

David Pierson Bradway, Ph.D.

david.bradway@duke.edu
Research Scientist
Biomedical Engineering
Duke University
Durham, NC 27708 USA

##Objective

- Career in research, visualization, data acquisition, and signal processing
- Engineering, research and development role in academia or industry

##Work Experience

- **Duke University** (Durham, NC, USA)

Research Scientist, 2014 - present

- Managing clinical trials on ultrasound imaging in fetal and liver clinics
- Working with graduate students on NIH-funded research
- Contributed to several funded NIH grant applications

- **Technical University of Denmark (DTU)** (Kongens Lyngby, Denmark)

Postdoctoral Researcher, 2013 - 2014

- Developed OpenCL software for processing 3-D vector flow imaging ultrasound data on the GPU
- Presented one conference presentation, one poster, and two proceedings (SPIE 2014 & 2015)
- Contributed as co-author to one peer-reviewed journal articles
- Examined feasibility of transthoracic cardiac vector flow imaging on a phased-array probe

- **Duke University** (Durham, NC, USA)

Graduate Research and Teaching Assistant, 2005 - 2013

- PhD project using ultrasound to noninvasively measure the heart's mechanical properties
- Organized and conducted pre-clinical trials at Duke University Medical Center
- Presented results in conferences, proceedings and co-authored articles

- **Siemens Healthcare** (Issaquah, WA, USA)

Graduate Student Research Intern, 2008

- Worked within a research and development team in a large corporation
- Added multiple focal zone ARFI excitation to research mode of Acuson S2000 ultrasound scanner
- Learned version control and MS Visual Studio IDE tools

##Education

- **Duke University** (Durham, NC, USA)

Ph.D. in Biomedical Engineering, May 2013.

- **The Ohio State University (OSU)** (Columbus, OH, USA)

B.S. in Electrical and Computer Engineering, June 2005.

##Teaching

- Co-Instructor, Instructor, Adv. Top. Lab for Grads in BME - Intro. to Electronics Biomedical Engineering 790L (2018, 2019)
- Instructor, Ultrasound module of Medical Physics 731 (2015, 2016)
- Guest lecturer, Biomedical Engineering 590 (2016)

- Co-Instructor, “International Summer School on Advanced Ultrasound Imaging”, Technical University of Denmark (June 2015)

##Invention Disclosures and Patents

- Duke IDF #4547: “Low-Cost, Portable Ultrasound Shear Wave Device for Characterization of Material Viscoelasticity”
- Duke IDF #540: “Visual Feedback for Improved Triggered Acquisitions for Ultrasound Imaging”

##Honors and Activities

- Whitaker International Program Scholar (2013)
- Student Travel Support IEEE International Ultrasonics Symposium, Dresden, Germany (2012)
- National Science Foundation Graduate Research Fellow (2005-2008)
- Goldwater Research Scholar (2004-2005)
- Organized engineering design and build trip to Honduran orphanage (2004)
- Founded engineering community service group at Ohio State (2003)

##Professional Activities

- Early Career Professional Development in Medical Imaging Workshop, SPIE Medical Imaging 2015
- Associate Editor, Ultrasonic Imaging journal (2016-)
- Reviewer for Ultrasound in Medicine and Biology, Ultrasonic Imaging journal

##Skills * Advanced signal and imaging processing programming: Matlab and Python * Tools and languages: Git, C/C++, OpenCL/CUDA, Docker, Linux * Problem solving, signal and image analysis, data science, scientific computing, and experimental design * Strong written and verbal communication, data visualization * Successfully written fellowships, scholarships, proposals * Personal projects in mobile and embedded systems: Arduino, Raspberry Pi

###Journal Articles [1–13]

###Book Chapters [14,15]

###Abstracts and Proceedings [[16];[17];[18];[19];[20];[21];[22];[23];[24];[25];[26];[27];[28];[29];[30];[31];[32];[33];[34];[35];[36];[37];[38];[39];[40];[41];[42];[43];[44];[45];[46];[47];[48];[49];[50];[51];[52];[53];[54];[55];[56];[57];[58];[59];[60];[61];[62];[63];[64];[65];[66];[67];[68];[69];[70];[71];[72];[73];[74];[75];[76];[77];[78];[79];[80];[81];[82];[83];[84];[85];[86];[87];[88];[89];[90];[91];[92];[93];[94];[95];[96];[97];[98];[99];[100];[101];[102];[103];[104];[105];[106];[107];[108];[109];[110];[111];[112];[113];[114];[115];[116];[117];[118];[119];[120];[121];[122];[123];[124];[125];[126];[127];[128];[129];[130];[131];[132];[133];[134];[135];[136];[137];[138];[139];[140];[141];[142];[143];[144];[145];[146];[147];[148];[149];[150];[151];[152];[153];[154];[155];[156];[157];[158];[159];[160];[161];[162];[163];[164];[165];[166];[167];[168];[169];[170];[171];[172];[173];[174];[175];[176];[177];[178];[179];[180];[181];[182];[183];[184];[185];[186];[187];[188];[189];[190];[191];[192];[193];[194];[195];[196];[197];[198];[199];[200];[201];[202];[203];[204];[205];[206];[207];[208];[209];[210];[211];[212];[213];[214];[215];[216];[217];[218];[219];[220];[221];[222];[223];[224];[225];[226];[227];[228];[229];[230];[231];[232];[233];[234];[235];[236];[237];[238];[239];[240];[241];[242];[243];[244];[245];[246];[247];[248];[249];[250];[251];[252];[253];[254];[255];[256];[257];[258];[259];[260];[261];[262];[263];[264];[265];[266];[267];[268];[269];[270];[271];[272];[273];[274];[275];[276];[277];[278];[279];[280];[281];[282];[283];[284];[285];[286];[287];[288];[289];[290];[291];[292];[293];[294];[295];[296];[297];[298];[299];[300];[301];[302];[303];[304];[305];[306];[307];[308];[309];[310];[311];[312];[313];[314];[315];[316];[317];[318];[319];[320];[321];[322];[323];[324];[325];[326];[327];[328];[329];[330];[331];[332];[333];[334];[335];[336];[337];[338];[339];[340];[341];[342];[343];[344];[345];[346];[347];[348];[349];[350];[351];[352];[353];[354];[355];[356];[357];[358];[359];[360];[361];[362];[363];[364];[365];[366];[367];[368];[369];[370];[371];[372];[373];[374];[375];[376];[377];[378];[379];[380];[381];[382];[383];[384];[385];[386];[387];[388];[389];[390];[391];[392];[393];[394];[395];[396];[397];[398];[399];[400];[401];[402];[403];[404];[405];[406];[407];[408];[409];[410];[411];[412];[413];[414];[415];[416];[417];[418];[419];[420];[421];[422];[423];[424];[425];[426];[427];[428];[429];[430];[431];[432];[433];[434];[435];[436];[437];[438];[439];[440];[441];[442];[443];[444];[445];[446];[447];[448];[449];[450];[451];[452];[453];[454];[455];[456];[457];[458];[459];[460];[461];[462];[463];[464];[465];[466];[467];[468];[469];[470];[471];[472];[473];[474];[475];[476];[477];[478];[479];[480];[481];[482];[483];[484];[485];[486];[487];[488];[489];[490];[491];[492];[493];[494];[495];[496];[497];[498];[499];[500];[501];[502];[503];[504];[505];[506];[507];[508];[509];[510];[511];[512];[513];[514];[515];[516];[517];[518];[519];[520];[521];[522];[523];[524];[525];[526];[527];[528];[529];[530];[531];[532];[533];[534];[535];[536];[537];[538];[539];[540];[541];[542];[543];[544];[545];[546];[547];[548];[549];[550];[551];[552];[553];[554];[555];[556];[557];[558];[559];[560];[561];[562];[563];[564];[565];[566];[567];[568];[569];[570];[571];[572];[573];[574];[575];[576];[577];[578];[579];[580];[581];[582];[583];[584];[585];[586];[587];[588];[589];[590];[591];[592];[593];[594];[595];[596];[597];[598];[599];[600];[601];[602];[603];[604];[605];[606];[607];[608];[609];[610];[611];[612];[613];[614];[615];[616];[617];[618];[619];[620];[621];[622];[623];[624];[625];[626];[627];[628];[629];[630];[631];[632];[633];[634];[635];[636];[637];[638];[639];[640];[641];[642];[643];[644];[645];[646];[647];[648];[649];[650];[651];[652];[653];[654];[655];[656];[657];[658];[659];[660];[661];[662];[663];[664];[665];[666];[667];[668];[669];[670];[671];[672];[673];[674];[675];[676];[677];[678];[679];[680];[681];[682];[683];[684];[685];[686];[687];[688];[689];[690];[691];[692];[693];[694];[695];[696];[697];[698];[699];[700];[701];[702];[703];[704];[705];[706];[707];[708];[709];[710];[711];[712];[713];[714];[715];[716];[717];[718];[719];[720];[721];[722];[723];[724];[725];[726];[727];[728];[729];[730];[731];[732];[733];[734];[735];[736];[737];[738];[739];[740];[741];[742];[743];[744];[745];[746];[747];[748];[749];[750];[751];[752];[753];[754];[755];[756];[757];[758];[759];[760];[761];[762];[763];[764];[765];[766];[767];[768];[769];[770];[771];[772];[773];[774];[775];[776];[777];[778];[779];[780];[781];[782];[783];[784];[785];[786];[787];[788];[789];[790];[791];[792];[793];[794];[795];[796];[797];[798];[799];[800];[801];[802];[803];[804];[805];[806];[807];[808];[809];[810];[811];[812];[813];[814];[815];[816];[817];[818];[819];[820];[821];[822];[823];[824];[825];[826];[827];[828];[829];[830];[831];[832];[833];[834];[835];[836];[837];[838];[839];[840];[841];[842];[843];[844];[845];[846];[847];[848];[849];[850];[851];[852];[853];[854];[855];[856];[857];[858];[859];[860];[861];[862];[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