeutics in Cardiology / Blood and Oximetry.....February 2020
 Advanced Biomedical and Clinical Diagnostic and Surgical Guidance Systems / Surgical Guidance II.....February 2019
 Diagnostics and Therapeutics in Cardiology / Imaging and Vascular Materials.....February 2019
 Diagnostics and Therapeutics in Cardiology / Myocardium.....January 2018
 Diagnostics and Therapeutics in Cardiology / Myocardium.....January 2017
 Advanced Biomedical and Clinical Diagnostic and Surgical Guidance Systems / New TechnologiesJanuary 2017
 Diagnostics and Therapeutics in Cardiology / Spectroscopy..... February 2013

Gordon Conference on Lasers in Medicine and Biology

Fetal/Maternal Medicine.....	July 2018
OSA BIOMED	
Optical Coherence Tomography. Clinical and Preclinical Imaging.....	April 2020
OSA BIOMED Post deadline Submissions.....	April 2020
Optical Coherence Tomography, Novel Techniques.....	April 2018
Optical Biomarkers.....	March 2016
OSA Frontiers in Optics	
Optical Tomography.....	October 2016
IEEE Engineering in Medicine and Biology (EMBC)	
Optical Coherence Tomography.....	August 2014
Biomedical Engineering Society (BMES)	
Biomedical Imaging and Optics / Optical Coherence Tomography.....	September 2013

3. University Service

School of Engineering and Applied Science (SEAS) Recruitment and Career Development Activities

1. EngAGE, Columbia University. New York, NY. SEAS recruitment event for rising minority juniors, presenter and laboratory tours.....February 2013, 2016, 2017, 2020, 2021
2. Women in Science and Engineering, Columbia University, Panel member and laboratory tours. Outreach program for undergraduate women in STEM.....Fall 2012, 2016, 2020
3. Path to Professorship. Panelist on for SEAS doctoral students and postdoctoral fellows considering academic careers.....Fall 2016, 2018, 2020
4. Johnson & Johnson's WiSTEM2D. Panelist to discuss academic careers with Columbia female summer undergraduate researchers. Summer 2017, 2020
5. Women of Color Roundtable with Columbia Faculty. Panelist for Columbia University graduate students and professional students women of color considering an academic career.....April 2020
6. Egleston Faculty Mentor.....2013, 2014, 2015, 2017, 2018, 2019
7. Engineering Women's Forum. Panelist for undergraduate SEAS recruitment event and Electrical Engineering Departmental presentation.....October 2012, 2013, 2014, 2015, 2016
8. Faculty Speaker, SEAS Family Weekend.....2013, 2015

4. Public Outreach

1. Figure Skating Harlem visiting SEAS for College and Career Week. Laboratory tour and lecture to 15 high school students. Spring 2023
2. Ivy Collective for Inclusion in Engineering - Graduate Symposium. Panelist. Fall 2021
3. Hk Maker Lab, Columbia University. New York, NY. Program on engineering design for NYC high school students underrepresented in STEM fields Guest speaker, host/mentor for high school summer researcher..... August 2014, August 2015, August 2016, August 2017, August 2019, July 2020, August 2021
4. Booker T Washington Middle School 54, Columbia University Engineering and Applied Science Laboratory Tours. New York, NY. Organizer for yearly event. Organized laboratory tours, demonstrations, selection of speakers and demonstrations, campus tour, and student panel discussion for 6th to 8th grader. 20 students participated in the program each year. May 2015, May 2016
5. Advisory Board Member – Math Minds, Nonprofit. September 2015 – August 2016

6. Meet the Professionals –Organizer of career development event for graduate students and postdoctoral fellows to meet with faculty and industry representative during the OSA BIOMED Congress.. March 2016
7. Johns Hopkins Center for Talented Youth, Columbia University presents Engineering and Applied Science. New York, NY. Co-organizer for event. Organized laboratory tours and hands on demonstrations for 7th to 10th graders on the topic of optics and biomedical optics. 75 students participated in the program. September 2014
8. The New York Academy of Sciences and Minority Graduate Student Network. New York, NY. Panel member. Supporting Dynamic STEM Careers for Underrepresented Minorities. May 2014
9. The Franklin Institute. 3rd Annual the Color of Science, Philadelphia PA. Interviewee and panelist during 300-person community science evening and conducted demonstrations in optics for 300 area minority middle school students. March 2014
10. Womensphere, Annual Emerging Leaders Global Summit. Speaker to encourage 350 undergraduate and graduate women toward research in STEM and laboratory tours and laboratory demonstration for 40 undergraduate and graduate women. January 2014
11. The National GEM Consortium – GEM Grad Lab, Columbia University. Panel moderator. Outreach program for undergraduate minorities in STEM. October 2013
12. Louisiana State University LA-STEM Research Scholars Program Visit. Panel member. Outreach program for undergraduate students in STEM. August 2013
13. Mentor for Minority Business Students Association, Massachusetts Institute of Technology. Mentor for two undergraduate students, hosted monthly meetings with mentees.....2010-2011
14. Creating a Life for Yourself After Graduation, Massachusetts Institute of Technology. Panel member. Outreach program for undergraduate minority students. April 2010
15. Women in Leadership, Case Western Reserve University. Panel member. Outreach program for undergraduate women. September 2009
16. National Society of Black Engineers (NSBE) – Pre-college initiative Cleveland Chapter. Laboratory demonstrations on biomedical imaging. April 2008, February 2009

I. PUBLICATIONS

Underline denotes supervised students and fellows.

bold indicates Hendon as senior or first author

* denotes equal first author contribution

† denotes equal senior author contribution

Fleming -- Christine Hendon's Maiden Name

h-index = 24 (Source Google Scholar April 4, 2023)

1. Published Work

Peer-Reviewed Journal Papers

- J1. Ziyi Huang, Yu Gan, Theresa Lye, Yanchen Liu, Haofeng Zhang, Andrew Laine, Elsa Angelini, and **Christine Hendon**. Cardiac Adipose Tissue Segmentation via Image-Level Annotations. Journal of Biomedical and Health Informatics. 27(6), June 2023. *In press*
- J2. Ziyi Huang, Xiaowei Zhao, Ohad Ziv, Kenneth R. Laurita, Andrew M. Rollins, and **Christine P. Hendon**. Automated analysis framework for in vivo cardiac ablation therapy monitoring with optical coherence tomography. Biomed. Opt. Express **14**(3), 1228-1242 (2023)
- J3. Soo Young Park, Rajinder Singh-Moon, Haiqiu Yang, and **Christine P. Hendon**. Monitoring of irrigated lesion formation with single fiber based multispectral system using machine learning. Journal of

Biophotonics. 15(9), p e202100374 (2022)

- J4. Diana Mojahed, Matthew Applegate, Hua Guo, Richard Ha, Hanina Hibshoosh, and **Christine Hendon**. Real-time histology evaluation by optical coherence tomography (OCT) holds promise to improve the diagnostic anatomic pathology gross evaluation process. *Biomedical Optics Express*. 27 (9), p 096003 (2022)
- J5. Rohan Bareja*, Diana Mojahed*, Hanina Hibshoosh, and Christine P. Hendon. Classifying breast cancer in ultrahigh-resolution optical coherence tomography (UHR-OCT) images using convolutional neural networks. *Applied Optics*. 61(15), p 4458-4462 (2022)
- J6. Soo Young Park, Haiqiu Yang, Charles Marboe, Ohad Ziv, Kenneth Laurita, Andrew Rollins, Deepak Saluja, and **Christine P. Hendon**. Cardiac endocardial left atrial substrate and lesion depth mapping using near-infrared spectroscopy. *Biomedical Optics Express*. 13(4). 1801 – 1819 (2022)
- J7. Xiaowei Zhao, Ohad Ziv, Reza Mohammadpour, Benjamin Crosby, Walter J Hoyt, Michael W Jenkins, Christopher Snyder, Christine Hendon, Kenneth R Laurita, Andrew M Rollins. *Scientific Reports*, 11 (1), 1-10. (2021)
- J8. Soo Young Park*, Rajinder Singh-Moon*, Haiqiu Yang, Deepak Saluja, **Christine Hendon**. Quantification of irrigated lesion morphology using near-infrared spectroscopy. *Scientific Reports*, 11 (1), 1-11. (2021)
- J9. Xingchen Ji*, Diana Mojahed*, Yoshitomo Okawachi, Alexander L. Gaeta, **Christine P. Hendon**[†] and Michal Lipson[†] Millimeter-scale chip-based supercontinuum generation for optical coherence tomography. *Science Advances*, 7 (38). (2021)
- J10. Shu Fang, James McLean, Lei Shi, Joy-Sarah Y. Vink, Christine P. Hendon, Kristin M. Myers. Anisotropic Mechanical Properties of the Human Uterus Measured by Spherical Indentation. *Annals of Biomedical Engineering*, pp 1-20 (2021)
- J11. James P. McLean, **Christine P. Hendon**. 3-D compressed sensing optical coherence tomography using predictive coding. *Biomedical Optics Express* 12 (4), pp 2531-2549 (2021)
- J12. James P. McLean, Shuyang Fang, George Gallos, Kristin M. Myers, and **Christine P. Hendon**. Three-dimensional collagen fiber mapping and tractography of human uterine tissue using OCT. *Biomedical Optics Express*. 11(9). (2020)
- J13. Rajinder P. Singh-Moon, Soo Young Park, Diego M. Song Cho, Agastya Vaidya, Charles C. Marboe, Elaine Y. Wan, and **Christine P. Hendon**. Feasibility of near-infrared spectroscopy as a tool for anatomical mapping of the human epicardium. *Biomedical Optics Express*. 11(8) pp 4099-4109 (2020) Editors Pick
- J14. Diana Mojahed, Richard S. Ha, Peter Chang, Yu Gan, Xinwen Yao, Brigid Angelini, Hanina Hibshoosh, Brett Tabaek, and **Christine Hendon**. Fully automated post lumpectomy breast margin assessment utilizing convolutional neural network based optical coherence tomography image classification method. *Academic Radiology*. 27 (5) pp e81-e86. (2020)
- J15. Theresa H. Lye, Charles C. Marboe and **Christine P. Hendon**. Imaging of Sub-Endocardial Adipose Tissue and Fiber Orientation Distributions in the Human Left Atrium using Optical Coherence Tomography. *Journal of Cardiac Electrophysiology*. 30 (12), 2950-2959 (2019)
- J16. Xingchen Ji**, Xinwen Yao**, Yu Gan, Aseema Mohanty, Mohammad A. Tadayon, Christine P. Hendon,

and Michal Lipson. On-chip tunable photonic delay line. APL Photonics. 4 pp 090803. (2019)

- J17. Yu Gan, Theresa H. Lye, Charles C. Marboe, **Christine P. Hendon**. Characterization of the human myocardium by optical coherence tomography. Journal of biophotonics, e201900094 (2019)
- J18. Xingchen Ji, Alexander Klenner, Xinwen Yao, Yu Gan, Alexander L. Gaeta, Christine P. Hendon, and Michal Lipson. Chip-based frequency comb sources for optical coherence tomography. Optics Express 27 (14), 19896-19905 (2019)
- J19. Lei Shi, Wang Yao, Yu Gan, Lily Y. Zhao, W. Eugene McKee, Joy-Sarah Y. Vink, Ronald J. Wapner, Christine P. Hendon, Kristin Myers. Anisotropic Material Characterization of Human Cervix Tissue based on Indentation. Journal of Biomechanical Engineering. 141(9). (2019).
- J20. Soo Young Park, Rajinder P Singh-Moon, **Christine P Hendon**. Towards Real-Time Multispectral Endoscopic Imaging for Cardiac Lesion Quality Assessment. Biomedical Optics Express 10 (6), 2829 – 2846. (2019)
- J21. **Christine P Hendon**, Theresa H Lye, Xinwen Yao, Yu Gan, Charles C Marboe. Review: Optical Coherence Tomography Imaging of Cardiac Substrates. Quantitative Imaging in Medicine and Surgery 9 (5), 882 – 904. (2019)
- J22. James McLean, Yu Gan, Theresa H Lye, Dovina Qu, Helen Lu, and **Christine P Hendon**. High-speed collagen fiber modeling and orientation quantification for optical coherence tomography imaging. Optics Express 27(10), 14457-14471. (2019)
- J23. Xin Yu, Rajinder P Singh-Moon, and **Christine P Hendon**. Real-time assessment of catheter contact and orientation using an optical coherence tomography integrated cardiac ablation catheter. Applied Optics. 58(14), 3823-3829. (2019) *Editors Pick*
- J24. Nathan C. Lin, Elika Fallah, C. Elliott Strimbu, Christine P. Hendon, and Elizabeth S. Olson, "Scanning optical coherence tomography probe for in vivo imaging and displacement measurements in the cochlea," Biomedical Optics Express 10, 1032-1043 (2019)
- J25. Yuye Ling, William Meiniel, Rajinder Singh-Moon, Elsa Angelini, Jean-Christophe Olivo-Marin, and **Christine P. Hendon**, "Compressed sensing-enabled phase-sensitive swept-source optical coherence tomography," Opt. Express 27, 855-871 (2019)
- J26. Theresa H. Lye, Vivek Iyer, Charles C. Marboe, and **Christine P. Hendon**. "Mapping the human pulmonary venoatrial junction with optical coherence tomography," Biomed. Opt. Express 10, 434-448 (2019)
- J27. Rajinder P Singh-Moon, Xinwen Yao, Vivek Iyer, Charles Marboe, William Whang, **Christine P Hendon**. Real-time optical spectroscopic monitoring of non-irrigated lesion progression within atrial and ventricular tissues. Journal of Biophotonics. p e201800144 (2019) (*Selected for inside cover*)
- J28. Theresa H Lye, Kevin P Vincent, Andrew D McCulloch, and **Christine P Hendon**. Tissue-Specific Optical Mapping Models of Swine Atria Informed by Optical Coherence Tomography. Biophysical Journal. 114(6), pages 1477-1489. (2018)
- J29. Xinwen Yao, Yu Gan, Yuye Ling, Charles C. Marboe and **Christine P. Hendon**. Multicontrast Endomyocardial Imaging By Single-channel High Resolution Cross-polarization Optical Coherence

Tomography. Journal of Biophotonics. 11(4), p e201700204. (2018)

- J30. Richard S Ha, Lauren Friedlander, Christine P Hendon, Hanina Hibshoosh, Sheldon Feldman, Soojin Ahn, MD; Hank Schmidt, Margaret Akens, MaryAnn Fitzmaurice, Brian Wilson, Victoria Mango. Optical Coherence Tomography: A novel imaging method for post lumpectomy breast margin assessment - A multi-reader study. Academic Radiology Journal. 25(3), p 279-287. (2018)
- J31. James P. McLean, Yuye Ling, and **Christine P Hendon**. Frequency-Constrained Robust Principal Component Analysis: A Sparse Representations approach to segmentation of dynamic features in Optical Coherence Tomography imaging. Optics Express. 25(21). Pp. 25819-25830. (2017)
- J32. Yuye Ling, Xinwen Yao, and **Christine P Hendon**. Highly phase-stable 200 kHz swept-source optical coherence tomography based on KTN electro-optic deflector. Biomedical Optics Express. 8(8).pp. 3687-3699 (2017)
- J33. Yuye Ling, Yu Gan, Xinwen Yao, and **Christine P Hendon**. Phase noise analysis on swept-source optical coherence tomography system. Optics Letters. 42(7) 1333-1336. (2017)
- J34. Yuye Ling, Xinwen Yao, Ute T. Gamm, Emilio S. Arteaga-Solis, Charles W. Emala, Michael A. Choma, and **Christine P. Hendon**. Ex vivo visualization of human ciliated epithelium and quantitative analysis of induced flow dynamics by using optical coherence tomography. Lasers in Surgery and Medicine. 49(3) 270–279. (2017) *(Selected as Editor's Choice Paper)*
- J35. Xinwen Yao **, Yu Gan **, Ernest Chang, Hanina Hibshoosh, Sheldon Feldman, and **Christine P Hendon**. Visualization and tissue classification of human breast cancer images using ultrahigh-resolution OCT. Lasers in Surgery and Medicine. 49(3) 258–269. (2017) *(Selected as Feature of the Week on octnews.org)*
- J36. Nathan C Lin, Christine P Hendon, Elizabeth Olson. Paper. Signal competition in optical coherence tomography and its relevance for cochlear vibrometry. The Journal of the Acoustical Society of America. 141 (1), 395 – 405. (2017)
- J37. Dovina Qu, Philip J Chuang, Sagaw Prateepchinda, Priya Balasubramanian, Xinwen Yao, Stephen Doty, Christine P Hendon, and Helen H Lu. Micro- and Ultrastructural Characterization of Age-Related Changes at the Anterior Cruciate Ligament-to-Bone Insertion. ACS Biomaterials Science & Engineering. 3(11), 2806-2814. (2016)
- J38. Wang Yao **, Yu Gan **, Kristin Myers, Joy Vink, Ronald Wapner, and **Christine P. Hendon**. Collagen Fiber Orientation and Dispersion of the Upper Cervix. PLOS One. 11(11): e0166709. (2016) ** denotes equal contribution.
- J39. Yu Gan, David Tsay, Syed Bin Amir, Charles C. Marboe, and **Christine P. Hendon**. Automated classification of optical coherence tomography images of human atrial tissue. Journal of Biomedical Optics. Vol 21 (10), 101407 (2016)
- J40. Xinwen Yao, Yu Gan, Charles C. Marboe, and **Christine P. Hendon**. Myocardial Imaging using Ultrahigh Resolution Spectral Domain Optical Coherence Tomography. Journal of Biomedical Optics. 21(6), 061006 (2016)
- J41. Rajinder P. Singh-Moon, Charles C. Marboe, and **Christine P. Hendon**. A near-infrared spectroscopy integrated catheter for characterization of myocardial tissues: preliminary demonstrations to radiofrequency ablation therapy for atrial fibrillation. Biomedical Optics Express. Vol 6(7) pp. 2494-

2511 (2015)

- J42. Kristin M Myers, Christine P Hendon, Yu Gan, Wang Yao, Joy Vink, and Ronald Wapner. A continuous Fiber Distribution Material Model for Human Cervical Tissue. *Journal of Biomechanics*. 48(9) pp. 1533-1540 (2015).
- J43. Yu Gan, Wang Yao, Kristin M Myers, Joy Y Vink, Ronald J Wapner, and **Christine P Hendon**. Analyzing three-dimensional ultrastructure of human cervical tissue using optical coherence tomography. *Biomedical Optics Express*. 6(4) pp. 1090-1108 (2015).
- J44. Yu Gan and **Christine P Fleming**. Three-dimensional quantification and tractography of fibers in myocardial tissues using optical coherence tomography. *Biomedical Optics Express*. 4(10) pp. 2150-2165 (2013)

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- J45. **Christine P Fleming**, Jocelyn Eckert, Elkin F Halpern, Joseph A Gardecki, and Guillermo J Tearney. Depth resolved detection of lipid using spectroscopic optical coherence tomography. *Biomedical Optics Express*. 4(8) pp. 1269-1284 (2013).
- J46. **Christine P Fleming**, Noah Rosenthal, Andrew M Rollins, Mauricio M Arruda. First in vivo Real-Time Imaging of Endocardial Radiofrequency Ablation by Optical Coherence Tomography: Implications on Safety and The Birth of “Electro-structural” Substrate-Guided Ablation. *Innovations in Cardiac Rhythm Management*. 2: 199-201 (2011)
- J47. **Christine P Fleming**, Kara J Quan, and Andrew M Rollins. Towards Guidance of Epicardial Cardiac Radiofrequency Ablation Therapy using Optical Coherence Tomography. *Journal of Biomedical Optics*. 15(4): 041510 (2010)
- J48. **Christine P Fleming**, Hui Wang, Kara J Quan, and Andrew M Rollins. Real-time Monitoring of Cardiac Radiofrequency Ablation Lesion Formation using an Optical Coherence Tomography Forward Imaging Catheter. *Journal of Biomedical Optics*. 15(3): 030516 (2010) [49 citations]
- J49. **Christine P Fleming**, Kara J Quan, Hui Wang, Guy Amit, and Andrew M Rollins. In vitro characterization of cardiac radiofrequency ablation lesions using optical coherence tomography. *Optics Express* 18(3): 3079–3092 (2010)
- J50. William J Hucker, Crystal M Ripplinger, Christine P. Fleming, Vadim V Fedorov, Andrew M Rollins, and Igor R Efimov. Bimodal biophotonic imaging of the structure-function relationship in cardiac tissue. *Journal of Biomedical Optics*. 13(5): 054012 (2008)
- J51. **Christine P Fleming**, Crystal M Ripplinger, Bryan Webb, Igor R Efimov, and Andrew M Rollins. Quantification of cardiac fiber orientation using Optical Coherence Tomography. *Journal of Biomedical Optics*. 13(3): 030505 (2008)
- J52. Hui Wang, Christine P Fleming, and Andrew M Rollins. Ultrahigh-resolution optical coherence tomography at 1.15 μm using photonic crystal fiber with no zero-dispersion wavelengths. *Optics Express*. 15(6): 3085-3092 (2007)

Book Chapters

- B1. Piao Z, Hendon CP, Bouma BE, Tearney GJ. Emerging Methods to Enhance OCT Imaging: New Frontiers in OCT Imaging. *Book Chapter* for Clinical Atlas of Intravascular Optical Coherence Tomography. PCR Publishing. Radu MD, Raber L, Garcia-Garcia HM, Serrugs PW, eds. (2017)
- B2. **Hendon CP** and Rollins AM. Real-Time Imaging of Microstructure and Function Using Optical Coherence Tomography. Chapter 7 in Handbook of Optical Biomedical Diagnostics, 2nd Edition, V. Tuchin, ed., SPIE, Bellingham, WA (2016)
- B3. **Fleming CP**, Bouma BE, and Tearney GJ. New frontiers in OCT Imaging. *Book Chapter* for Clinical Atlas of Intravascular Optical Coherence Tomography. PCR Publishing. Radu MD, Raber L, Garcia-Garcia HM, Serrugs PW, eds. (2012)

Patents Received and Patents Under Review

- P1. Ji Xingchen, Michal Lipson, Diana Mojahed, Yoshitomo Okawachi, Christine P Hendon, Alexander L Gaeta. Millimeter-Scale Chip-Based Supercontinuum Generation For Optical Coherence Tomography. US Patent App. 17/812,196, 2023
- P2. **Christine Hendon**, Richard Ha, Diana Mojahed, Hanina Hibshoosh, James McLean. System, method, computer-accessible medium, and apparatus facilitating ultra-high resolution optical coherence tomography for automated detection of diseases. US Patent 11,519,713, 2022
- P3. Michal Lipson; Xingchen Ji; Xinwen Yao; Yu Gan; Alexander Gaeta; Christine P. Hendon; Alexander Klenner. Microresonator-Frequency-Comb-Based Platform For Clinical High-Resolution Optical Coherence Tomography. US Patent App. 17/367,884, 2022
- P4. Christine Hendon, Rajinder Singh-Moon, James McLean, Soo Young Park. System, method, computer-accessible and apparatus for providing near-infrared spectroscopy for anatomical mapping of the epicardium. US Patent App. 16/906,429, 2021
- P5. **Hendon CP**, Yao X, and Ling Y. "High Sensitivity Spectral Domain Optical Coherence Tomography." Non-provisional application 62/084,648 filed 11/26/2014. United States Patent Application 20170356734 A1 published 12/14/2017. US10429170B2 published 10/1/2019
- P6. **Hendon CP** and Singh-Moon R. System, Method And Computer-Accessible Medium For Catheter-Based Optical Determination Of Met-Myoglobin Content For Estimating Radiofrequency Ablated, Chronic Lesion Formation In Tissue. 62/217,518 filed 9/11/2015. US 20180303544 published 10/25/2018. US 16/259,014 filed 1/28/2019. US Patent App. 16/259,014, 2019 published 8/1/2019
- P7. **Christine P. Hendon**; Yuye Ling. Compressed Sensing Enabled Swept Source Optical Coherence Tomography Apparatus, Computer-Accessible Medium, System And Method For Use Thereof. US 62/553,472 filed 9/1/2017. US Patent App. 16/120,891, 2019. US 20190069849 published 3/7/2019
- P8. **Hendon, Christine**; Singh-Moon; Rajinder; Yu, Xin. Real-Time Guidance of RadioFrequency Ablation Catheter Contact Orientation with Cardiac Tissue Using Optical Coherence Tomography. 62/738,718 filed 9/28/2018. 62/739,648 filed 10/1/2018.
- P9. Michal Lipson; Aseema Mohanty; Mohammad Amin Tadayon; Qian Li; Xingchen Ji; Christine P. Hendon; Xinwen Yao. Thermally Tunable Low Loss Broadband Waveguides and Related Systems and Methods. PCT/US18/15265 filed 1/25/2018. WO/2018/140615 published 8/2/2018

- P10. Rollins AM and Fleming CP. "Characterizing ablation lesions using optical coherence tomography." US Patent 2011/0028967 A1. Filed July 31, 2009, Published February 3, 2011, Patent No: US 9,089,331 B2 Issued July 28, 2015. US 15884604 6/7/2018
- P11. **Fleming CP**, Gardecki JA, Bouma BE, and Tearney GJ. "Apparatus, systems, methods and computer-accessible medium for spectral analysis of optical coherence tomography images." priority date 5/25/2010. US Patent 2011/0292400 A1. Filed October 25, 2010, Published December 1, 2011. Patent No: US9795301B2 Issued 10/24/2017.
- P12. Richard Ha; Peter D. Chang; Christine P. Hendon. Deep Machine Learning For Computer Aided Identification Of Breast Cancer Margins And Core Biopsy Diagnosis Within Optical Images. File Patent Application 9/25/17
- P13. **Hendon CP, Singh-Moon R**. "System, Method and Computer-Accessible Medium for Characterization of Tissue." US Patent PCT/US2014/60261. Filed October 13, 2014. EP 3054842 published 8/17/2016. US 20160235303 published 8/18/2016

2. Conference Papers and Proceedings

- C1. Kaveri A Thakoor, Ari Carter, Ge Song, Adam Wax, Omar Moussa, Royce WS Chen, Christine Hendon, Paul Sajda. Enhancing Portable OCT Image Quality via GANs for AI-Based Eye Disease Detection. Medical Image Computing and Computer Assisted Intervention – MICCAI 2022. Lecture Notes in Computer Science, vol 13573. Springer, Cham. (2022)
- C2. Ziyi Huang, Xiaowei Zhao, Ohad Zvi, Kenneth Laurita, Andrew Rollins, **Christine Hendon**. Automated Classification of In Vivo Catheter based Optical Coherence Tomography Images of Left Atrial Tissue. Optica Biophotonics; Optical Coherence Tomography. Pp CW1E. 2 (2022)
- C3. Haiqiu Yang, Soo-Young Park, Ohad Ziv, Kenneth Laurita, Andrew M Rollins, **Christine P Hendon**. Lesion gap assessment in left atrium by spectroscopic anatomical mapping with optically integrated catheter. Optica Biophotonics; Clinical and Translational Biophotonics. Pp TTu4B. 4 (2022)
- C4. Ziyi Huang, Yu Gan, Theresa Lye, Haofeng Zhang, Andrew Laine, Elsa D Angelini, **Christine Hendon**. *Heterogeneity Measurement of Cardiac Tissues Leveraging Uncertainty Information from Image Segmentation*. Medical Image Computing and Computer Assisted Intervention – MICCAI 2020. Lecture Notes in Computer Science, vol 12261. 782-791 (2020)
- C5. Ziyi Huang, Yu Gan, Theresa Lye, Darnel Theagene, Spandana Chintapalli, Simeran Viridi, Andrew Laine, Elsa Angelini, **Christine P. Hendon**. Segmentation and uncertainty measures of cardiac tissues on optical coherence tomography via convolutional neural networks. IEEE International Symposium on Biomedical Imaging, ISBI (2020)
- C6. James P McLean, Shuyang Fang, Kristin M Myers, **Christine P Hendon**. Quantitative three-dimensional visualization of the human uterus collagen fiber architecture using SD-OCT imaging. OSA biophotonics; Optical Coherence Tomography. Pp OW2E. 3 (2020)
- C7. Soo-Young Park, Rajinder P Singh-Moon, **Christine Hendon**. Real-time single fiber based multispectral monitoring of cardiac ablation therapy. OSA Biophotonics: Optical Tomography and Spectroscopy. pp SM2D. 5 (2020)
- C8. Rajinder P Singh-Moon, Soo Young Park, Haiqiu Yang, **Christine P Hendon**. Endocardial Mapping of Lesion Delivery to the Human Left Atrium using Near Infrared Spectroscopy. OSA Biophotonics: Clinical and Translational Biophotonics. pp JW3A. 19 (2020)
- C9. Diana Mojahed, Theresa Lye, Rohan Bareja, Hanina Hibshoosh, **Christine Hendon**. Ensemble deep learning

for breast cancer segmentation in optical coherence tomography (OCT) images. OSA Biophotonics: Clinical and Translational Biophotonics. pp TM4B. 3 (2020)

- C10. Yu Gan, Jie Yang, Benjamin Smith, Pallavi Balte, Eric Hoffman, Christine Hendon, R. Graham Barr, Andrew F. Laine, Elsa D. Angelini. Enhanced generative model for unsupervised discovery of spatially-informed macroscopic emphysema: the MESA COPD Study. IEEE International Symposium on Biomedical Imaging, ISBI (2019)
- C11. Diana Mojahed, Yu Gan, Peter Chang, Xinwen Yao, Hanina Hibshoosh, Richard Ha, **Christine Hendon**. Convolutional neural network (CNN) classification of breast cancer in optical coherence tomography (OCT) images. Proceedings Volume 10867, Optical Coherence Tomography and Coherence Domain Optical Methods in Biomedicine XXIII; 108671N (2019)
- C12. NC Lin, CE Strimbu, CP Hendon, ES Olson. Adapting a commercial spectral domain optical coherence tomography system for time-locked displacement and physiological measurements. AIP Conference Proceedings. Vol 1965. pp 080004 (2018)
- C13. X Ji, A Klenner, X Yao, Y Gan, AL Gaeta, CP Hendon, M Lipson. Chip-Based Frequency Combs for High-Resolution Optical Coherence Tomography. CLEO: Science and Innovations, pp. STh1J. 4 (2018)
- C14. Rajinder P Singh-Moon, Xinwen Yao, Mohammad Zaryab, Vivek Iyer, **Christine P Hendon**. Dual-modality Optical Spectroscopy and Optical Coherence Tomography Ablation Catheter for Intraoperative Assessment of Cardiac Lesion Development. OSA BIOMED. Optical Tomography and Spectroscopy. pp. OTh2D. 4 (2018)
- C15. Yuye Ling, James P McLean, **Christine P Hendon**. Data Compression of Time-lapse Optical Coherence Tomography Images Based On Low-rank Plus Sparse Reconstruction. OSA BIOMED. Optical Tomography and Spectroscopy. pp. JW3A. 35. (2018)
- C16. James P McLean, Dovina Qu, Helen Lu, **Christine P Hendon**. Automatic measurement of crimped collagen fiber insertion angle in Optical Coherence Tomography images of the Anterior Cruciate Ligament. OSA BIOMED. Optical Tomography and Spectroscopy. pp. OF3D. 2 (2018)
- C17. Rhiana N. Rivas; Theresa H. Lye; **Christine P. Hendon**. Impact of radiofrequency ablation geometry on electrical conduction. Proceedings Volume 10471, Diagnostic and Therapeutic Applications of Light in Cardiology 2018; 104710Q (2018)
- C18. James P McLean, Yuye Ling, **Christine Hendon**. A temporal-frequency variant on robust-principle component analysis for segmentation of motile cilia in optical coherence tomography images. SPIE Medical Imaging 2018: Image Processing
- C19. Yu Gan, Theresa Lye, Xinwen Yao, Charles Marboe, and **Christine Hendon**. Characterization of Human Endomyocardium Using a Human Cardiac Optical Coherence Tomography Atlas. Biophotonics Congress: Biomedical Optics Congress 2018 (Microscopy/Translational/Brain/OTS) OSA Technical Digest (Optical Society of America, 2018), paper OTh2D.6
- C20. Xingchen Ji, Xinwen Yao, Mohammad A. Tadayon, Aseema Mohanty, Christine P. Hendon, and Michal Lipson. High Confinement and Low Loss Si₃N₄ Waveguides for Miniaturizing Optical Coherence Tomography. CLEO Conference Proceedings: Science and Innovations, SM3C. 4 (2017)
- C21. Priya S. Balasubramanian, Jiaqi Guo, Xinwen Yao, Dovina Qu, Helen H. Lu, and **Christine P. Hendon**.

Automated Fiber Tracking and Tissue Characterization of the Anterior Cruciate Ligament with Optical Coherence Tomography. Proceedings of *SPIE Photonics West BiOS*. International Society for Optics and Photonics. Vol (10067) 1006719-1 (2017).

- C22. Yu Gan, Xinwen Yao, David Tsay, Charles C. Marboe, **Christine P. Hendon**. Characterization of ventricular endomyocardial tissue using Optical Coherence Tomography Proceedings of *SPIE Photonics West BiOS*. International Society for Optics and Photonics. Vol (10042) 1004207 (2017).
- C23. Theresa H. Lye, Yu Gan, **Christine P. Hendon**. Mapping the human atria with optical coherence tomography. Proceedings of *SPIE Photonics West BiOS*. International Society for Optics and Photonics Vol (10042) 1004203 (2017).
- C24. Mohammad Zaryab, Rajinder P. Singh-Moon, **Christine P. Hendon**. Robust classification of contact orientation between tissue and an integrated spectroscopy and radiofrequency ablation catheter. Proceedings of *SPIE Photonics West BiOS*. International Society for Optics and Photonics Vol (10042) 1004200 (2017).
- C25. Yu Gan, Xinwen Yao, Ernest Chang, Syed Bin Amir, Hanina Hibshoosh, Sheldon Feldman, **Christine P. Hendon**. Comparative study of texture features in OCT images at different scales for human breast tissue classification. Proceedings of IEEE Engineering in Medicine and Biology. pp. 3926 - 3929 (2016)
- C26. Lye T, Vincent K, McCulloch A, and **Hendon CP**. Normal and Radiofrequency Ablated Atrial Models Enabled by Optical Coherence Tomography Tissue Characterization. *Biomedical Optics 2016*, OSA Technical Digest. Optical Society of America, OTh2B.3. (2016)
- C27. Gan Y, Gutbrod SR, Efimov IR, and **Hendon CP**. Towards Geometric Modeling of the Atria using Optical Coherence Tomography. *Biomedical Optics 2016*, OSA Technical Digest. Optical Society of America, JM3A. 26 (2016)
- C28. Singh-Moon RP, Yao X, Marboe CC, and **Hendon CP**. Optical spectroscopy facilitated characterization of acute atrial lesions. *Biomedical Optics 2016*, OSA Technical Digest. Optical Society of America, JTu3A. 39 (2016)
- C29. Yao X, Chang E, Hibshoosh H, Feldman S, and **Hendon CP**. Towards in vivo high-resolution OCT based ductal imaging. *Biomedical Optics 2016*, OSA Technical Digest. Optical Society of America, JTu3A. 33 (2016)
- C30. Meiniel W, Gan Y, Hendon CP, Olivo-Marin JC, Laine A, and Angelini E. A Sparsity-Based Image Simplification Method for Spectral Domain Optical Coherence Tomography. Proceedings of IEEE international symposium on biomedical imaging. pp. 373-376 (2016)
- C31. Singh-Moon RP and **Hendon CP**. Towards optical monitoring of radiofrequency ablation extent for atrial fibrillation. Proceedings of IEEE international symposium on biomedical imaging. pp.751-755 (2015)
- C32. Gan Y, Angelini E, Laine A, and **Hendon CP**. BM3D-Based ultrasound image denoising via brushlet thresholding. Proceedings of IEEE international symposium on biomedical imaging. pp. 667-670 (2015)
- C33. Singh-Moon RP and **Hendon CP**. Cardiac tissue characterization using near-infrared spectroscopy. Proceedings of *SPIE BiOS*. International Society for Optics and Photonics, Vol 8926, pp. 89263N (2014).
- C34. Gan Y, Yao W, Myers KM, and **Hendon CP**. An automated 3D registration method for optical coherence

tomography volumes. Proceedings of IEEE Engineering in Medicine and Biology, 3873-3876 (2014).

Conference Abstracts and Presentations

- A1. Haiqiu Yang, Michael Douglass, Deepak Saluja, Kenneth Laurita, Andrew Rollins, **Christine P Hendon**. Multi-modal imaging system with optically integrated probe for left atrial anatomical mapping. SPIE Photonics West, BiOS. Diagnostic and Therapeutic Applications of Light in Cardiology 2023
- A2. Jingpeng Hu, Aidan M Therien, Kristin M Myers, **Christine Hendon**. Full-thickness fiber orientation mapping of the human uterus. SPIE Photonics West, BiOS. Three-Dimensional and Multidimensional Microscopy: Image Acquisition and Processing XXX
- A3. Michael Douglass, Juan Perez, Lydia Akino, Haiqiu Yang, Walter J Hoyt, Ohad Ziv, Kenneth R Laurita, Christine Hendon, Andrew M Rollins. Polarization-Sensitive Optical Coherence Tomography (PSOCT) for identifying and analyzing gaps in lesion lines during ex vivo simulated radiofrequency ablation procedure. SPIE Photonics West, BiOS. Diagnostic and Therapeutic Applications of Light in Cardiology 2023
- A4. Diego M Song Cho, **Christine P Hendon**. Overall performance of compressed sensing of human breast OCT data using a predictive coding algorithm. SPIE Photonics West, BiOS. Optical Coherence Tomography and Coherence Domain Optical Methods in Biomedicine XXVII
- A5. Margherita Firenze, Yunhe Liu, Diana Mojahed, Nisha Gandhi, Hanina Hibshoosh, Richard Ha, Christine P Hendon. Optical coherence tomography texture analysis and classification of breast biopsies. SPIE Photonics West, BiOS. Advanced Biomedical and Clinical Diagnostic and Surgical Guidance Systems XXI
- A6. Arielle Joasil, Haiqiu Yang, Hanina Hibshoosh, **Christine P Hendon**. Optical coherence tomography enabled tissue architecture characterization of uterine tumors. SPIE Photonics West, BiOS. Advanced Biomedical and Clinical Diagnostic and Surgical Guidance Systems XXI (2023)
- A7. Nisha Gandhi, Diana Mojahed, Margherita Firenze, Hua Guo, Hanina Hibshoosh, Richard Ha, **Christine Hendon**. Deep learning to identify breast disease in an 87-patient clinical study of breast core biopsies to provide rapid biopsy evaluation. SPIE Photonics West, BiOS. Advanced Biomedical and Clinical Diagnostic and Surgical Guidance Systems XX (2022)
- A8. Diego Song, **Christine P Hendon**. Compressed sensing of human breast optical coherence 3-D image volume data using predictive coding. SPIE Photonics West, BiOS. Optical Coherence Tomography and Coherence Domain Optical Methods in Biomedicine XXVI (2022)
- A9. Diana Mojahed, Matthew B Applegate, Hua Guo, Richard Ha, Hanina Hibshoosh, **Christine Hendon**. Real-time histology evaluation by optical coherence tomography (OCT) holds promise to improve the diagnostic anatomic pathology gross evaluation process. SPIE Photonics West, BiOS. Optical Coherence Tomography and Coherence Domain Optical Methods in Biomedicine XXVI (2022)
- A10. Tirthraj Patel, Yiyi Chen, **Christine P Hendon**. Characterizing 3D and 2D fiber orientation architecture within OCT image sets of the human left atrium. SPIE Photonics West, BiOS. Diagnostic and Therapeutic Applications of Light in Cardiology 2022
- A11. Soo Young Park, Haiqiu Yang, Charles C Marboe, Ohad Ziv, Kenneth Laurita, Andrew M Rollins, Deepak Saluja, **Christine P Hendon**. Cardiac endocardial left atrial substrate mapping and lesion depth assessment using near-infrared spectroscopy. SPIE Photonics West, BiOS. Diagnostic and Therapeutic Applications of Light in Cardiology 2022
- A12. Xiaowei Zhao, Ohad Ziv, Michael Douglass, Walter J Hoyt, Michael W Jenkins, Christopher Snyder, Christine P Hendon, Kenneth Laurita, Andrew M Rollins. Cardiac tissue substrate mapping with polarization-sensitive optical coherence tomography. SPIE Photonics West, BiOS. Diagnostic and Therapeutic Applications of Light in Cardiology 2022
- A13. Diana Mojahed, Rohan Bareja, Theresa Lye, Richard Ha, Hanina Hibshoosh, **Christine Hendon**. Generalizable convolutional neural network (CNN) classification of breast cancer using images from two optical coherence tomography (OCT) systems. SPIE BiOS March 2021

- A14. Isaac C Donis, James P McLean, **Christine P Hendon**. Visualizing the full depth of the human uterine wall through three-dimensional mosaic Optical Coherence Tomography. SPIE BiOS March 2021
- A15. Soo Young Park, Haiqiu Yang, Rajinder Singh-Moon, Deepak Saluja, **Christine Hendon**. Irrigated cardiac endocardial lesion assessment using single fiber-multispectral spectroscopy and neural networks. SPIE BiOS March 2021
- A16. Soo Young Park, Rajinder Singh-Moon, Haiqiu Yang, Deepak Saluja, **Christine Hendon**. Spectroscopic anatomical mapping of left atrium endocardial substrate and lesion using an optically integrated mapping catheter. SPIE BiOS March 2021
- A17. Ziyi Huang, Yu Gan, Theresa Lye, Y Liu, Andrew Laine, Elsa Angelini, **Christine Hendon**. Automated adipose segmentation within cardiac optical coherence tomography images. SPIE BiOS March 2021
- A18. Soo Young Park, Rajinder Singh-Moon, Haiqiu Yang, Vivek Iyer, Deepak Saluja, **Christine Hendon**. In-vivo demonstration of irrigated lesion morphology using near-infrared spectroscopy and artificial neural networks. SPIE BiOS March 2021
- A19. Soo Young Park, Rajinder Singh-Moon, **Christine P. Hendon**. Real-time single fiber based multispectral monitoring of cardiac ablation therapy. OSA BIOMED Congress April 2020
- A20. Diana Mojahed, Theresa Lye, Rohan Bareja, Hanina Hibshoosh, **Christine P. Hendon**. Ensemble deep learning for breast cancer segmentation in optical coherence tomography (OCT) Images. OSA BIOMED Congress April 2020
- A21. James P. McLean, Shuyang Fang, Kristin M. Myers, **Christine P. Hendon**. Quantitative three-dimensional visualization of the human uterus collagen fiber architecture using SD-OCT imaging. OSA BIOMED Congress April 2020
- A22. Ziyi Huang, Yu Gan, Theresa Lye, **Christine P. Hendon**. Cardiac optical coherence tomography image restoration. SPIE BiOS January 2020
- A23. Rohan Bareja, Diana Mojahed, **Christine P. Hendon**. Deep learning for classification of breast cancer in optical coherence tomography (OCT) imaging. SPIE BiOS January 2020
- A24. James P. McLean, Shuyang Fang, Kristin M. Myers, **Christine P. Hendon**. Quantitative three-dimensional collagen fiber modeling from spectral domain optical coherence tomography (OCT) images, SPIE BiOS January 2020
- A25. Theresa H. Lye, Darnel Theagene, Charles C. Marboe, **Christine P. Hendon**. Quantifying differences in cardiac tissue structure related to patient characteristics using an optical coherence tomography cardiac tissue atlas. SPIE BiOS January 2020
- A26. Soo Young Park, Rajinder P. Singh-Moon, **Christine P. Hendon**. Real-time fiber-bundle based multispectral imaging of cardiac tissue structure and monitoring of radiofrequency ablation therapy. SPIE BiOS January 2020
- A27. Ziyi Huang, Yu Gan, Theresa H. Lye, Darnel Theagene, Simeran Viridi, Spandana Chintapalli, Andrew Laine, Elsa Angelini, **Christine P. Hendon**. Segmentation of cardiac tissues on optical coherence tomography via convolutional neural networks. SPIE BiOS January 2020

- A28. Rajinder P. Singh-Moon, Diego Song Cho, Agastya Vaidya, Charles C. Marboe, Elaine Y. Wan, **Christine P. Hendon**. Rapid optical spectroscopic quantification and mapping of human epicardial adipose tissue and lesion deposition. SPIE BiOS January 2020
- A29. Diana Mojahed, Matthew B. Applegate, Richard Ha, Hanina Hibshoosh, **Christine P. Hendon**. Ultrahigh-speed, high-resolution, large-area optical coherence tomography (OCT) imaging for rapid evaluation of breast cancer surgical specimens. SPIE BiOS January 2020
- A30. Shuyang Fang, James McLean, Christine P. Hendon, Joy Vink, Kristin M. Myers. fiber orientation and structure characterization of pregnant and nonpregnant human uterus. Summer Biomechanics, Bioengineering and Biotransport Conference. 2019.
- A31. James P. McLean, Yuye Ling, **Christine P. Hendon**. Compressed sensing OCT for real-time collagen fiber orientation quantification and analysis. SPIE BiOS January 2019
- A32. Soo Young Park, Rajinder Singh-Moon, **Christine P. Hendon**. Towards real-time multispectral imaging of tissue differentiation for cardiac ablation therapy. SPIE BiOS January 2019
- A33. Rajinder P. Singh-Moon, **Christine P Hendon**. Rapid phase function parameter assessment of radiofrequency ablated cardiac tissue: towards characterization of irreversible injury. SPIE BiOS January 2019
- A34. Diana Mojahed, Yu Gan, Peter Chang, Xinwen Yao, Hanina Hibshoosh, Richard Ha, **Christine P. Hendon**. A-line based convolutional neural network (CNN) classification of breast cancer in optical coherence tomography (OCT) images. SPIE BiOS January 2019
- A35. Yu Gan, Theresa H. Lye, Xinwen Yao, Charles Marboe, **Christine P. Hendon**. Cardiac optical coherence tomography atlas. SPIE BiOS January 2019
- A36. Theresa H. Lye, Yu Gan, Kevin P. Vincent, Andrew D. McCulloch, **Christine P. Hendon**. Comprehensive mapping and modeling of the human left atrium with optical coherence tomography. SPIE BiOS January 2019
- A37. Rajinder P. Singh-Moon, Diego M. Su Song Cho, **Christine P. Hendon**. Spectroscopic anatomical mapping of epicardial substrate and lesion delivery using an optically integrated radiofrequency ablation catheter. SPIE BiOS January 2019
- A38. Xin Yu, Rajinder P. Singh-Moon, **Christine P. Hendon**. Real-time guidance of radiofrequency ablation catheter contact orientation with cardiac tissue using optical coherence tomography. SPIE BiOS January 2019
- A39. Agastya Vaidya, Rajinder Singh-Moon, and **Christine P Hendon**. Using 3D Models to Visualize Spectroscopic Data. Biomedical Engineering Society Conference. October 2018
- A40. Xinwen Yao, Yu Gan, Yuye Ling, Charles C. Marboe, **Christine P. Hendon**. Functional endomyocardial imaging by single-channel high resolution cross-polarization OCT. SPIE BiOS. 28 January 2018
- A41. Theresa H. Lye, Kevin P. Vincent, Andrew D. McCulloch, **Christine P. Hendon**. Optical mapping models of human atria including heterogeneous tissue types as informed by optical coherence tomography. SPIE BiOS. 28 January 2018

- A42. Nathan C. Lin, Elika Fallah, Clark E. Strimbu, **Christine P. Hendon**, Elizabeth S. Olson. Customizing a commercial spectral domain optical coherence tomography system for standard free-space and fiber optic probe intracochlear measurements. SPIE BiOS. 28 January 2018
- A43. Rhiana N. Rivas, Theresa H. Lye, **Christine P. Hendon**. Impact of radiofrequency ablation geometry on electrical conduction. SPIE BiOS . 28 January 2018
- A44. Soo Young Park, Rajinder P. Singh-Moon, **Christine P. Hendon**. Towards multispectral endoscopic imaging of cardiac lesion assessment and classification for cardiac ablation therapy. SPIE BiOS. 28 January 2018
- A45. Rajinder P. Singh-Moon, Vivek Iyer M.D., **Christine P. Hendon**. Multi-chamber, multivariate model for online evaluation of lesion depth in cardiac tissue using optical spectroscopy. SPIE BiOS . 28 January 2018
- A46. Yu Gan, Wang Yao, Kristin M. Myers, Joy-Sarah Y. Vink, Ronald J. Wapner, **Christine P. Hendon**. Heterogeneity study of the human cervix between the internal os and the external os using optical coherence tomography. SPIE BiOS . 28 January 2018
- A47. Yuye Ling, William Meiniel, Jean-Christophe Olivo-Marin, Elsa D. Angelini, **Christine P. Hendon**. Implementation and demonstration of compressed sensing enabled phase-resolved swept-source optical coherence tomography. SPIE BiOS. 28 January 2018
- A48. Theresa H. Lye, **Christine P. Hendon**. Mapping the human left atrium and pulmonary veins with optical coherence tomography. SPIE BiOS. 29 January 2018
- A49. Rajinder P. Singh-Moon, Xinwen Yao, Mohammad Zaryab, Vivek Iyer M.D., **Christine P. Hendon**. Intraoperative, multimodal guidance of cardiac ablation therapy using an optical coherence tomography and optical spectroscopy (OCT-OS) integrated ablation catheter. SPIE BiOS. 29 January 2018
- A50. Victoria L. Mango, Lauren C. Friedlander, Hanina Hibshoosh, Soojin Ahn, Margarete Akens, Hank Schmidt, Sheldon Feldman, MaryAnn Fitzmaurice, **Christine Hendon**, Brian C. Wilson, Richard Ha. Optical Coherence Tomography (OCT): A Novel Imaging Method for Ex-Vivo Breast Specimens-A Reader Feasibility Study. Radiological Society of North America Annual Meeting. Chicago, IL. November 2017
- A51. Yu Gan, Xinwen Yao, David Tsay, Charles C. Marboe. **Christine P. Hendon**. Characterization of ventricular endomyocardial tissue using optical coherence tomography. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A52. Yuye Ling, **Christine P. Hendon**. Investigating mechanically induced phase response of the tissue by using high-speed phase-resolved optical coherence tomography. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A53. Mohammad Zaryab, Rajinder P. Singh-Moon, **Christine P. Hendon**. Robust classification of contact orientation between tissue and spectroscopic RF catheter. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A54. Rajinder P. Singh-Moon, Mohammad Zaryab, **Christine P. Hendon**. Towards optical spectroscopic anatomical mapping for lesion validation in cardiac tissue. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A55. Rajinder P. Singh-Moon, **Christine P. Hendon**. Lesion transmural assessment using multi-fiber diffuse reflectance. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation

- A56. Theresa H. Lye, Yu Gan, **Christine P. Hendon**. Mapping the human atria with optical coherence tomography. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A57. Yu Gan, Xinwen Yao, Ernest W. Chang, Syed A. Bin Amir, Hanina Hibshoosh, Sheldon Feldman, **Christine P. Hendon**. Automated adipose map generation for assessing cancerous human breast tissue using optical coherence tomography. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A58. Xinwen Yao, Yu Gan, Ernest W. Chang, Hanina Hibshoosh, Sheldon Feldman, **Christine P. Hendon**. Visualization and tissue classification of human breast cancer images using ultrahigh-resolution OCT. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A59. Priya S. Balasubramanian, Jiaqi Guo, Dovina Qu, Helen H. Lu, **Christine P. Hendon**. Automated fiber tracking in the anterior cruciate ligament. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Poster Presentation
- A60. Theresa H. Lye, Kevin P. Vincent, Andrew D. McCulloch, **Christine P. Hendon**. Optical mapping models of heterogeneous atria tissue informed by optical coherence tomography. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A61. Yu Gan, Wang Yao, Kristin M. Myers, Joy-Sarah Y. Vink, Ronald J. Wapner, **Christine P. Hendon**. Depth analysis of collagen directionality on axial human uterine cervical tissue using optical coherence tomography. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A62. Yuye Ling, Ute A. Gamm, Xinwen Yao, Emilio Arteaga-Solis, Charles W. Emala, Michael A. Choma, **Christine P. Hendon**. Visualization of ex vivo human ciliated epithelium and induced flow using optical coherence tomography. February 2017. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A63. Ling Y and **Hendon CP**. Functional cardiac imaging platform by using ultrahigh phase stable swept source optical coherence tomography. February 2016. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A64. Lye TH, McCulloch AD, and **Hendon CP**. Optical mapping models of the atria enabled by OCT tissue characterization. February 2016. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A65. Singh-Moon RP and **Hendon CP**. Real-time optical monitoring of permanent lesion progression during RF ablation: implications for treatment of atrial fibrillation. February 2016. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A66. Yao X, Marboe CC, and **Hendon CP**. Endomyocardial imaging using ultrahigh resolution spectral domain optical coherence tomography (SD-OCT). February 2016. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A67. Gan Y, Tsay D, Amir SB, Marboe CC, and **Hendon CP**. Automated tissue classification of intracardiac optical coherence tomography images. February 2016. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A68. Gan Y, Yao W, Myers KM, Vink JY, Wapner RJ, and **Hendon CP**. Dispersion analysis of collagen fiber networks in cervical tissue using optical coherence tomography. February 2016. SPIE Photonics West BiOS.

San Francisco, CA. Platform Presentation

- A69. Lye T and **Hendon CP**. Atria models enabled by OCT tissue characterization. October 2015. BMES. Tampa, FL. Poster Presentation.
- A70. Gan Y, Tsay D, Fung C, Marboe C, and **Hendon CP**. Automated three dimensional segmentation of atrial optical coherence tomography images. October 2016. BMES. Tampa, FL. Poster Presentation
- A71. Singh-Moon RP and **Hendon CP**. Catheter-based optical determination of met-myoglobin content for estimating radiofrequency ablated, chronic lesion formation in atrial tissue. September 2016. SPIE/NIH Biophotonics from Bench to Bedside Workshop. Bethesda, MD. Poster Presentation
- A72. Gan Y, Tsay D, Amir SB, Marboe CC, and **Hendon CP**. Towards the automated classification of endomyocardial tissues for intracardiac OCT. September 2016. SPIE/NIH Biophotonics from Bench to Bedside Workshop. Bethesda, MD. Poster Presentation
- A73. Yao X, Marboe CC, and **Hendon CP**. Ultrahigh resolution myocardial imaging using spectral domain (SD) OCT system with low-noise supercontinuum light source. September 2016. SPIE/NIH Biophotonics from Bench to Bedside Workshop. Bethesda, MD. Poster Presentation
- A74. Yao W, Gan Y, **Hendon CP**, Vink J, Wapner RJ, and Myers KM. The collagen directionality and dispersion and mechanical indentation response in nonpregnant human cervical tissue. June 2015. Summer Biomechanics, Bioengineering and Biotransport Conference. Snobird Resort, UT. Platform Presentation
- A75. Ling Y, Yao X and **Hendon CP**. Nonlinear amplification and detection for swept-source optical coherence tomography. June 2015. OSA/SPIE European Conference on Biomedical Optics. Munich, Germany. Poster Presentation
- A76. Singh-Moon RP and **Hendon CP**. An optically-integrated ablation catheter for lesion verification in pulmonary vein isolation. May 2015. Heart Rhythm Society Annual Scientific Sessions. Boston, MA. Poster Presentation
- A77. Gan Y, Angelini E, Laine AF, and **Hendon CP**. BM3D-Based Ultrasound Image Denoising via Brushlet Thresholding. April 2015. International Symposium on Biomedical Engineering. Brooklyn, NY. Poster Presentation
- A78. Lin N, **Hendon CP**, and Olson E. Phase corruption in heterodyne interferometer and spectral domain optical coherence tomography signals. April 2015. International Symposium on Biomedical Engineering. Brooklyn, NY. Poster Presentation
- A79. Singh-Moon R and **Hendon CP**. Towards optical monitoring of radiofrequency ablation extent for atrial fibrillation. April 2015. International Symposium on Biomedical Engineering (ISBI). Brooklyn, NY. Platform Presentation
- A80. Gan Y, Tsay D, Amir SB, Marboe CC, and **Hendon CP**. Automated myocardial characterization using optical coherence tomography. February 2015. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation
- A81. Yao Xinwen and **Hendon CP**. Towards mapping the human Purkinje fiber network using high-resolution OCT. February 2015. SPIE Photonics West BiOS. San Francisco, CA. Platform Presentation

- A82. Gan Y, Yao W, Myers KM, Vink JY, Wapner RJ, and **Hendon CP**. Three-dimensional ultrastructure study of cervical collagen fibers using optical coherence tomography. February 2015. SPIE Photonics West BIOS. San Francisco, CA. Platform Presentation
- A83. Singh-Moon RP and **Hendon CP**. Near-infrared spectroscopic device for lesion depth assessment in myocardial tissue. February 2015. SPIE Photonics West BIOS. San Francisco, CA. Platform Presentation
- A84. Bin Amir S, Gan Y, Balci FL, Hibshoosh H, Feldman S, and **Hendon CP**. Towards characterization of ductal carcinoma in situ using optical coherence tomography. February 2015. SPIE Photonics West BIOS. San Francisco, CA. Poster Presentation
- A85. Lye T, Iyer V, and **Hendon CP**. Classification of Atrial Fibrillation and Sinus Rhythm with a Gaussian Mixture Model. Biomedical Engineering Society. October 2014. San Antonio, TX. Poster Presentation
- A86. Tsay D, Gan Y, Marboe C, and **Hendon CP**. Feasibility of Endomyocardial Imaging Using Optical Coherence Tomography For the Diagnosis of Myocardial Disease. TCT. September 2014. Washington DC. Poster Presentation
- A87. Gan Y, Yao W, Myers K, and **Hendon CP**. An Automated 3D Registration Method for Optical Coherence Tomography Volumes. IEEE Engineering in Medicine and Biology. Chicago, IL. August 2014. Platform Presentation.
- A88. Myers K, Vink J, Yao F, Gan Y, **Hendon C**, Yoshida K, Fernandez M, Zork N, and Wapner R. The Constitutive Modeling of Human Cervical Tissue. July 2014. World Congress on Biomechanics. Boston, MA. Invited Platform Presentation
- A89. Singh-Moon RP, Zhao Y, and **Hendon CP**. Cardiac tissue characterization using near-infrared spectroscopy. February 2 2014. SPIE Photonics West BIOS. San Francisco, CA. Poster Presentation
- A90. Gan Y and **Hendon CP**. Three-dimensional quantification of Myofiber orientation and tractography using optical coherence tomography. February 1 2014. SPIE Photonics West BIOS. San Francisco, CA. Platform Presentation
- A91. Gan Y and **Fleming CP**. Quantification of 3D Fiber Orientation for Myocardial Tissues Using Optical Coherence Tomography. Biomedical Engineering Society. September 2013. Seattle, WA. Platform Presentation
- A92. **Fleming CP**, Gardecki JA, Eckert J, Tanaka A, Haskell MW, Wiesz G, Bouma BE, Tearney GJ. Intravascular spectroscopic optical coherence tomography for automated detection of lipid. SPIE Photonics West BIOS. February 2013. San Francisco, CA. Platform Presentation.
- A93. Chu KK, Liu L, Houser G, Dierksen G, Wilsterman E, **Fleming CP**, Diephuis BJ, Rowe SM, Tearney GJ. High throughput screening of primary airway epithelial cells in culture using μ OCT. SPIE Photonics West BIOS. February 2013. San Francisco, CA. Platform Presentation.
- A94. Diephuis BJ, **Fleming CP**, Liu L, Rowe SM, Tearney GJ. Automated micro-optical coherence tomography image processing for cystic fibrosis. SPIE Photonics West BIOS. February 2013. San Francisco, CA. Platform Presentation.
- A95. **Fleming CP**, Tanaka A, Gardecki JA, Maurovich-Horvat P, Warger II WC, Eckert JE, Hoffmann U, Bouma BE, and Tearney GJ. Automated algorithm for classification of atherosclerotic plaques using depth-resolved

spectral analysis of optical frequency-domain imaging datasets. SPIE Photonics West BiOS. January 2012. San Francisco, CA. Platform Presentation

- A96. **Fleming CP**, Tanaka A, Gardecki JA, Maurovich-Horvat P, Warger II WC, Eckert JE, Hoffmann U, Bouma BE, and Tearney GJ. Classification of Atherosclerotic Plaques using Depth Resolved Spectral Analysis of Optical Frequency Domain Imaging Datasets. Transcatheter and Therapeutics (TCT) Conference. November 2011. San Francisco, CA. Poster Presentation
- A97. **Fleming CP**, Gardecki JA, Wang H, Bouma BE, Tearney GJ. Near-infrared spectroscopy and optical frequency domain imaging for intravascular tissue characterization. SPIE Photonics West BiOS. January 2011. San Francisco, CA. Platform Presentation
- A98. Wang H, Kang W, **Fleming CP**, MacLennan G, Zhu H, Rollins AM. Multiple-functional endoscopic OCT for bladder and ureter. SPIE Photonics West BiOS. January 2011. San Francisco, CA. Platform Presentation
- A99. Wang H, Gardecki JA, **Fleming CP**, Bouma BE, Tearney GJ. Combination of Raman spectroscopy and optical frequency domain imaging for coronary atherosclerosis SPIE Photonics West BiOS. January 2011. San Francisco, CA. Platform Presentation
- A100. **Fleming CP**, Quan KJ, Wang H, Rosenthal N, Arruda M, and Rollins AM. Optical Coherence Tomography for Image Guided Radiofrequency Ablation. Gordon Conference on Lasers in Medicine and Biology. Holderness, NH. July 2010. Poster Presentation
- A101. **Fleming CP**, Wang H, Quan KJ, and Rollins AM. Optical coherence tomography forward imaging catheter for real-time monitoring of cardiac radiofrequency ablation lesion formation. SPIE Photonics West BiOS. January 2010. San Francisco, CA. Platform Presentation
- A102. **Fleming CP**, Quan KJ, Wang H, Arruda M, and Rollins AM. Monitoring and guidance of cardiac radiofrequency ablation using optical coherence tomography. SPIE Photonics West BiOS. January 2010. San Francisco, CA. Platform Presentation
- A103. Anwer R, **Fleming CP**, Krebs M, Alsberg E, and Rollins AM. Image Analysis Algorithm for Calculation of Scaffold Porosity from 3D Optical Coherence Tomography Images. Biomedical Engineering Society Conference. October 2009. Pittsburgh, PA. Platform Presentation
- A104. **Fleming CP**, Hucker W, Quan KJ, Efimov IR, and Rollins AM Optical Coherence Tomography Imaging Toward Monitoring Complex Radiofrequency Ablation Procedures. European Conferences on Biomedical Optics. Munich, Germany. June 15, 2009. Platform Presentation.
- A105. **Fleming CP**, Hucker W, Quan KJ, Efimov IR, and Rollins AM Optical Coherence Tomography Imaging Toward Monitoring Complex Radiofrequency Ablation Procedures. 4th International Graduate Summer School: Biophotonics 09. Ven, Sweden. June 2009. Poster Presentation.
- A106. **Fleming CP**, Wang H, Quan KJ and Rollins AM. In vitro Analysis of Cardiac Radiofrequency Ablation Lesions and Over Treatment Using OCT. Gordon Conference on Cardiac Arrhythmia Mechanisms. Lucca, Italy. February 2009. Poster Presentation
- A107. **Fleming CP**, Barwick LM, Wang H, Pan Y, Hu Z, Quan KJ, and Rollins AM. In vitro Analysis of Cardiac Radiofrequency Ablation Lesions and Over Treatment Using OCT. SPIE Photonics West BiOS. January 2009. San Jose, CA. Platform Presentation.

- A108. **Fleming CP**, Barwick LM, Quan KJ, Rollins AM. In-Vitro Characterization of Ablation Lesions Using OCT. *Circulation*. 2008;118:S_831-S_832. Abstract 4113. American Heart Association Scientific Sessions. November 2008. New Orleans, LA. Poster Presentation
- A109. **Fleming CP**, Quan KJ, and Rollins, AM. Optical Coherence Tomography Imaging of Radiofrequency Ablation Lesions. *Circulation*. 2007;116:II_725. Abstract 3224. American Heart Association Scientific Sessions. November 2007. Orlando, FL. Poster Presentation
- A110. **Fleming CP**, Wang H, and Rollins AM. Quantification of Fiber Orientation Disarray within Optical Coherence Tomography Images. Gordon Conference on Cardiac Arrhythmia Mechanisms. March 2007. Ventura, CA. Poster Presentation
- A111. **Fleming CP**, Hu Z, Efimov IR, and Rollins AM. Structural and Functional Imaging of Cardiac Tissue using Integrated Optical Mapping and OCT. Biomedical Engineering Society Annual Meeting. October 2006. Chicago, IL. Platform presentation