COLLEGE OF ENGINEERING BIOGRAPHICAL DATA
University of Illinois at Urbana-Champaign

Department (% appnt):	Electrical and Computer Engineering (100%)	**Updated:**	March 2024

1. Name:	Do, Minh N.	**Birth Date:**	9/17/1974	**Citizenship:**	US and Vietnam

2. Present Academic Rank:	Professor	**3. Tenure Status:**	tenured

4. Administrative Title:	Director of VinUni-Illinois Smart Health Center

5. Degrees *(field, institution, year awarded)*

1. Bachelor of Engineering in Computer Engineering (First Class Honors), University of Canberra, Australia, 1997.
2. Doctor of Science in Communication Systems, Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland, 2001.

6. Academic Positions at U of I and elsewhere *(rank, institution, field, inclusive dates) (show % if you hold multiple appointments)*

1. Assistant Professor, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 2002 - 2008.
2. Associate Professor, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 2008 - 2014.
3. Professor, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 2014 - present.
4. Affiliate Professor, Department of Bioengineering, University of Illinois at Urbana-Champaign, 2009 - present.
5. Affiliate Professor, Department of Computer Science, University of Illinois at Urbana-Champaign, 2017 - present.
6. Affiliate Professor, College of Medicine, University of Illinois at Urbana-Champaign, 2022 - present.
7. Faculty member (part-time), Beckman Institute, University of Illinois at Urbana-Champaign, 2002 - present.
8. Faculty member (full-time), Coordinated Science Laboratory, University of Illinois at Urbana-Champaign, 2002 - present.

7. Professional Activities

a. Other Professional Employment *(title, organization, location, inclusive dates)*

1. Co-founder and CTO, Personify Inc., Champaign, IL, 2009 - 2015.
2. Chief Scientist, Misfit Inc., Burlingame, CA, 2015 - 2016.
3. Vice-Provost, VinUniversity, Vietnam, 2020 - 2021.
4. Honorary Vice-Provost, VinUniversity, Vietnam, 2021 - present.

b. Major Consulting Activities *(past five years) (list organization and location)*

1. PhotoniCare, Inc., Champaign, IL, 2019-2020.
2. Cytonome, Bedford, MA, 2020.
3. Vingroup Science and Technology Advisory Board, 2018-present.
4. VinFuture Prize Pre-Screening Committee member, 2021-present

c. Professional Registrations *(field, location, date)*

8. Honors, Recognition, and Outstanding Achievements *(list year)*

1. Silver Medal from the 32nd International Mathematical Olympiad in Sweden (1991).
2. University Medal from the University of Canberra, Australia (1997).
3. Best Doctoral Thesis Award from the Swiss Federal Institute of Technology Lausanne (2001).
4. CAREER award from the National Science Foundation (2003).
5. Beckman Fellow of the Center for Advanced Study, UIUC (2006 - 2007).
6. Xerox Award for Faculty Research, College of Engineering, UIUC (2007).
7. Young Author Best Paper Award, IEEE Signal Processing Society (2008).
8. Fellow of IEEE (2014).
9. Associate of the Center for Advanced Study, UIUC (2017 - 2018).
10. Thomas and Margaret Huang Endowed Professor, UIUC (2020 - present).

a. Teaching

1. Teachers Ranked as Excellent, UIUC (Spring 2006).
2. Teachers Ranked as Excellent, UIUC (Fall 2014).
3. Teachers Ranked as Excellent, UIUC (Spring 2018).
4. Teachers Ranked as Excellent, UIUC (Spring 2020).

b. Research

1. Coauthored a paper with Arthur L. da Cunha that received a Best Student Paper Award at the IEEE International Conference on Acoustics, Speech, and Signal Processing (2005).
2. Coauthored a paper with Ha T. Nguyen that received a Best Student Paper Award at the IEEE International Conference on Acoustics, Speech, and Signal Processing (2005).
3. Coauthored a paper with Yue Lu that received a Most Innovative Paper Award at the IEEE International Conference on Image Processing (2006).
4. Coauthored a paper with Yue Lu that received an IBM Student Paper Award at the IEEE International Conference on Image Processing (2007).

c. Public Service

d. Others

9. Web pages

n	Full website URL	Text for link
1	https://minhdo.ece.illinois.edu	Prof. Minh Do's Home Page

FACTUAL INFORMATION

A. Resident Instruction and Continuing Education *(attach Teaching Activity reports, which covers 10 years)*

1. Resident Instruction *(verify the information on the appended page for sections in which you had primary responsibility; pencil in corrections)*

1. ECE 310/311 Digital Signal Processing (and Lab): Spring 2012, Spring 2016, Spring 2018, Spring 2019, Fall 2022, Fall 2023
2. ECE 313 Probability with Engineering Applications: Fall 2019, Spring 2023
3. ECE 365 Data Science and Engineering: Fall 2018
4. ECE 398BD Making Sense of Big Data: Spring 2014, Fall 2014, Spring 2016, Spring 2017
5. ECE 410 Digital Signal Processing: Spring 2002, Fall 2003, Spring 2005, Spring 2007
6. ECE 418 Introduction to Image and Video Processing: Spring 2014, Spring 2015
7. ECE 420 Embedded Digital Signal Processing Lab: Spring 2013, Fall 2013, Spring 2015, Spring 2017
8. ECE 551 Digital Signal Processing II: Fall 2005, Fall 2014, Fall 2015, Fall 2016
9. ECE 513 Vector-space Signal Processing: Spring 2003, Fall 2004, Spring 2020, Spring 2024
10. ECE 598-MD Wavelets in Signal Processing: Fall 2002, Spring 2004, Fall 2006
11. ECE 544-MD Wavelets in Signal Processing: Fall 2002, Spring 2004, Spring 2006, Fall 2007, Fall 2012
12. ECE-558 Digital Imaging: Spring 2008, Spring 2009
13. ECE-547 Topics in Image Processing: Fall 2009
14. ECE 590-P Signal and Image Processing Seminar: Fall 2002 - 2019

2. Continuing Education *(credit courses only) (year, course, # of students, delivery method)*

3. Other Instructional Activities *(prelim and final exams, course development, short courses, etc.)*

1. As Chair of ECE Graduate Committee (2016-2018), led the effort to introduce the Direct PhD program to ECE
2. Revised ECE 310 "Digital Signal Processing" as the Course Director
3. Revised ECE 311 "Digital Signal Processing Lab" as the Course Director
4. Co-developed a new undergraduate course ECE 398BD "Making Sense of Big Data"
5. Revised and expanded ECE 420 "Embedded Digital Signal Processing Lab" to reflect the modern DSP practice.
6. Developed a new graduate course "Wavelets in Signal Processing" which is now part of ECE 544 "Topics in Signal Processing"
7. Organized the weekly Signal Processing seminar series, Fall 2002 - 2016.
8. With Prof. Bresler, revised the course ECE 513 "Digital Signal and Spectral Analysis" to become "Vector Space Signal Processing".
9. Led the effort by the faculty in the Signal Processing group in proposing a new course ECE 544 "Topics in Signal Processing".
10. Served on more than 50 PhD thesis committees.
11. Organize Digital Signal Processing Summer School (Vietnam, 2006, 2008, and 2010)

a. Prelim and Final Exams

b. Course Development

c. Short Courses

4. Undergraduate Advising

a. Academic Advising *(student name, term, and activity description)*

1. 30

b. Student Organizations *(list past five years)*

c. Design Teams *(past five years)*

d. Other *(individual projects, engineering open house, etc. past five years)*

1. Advised about 50 ECE undergraduate students in independent research projects (ECE 396, ECE 397, ECE 496, ECE 497, ECE 499).
2. Gave a talk at the Engineering Council's Undergraduate Research Workshop (2002).
3. Served as judge at ECE Undergraduate Research Symposiums
4. Represented Signal Processing Area at the "Graduate Opportunities Night," (2003, 2004).
5. Represented Signal Processing Area at the "ECE Advising Fair," (2003-2010).
6. Research demo on 3D Imaging and Augmented Reality at the Engineering Open House (won awards in multiple years).

B. Research, Creative, and Other Scholarly Activities

1. Publications

List publications in print or accepted, with authors' names ordered the way they appear on the publications. Provide inclusive page numbers for papers in proceedings and journals. Follow the outline given below for the organization of the list of publications. Within each category place items in chronological order.

(*) has undergone stringent editorial review by peers
(**) invited and carries with it prestige and recognition
(S) based on work as a student
(W) co-authored with students you supervise
(!) represents most important contribution of the past decade
(P) derived from PhD thesis
(D) co-authored with post-docs

a. Books Authored or Co-Authored

1. Original Editions

2. Revisions

b. Books Edited or Co-Edited

1. Original Editions

2. Revisions

c. Chapters in Books

1. (**)(S) M. N. Do and M. Vetterli, "Contourlets," Beyond Wavelets, G. V. Welland ed., Academic Press, 2003.

d. Monographs *(longer than an article, but shorter than a book)*

1. (*)(**)(W) M. N. Do and Y. M. Lu, "Multidimensional Filter Banks and Multiscale Geometric Representations," Foundations and Trends in Signal Processing, vol. 5, issue. 3, pp. 157-264, 2012.

e. Articles

1. Articles In Journals

1. (*)(S) M. N. Do and M. Vetterli, "Wavelet-based texture retrieval using generalized Gaussian density and Kullback-Leibler distance," IEEE Transactions on Image Processing, vol. 11, pp. 146-158, Feb. 2002.
2. (*)(S) M. N. Do and M. Vetterli, "Rotation invariant texture characterization and retrieval using steerable wavelet-domain hidden Markov models," IEEE Transactions on Multimedia, vol. 4, pp. 517-527, Dec. 2002.
3. (*)(S) M. N. Do and M. Vetterli, "The finite ridgelet transform for image representation," IEEE Transactions on Image Processing, vol. 12, pp. 16-28, Jan. 2003.
4. (*)(S) M. N. Do, "Fast approximation of Kullback-Leibler distance for dependence trees and hidden Markov models," IEEE Signal Processing Letters, vol. 10, pp. 115-118, Apr. 2003.
5. (*)(S) M. N. Do and M. Vetterli, "Framing pyramids," IEEE Transactions on Signal Processing, vol. 51, pp. 2329-2342, Sep. 2003.
6. (*) C. Xu, D. L. Marks, M. N. Do, and S. A. Boppart, "Separation of absorption and scattering profiles in spectroscopic optical coherence tomography using a least-squares algorithm," Optics Express, vol. 12, no. 20, pp. 4790-4803, Oct. 2004.
7. (*) R. Shukla, P. L. Dragotti, M. N. Do and M. Vetterli, "Rate-distortion optimized tree structured compression algorithms for piecewise smooth images," IEEE Transactions on Image Processing, vol. 14, pp. 343-359, Mar. 2005.
8. (*)(W) J. Zhou, M. N. Do, and J. Kovacevic, "Multidimensional orthogonal filter bank characterization and design using the Cayley transform," IEEE Transactions on Image Processing, vol. 14, no. 6, pp. 760-769, Jun. 2005.
9. (*)(!) M. N. Do and M. Vetterli, "The contourlet transform: an efficient directional multiresolution image representation," IEEE Transactions on Image Processing, vol. 14, no. 12, pp. 2091-2106, Dec. 2005.
10. (*)(W) J. Zhou, M. N. Do, and J. Kovacevic, "Special paraunitary matrices, Cayley transform, and multidimensional orthogonal filter banks," IEEE Transactions on Image Processing, vol. 15, no. 2, pp. 511-519, Feb. 2006.
11. (*) Y. Huang, I. Pollak, C. A. Bouman and M. N. Do, "Best basis search in lapped dictionaries," IEEE Transactions on Signal Processing, vol. 54, no. 2, pp. 651- 664, Feb. 2006.
12. (*)(W) D. D.-Y. Po and M. N. Do, "Directional multiscale modeling of images using the contourlet transform," IEEE Transactions on Image Processing, vol. 15, no. 6, pp. 1610-1620, June 2006.
13. (*) Y. Huang, I. Pollak, M. N. Do, and C. A. Bouman, "Fast search for best representations in multitree dictionaries," IEEE Transactions on Image Processing, vol. 15, no. 7, pp. 1779-1793, July 2006.
14. (*)(W) A. L. Cunha, J. Zhou, and M. N. Do, "The nonsubsampled contourlet transform: theory, design, and applications," IEEE Transactions on Image Processing, vol. 15, no. 10, pp. 3089-3101, Oct. 2006.
15. (*)(W) J. Zhou and M. N. Do, "Multidimensional multichannel FIR deconvolution using Grobner bases," IEEE Transactions on Image Processing, vol. 15, no. 10, pp. 2998-3007, Oct. 2006.
16. (*)(W) D. Xu and M. N. Do, "On the number of rectangular tilings," IEEE Transactions on Image Processing, vol. 15, no. 10, pp. 3225-3230, Oct. 2006.
17. (*)(W) Y. Lu and M. N. Do, "Multidimensional directional filter banks and surfacelets," IEEE Transactions on Image Processing, vol. 16, no. 4, pp. 918-931, Apr. 2007.

18. (*)(W) A. L. Cunha and M. N. Do, "On two-channel filter banks with directional vanishing moments," IEEE Transactions on Image Processing, vol. 16, no. 5, pp. 1207-1219, May 2007.
19. (*)(W) R. L. Morrison, M. N. Do, and D. C. Munson, "SAR image autofocus by sharpness optimization: a theoretical study," IEEE Transactions on Image Processing, vol. 16, no. 9, pp. 2309-2321, Sep. 2007.
20. (*)(**)(W) Y. Lu and M. N. Do, "Sampling from a union of subspaces," IEEE Signal Processing Magazine, Special Issue on Compressive Sampling, vol. 25, no. 2, pp. 41-47, Mar. 2008.
21. (*)(W) Y. Lu and M. N. Do, "A mapping-based design for nonsubsampled hourglass filter banks in arbitrary dimensions," IEEE Transactions on Signal Processing, vol. 56, no. 4, pp. 1466-1478, Apr. 2008.
22. (*)(W)(!) Y. Lu and M. N. Do, "A theory for sampling signals from a union of subspaces," IEEE Transactions on Signal Processing, vol. 56, no. 6, pp. 2334-2345, June 2008.
23. (*)(W) M. Maitre, Y. Shinagawa, and M. N. Do, "Wavelet-based joint estimation and encoding of depth-image-based representations for free-viewpoint rendering," IEEE Transactions on Image Processing, vol. 17, no. 6, pp. 946-957, June 2008.
24. (*)(W) H. T. Nguyen and M. N. Do, "Hybrid filter banks with fractional delays: Minimax design and application to multichannel sampling," IEEE Transactions on Signal Processing, vol. 56, no. 7, pp. 3180-3190, July 2008.
25. (*)(W) H. M. Nguyen, B. P. Sutton, R. L. Morrison, and M. N. Do, "Joint estimation and correction of geometric distortions for EPI functional MRI using harmonic retrieval", IEEE Transactions on Medical Imaging, vol. 28, no. 3, pp. 423-434, Mar. 2009.
26. (*)(W) H. T. Nguyen and M. N. Do, "Error analysis for image-based rendering with depth information", IEEE Transactions on Image Processing, vol. 18, no. 4, pp. 703-716, Apr. 2009.
27. (*)(W) R. L. Morrison, M. N. Do, and D. C. Munson, "MCA: a multichannel approach to SAR autofocus", IEEE Transactions on Image Processing, vol. 18, no. 4, pp. 840-853, Apr. 2009.
28. (*)(W) Y. M. Lu, M. N. Do, and R. S. Laugesen, "A computable Fourier condition generating alias-free sampling lattices", IEEE Transactions on Signal Processing, vol. 57, pp. 1768-1782, May 2009.
29. (*)(W) K. L. Law, R. M. Fossum, and M. N. Do, "Generic invertibility of multidimensional FIR filter banks and MIMO systems", IEEE Transactions on Signal Processing, vol. 57, pp. 4282-4291, Nov. 2009.
30. (*)(**)(W) D. Lin, X. Huang, Q. Nguyen, J. Blackburn, C. Rodrigues, T. Huang, M. N. Do, S. Patel, and W.-M. Hwu, "Parallelization of video processing: from programming models to applications," IEEE Signal Processing Magazine, pp. 103-112, Nov. 2009.
31. (*)(W) A. L. Cunha, M. N. Do, and M. Vetterli, "On the information rates of the plenoptic function," IEEE Transactions on Information Theory, vol. 56, pp. 1306-1321, Mar. 2010.
32. (*)(W) M. Maitre and M. N. Do, "Depth and depth-color coding using shape-adaptive wavelets," Journal of Visual Communication and Image Representation, vol. 21, pp. 513-522, July 2010.
33. (*)(**)(W)(!) M. N. Do, Q. H. Nguyen, H. T. Nguyen, D. Kubacki, and S. J. Patel, "Immersive visual communication with depth cameras and parallel computing", IEEE Signal Processing Magazine, vol. 28, pp. 58-66, Jan. 2011.
34. (*)(W) K. L. Law and M. N. Do, "Multidimensional filter bank signal reconstruction from multichannel acquisition", IEEE Transactions on Image Processing, vol. 20, pp. 317-326, Feb. 2011.
35. (*)(W) A. Dapore, M. R. King, J. Harter, S. Sarwate, M. L. Oelze, J. A. Zagzebski, M. N. Do, T. J. Hall and W. D. O'Brien, Jr., "Analysis of human fibroadenomas using three-dimensional impedance maps," IEEE Transactions on Medical Imaging, vol. 30, no. 6, pp. 1206-1213, June 2011.
36. (*)(D) S. D. Babacan, Z. Wang, M. N. Do, G. Popescu, "Cell imaging beyond the diffraction limit using sparse deconvolution spatial light interference microscopy," Biomedical Optics Express, vol. 2, no. 7, pp. 1815-1827, July 2011.

37. (*) H. Pham, H. Ding, N. Sobh, M. Do, S. Patel, and G. Popescu, "Off-axis quantitative phase imaging processing using CUDA: toward real-time applications," Biomedical Optics Express, vol. 2, no. 7, pp. 1781-1793, July 2011.
38. (*)(W) M. N. Do, D. Marchand-Maillet, and M. Vetterli, "On the bandwidth of the plenoptic function," IEEE Transactions on Image Processing, vol. 21, no. 2, pp. 708-717, Feb. 2012.
39. (*)(D) D. Min, J. Lu; and M.N. Do, "Depth video enhancement based on weighted mode filtering," IEEE Transactions on Image Processing, vol. 21, no. 3, pp. 1176-1190, Mar. 2012.
40. (*)(D) Y. Liang, K. Rupnow, Y. Li, D. Min, M. N. Do, and D. Chen, "High level synthesis: Productivity, performance, and software constraints," Journal of Electrical and Computer Engineering, 14 pages, pp. 1-8, 2012.
41. (*)(D) M. Mir, S. D. Babacan, M. Bednarz, M. N. Do, I. Golding, and G. Popescu, "Visualizing Escherichia coli sub-cellular structure using sparse deconvolution spatial light interference tomography," PLoS ONE, vol. 7, June 2012.
42. (*)(W) H. M. Nguyen, X. Peng, M. N. Do, and Z.-P. Liang, "Denoising MR spectroscopic imaging data with low-rank approximations," IEEE Trans. on Biomedical Engineering, vol. 60, pp. 78-89, Jan. 2013.
43. (*)(D) V.-A. Nguyen, D. Min, and M. N. Do, "Efficient techniques for depth video compression using weighted mode filtering," IEEE Transactions on Circuits and Systems for Video Technology, vol. 23, no. 2, pp. 189-202, Feb. 2013.
44. (*)(D) D. Min, J. Lu, and M.N. Do, "Joint histogram based cost aggregation for stereo matching," IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 35, no. 10, pp. 2539-2545, Oct. 2013.
45. (*)(D) B. Ham, D. Min, C. Oh, M. N. Do, and K. Sohn, "Probability-based rendering for view synthesis," IEEE Trans. on Image Processing, vol. 23, no. 2, pp. 870-884, Feb. 2014.
46. (*)(W) A. L. N. Targino da Costa and M. N. Do, "A retina-based perceptually lossless limit and a Gaussian foveation scheme with loss control," IEEE Journal on Selected Topics in Signal Processing, vol. 8, no. 3, pp. 438-453, Apr. 2014.
47. (*)(W)(D) D. T. Vu, B. Chidester, H. Yang, M. N. Do, and J. Lu, "Efficient hybrid tree-based stereo matching with applications to postcapture image refocusing," IEEE Transactions on Image Processing, vol. 23, no. 8, pp. 3428-3442, Aug. 2014.
48. (*)(D) S. D. Babacan, S. Nakajima, and M. N. Do, "Bayesian group-sparse modeling and variational inference," IEEE Transactions on Signal Processing, vol. 62, no. 11, pp. 2906-2921, Nov. 2014.
49. (*)(D) V. A. Nguyen, J. Lu, S. Zhao, D. L. Jones, and M. N. Do, "Teleimmersive audio-visual communication using commodity hardware," IEEE Signal Processing Magazine, Nov. 2014.
50. (*)(D) D. Min, S. Choi, J. Lu, B. Ham, K. Sohn, and M. N. Do, "Fast global image smoothing based on weighted least squares," IEEE Transactions on Image Processing, pp. 5638-5653, Dec. 2014.
51. (*)(W) H. Q. Nguyen and M. N. Do, "Inverse rendering of Lambertian surfaces using subspace methods," IEEE Transactions on Image Processing, pp. 5545-5558, Dec. 2014.
52. (*)(W) H. Q. Nguyen and M. N. Do, "Downsampling of signals on graphs via maximum spanning trees," IEEE Transactions on Signal Processing," pp. 182-191, vol. 63, Jan. 2015.
53. (*)(W) H. Q. Bui, C. N. H. La, and M. N. Do, "A fast tree-based algorithm for compressed sensing with sparse-tree prior," Signal Processing, pp. 628-641, vol. 108, Mar. 2015.
54. (*)(D) V. A. Nguyen, J. Lu, S. Zhao, D. T. Vu, H. Yang, D. L. Jones, and M. N. Do, "ITEM: Immersive Telepresence for Entertainment and Meetings -- a practical approach," IEEE Journal of Selected Topics in Signal Processing, pp. 546-561, vol. 9, Apr. 2015.
55. (*) L. Wang, D. Tang, Y. Guo, and M. N. Do, "Common visual pattern discovery via nonlinear mean shift clustering," IEEE Transactions on Image Processing, vol. 24, no. 12, pp. 5442-5454, Dec. 2015.

56. (*)(D) Y. Zhang, X. S. Wei, J. Wu, J. Cai, J. Lu, V. A. Nguyen, and M. N. Do, "Weakly supervised fine-grained categorization with part-based image representation," IEEE Transactions on Image Processing, vol. 25 (4), 1713-1725, Apr. 2016.
57. (*)(D) Y. Zhang, L. Cheng, J. Wu, J. Cai, M. N. Do, and J. Lu, "Action recognition in still images with minimum annotation efforts," IEEE Transactions on Image Processing, vol. 25 (11), 5479-5490, Nov. 2016.
58. (*) J. A. Bengua, H. N. Phien, H. D. Tuan, and M. N. Do, "Efficient tensor completion for color image and video recovery: Low-rank tensor train," IEEE Transactions on Image Processing, pp. 2466-2479, 26 (5), May 2017.
59. (*) J. A. Bengua, H. N. Phien, H. D. Tuan, and M. N. Do, "Matrix product state for higher-order tensor compression and classification," IEEE Transactions on Signal Processing, pp. 4019-4030, 65 (15), Aug. 2017.
60. (*)(!)(D) J. Lu, Y. Li, H. Yang, D. Min, W. Eng, and M. N. Do, "PatchMatch Filter: Edge-aware filtering meets randomized search for visual correspondence," IEEE Transactions on Pattern Analysis and Machine Intelligence, pp. 1866-1879, 39 (9), Sep. 2017.
61. (*)(D) S. Kim, D. Min, B. Ham, M. N. Do, and K. Sohn, "DASC: Robust dense descriptor for multi-modal and multi-spectral correspondence estimation," IEEE Transactions on Pattern Analysis and Machine Intelligence, pp. 1712-1729, 39 (9), Sep. 2017.
62. (*) A. J. Bower, B. Chidester, J. Li, Y. Zhao, M. Marjanovic, E. J. Chaney, M. N. Do, and S. A. Boppart, "A quantitative framework for the analysis of multimodal optical microscopy images," Quantitative Omaging in Medicine and Surgery, pp. 24-37, 7(1), 2017.
63. (*)(W) T. H. Nguyen, S. Sridharan, V. Macias, A. K. Balla, J. Melamed, M. N. Do, and G. Popescu, "Automatic Gleason grading of prostate cancer using quantitative phase imaging and machine learning," Journal of Biomedical Optics, 2017.
64. (*)(W) T. H. Nguyen, M. Kandel, H. M. Shakir, C. B.-Popescu, M. N. Do, and G. Popescu, "Halo-free phase contrast microscopy," Scientific Reports, 2017.
65. (*)(W) S. Liu and M. N. Do, "Inverse rendering and relighting from multiple color plus depth images," IEEE Transactions on Image Processing, pp. 4951-4961, 26(10), Oct. 2017.
66. (*)(D) W.-Y. Lin, F. Wang, M. Cheng, S.-K. Yeung, P. Torr, M. N. Do, and J. Lu, "CODE: Coherence Based Decision Boundaries for Feature Correspondence," IEEE Trans. on Pattern Analysis and Machine Intelligence, pp. 34-47, 40(1), Jan. 2018.
67. (*)(W)(D) R. S. Pahwa, J. Lu, N. Jiang, T. T. Ng, and M. N. Do, "Locating 3D object proposals: A depth-based online approach," IEEE Transactions on Circuits and Systems for Video Technology, pp. 626-639, 28(3), Mar. 2018.
68. (*)(W) T. N. Nguyen, M. N. Do, and M. L. Oelze, "Visualization of the intensity field of a focused ultrasound (FUS) source in situ," IEEE Transactions on Medical Imaging, 2018.
69. (*)(W) Y. Kim, B. Ham, M. N Do, and K. Sohn, "Structure-texture image decomposition using deep variational priors," IEEE Transactions on Image Processing, 2018.
70. (*)(W) M Merler, KNC Mac, D Joshi, QB Nguyen, S Hammer, J Kent, J Xiong, MN Do, JR Smith, R Feris, "Automatic curation of sports highlights using multimodal excitement features," IEEE Transactions on Multimedia, 2018.
71. (*)(W) B Chidester, T Zhou, MN Do, J Ma, "Rotation equivariant and invariant neural networks for microscopy image analysis," Bioinformatics 35 (14), pp. 530-537, 2019.
72. (*)(W) TN Nguyen, AS Podkowa, AY Tam, EC Arnold, RJ Miller, TH Park, MN Do, and ML Oelze, "Characterizing fatty liver in vivo in rabbits, using quantitative ultrasound," Ultrasound in Medicine & Biology, 2019.
73. (*)(W) D Huang, X Tao, J Lu, and MN Do, "Geometry-aware GAN for face attribute transfer," IEEE Access, 2019.
74. (*)(W) TN Nguyen, AJ Tam, MN Do, and ML Oelze, "Estimation of backscatter coefficients using an in situ calibration source," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019.
75. (*)(W) N Kumar et al., "A multi-organ nucleus segmentation challenge," IEEE Transactions on Medical Imaging, 2019.

76. (*)(W) Q-H Luong, D-T Tran, NL Trung, HT Huynh, MN Do, "Simulation study of two-dimensional viscoelastic imaging of soft tissues using the extended Kalman filter for tumor detection", Simulation 96 (5), 435-447, 2020
77. (*)(W) J Yuan, H Abdul-Rashid, B Li, Y Lu, T Schreck, S Bai, X Bai, N-M Bui, MN Do, T-L Do, A-D Duong, K He, X He, M Holenderski, D Jamikov, T-K Le, W Li, A Liu, X Liu, V Menkovski, K-T Nguyen, T-A Nguyen, V-T Nguyen, W Nie, V-T Ninh, P Rey, Y Su, V Ton-That, M-T Tran, T Wang, S Xiang, S Zhe, H Zhou, Y Zhou, Z Zhou, "A comparison of methods for 3D scene shape retrieval", Computer Vision and Image Understanding, 2020.
78. (*)(W) TN Nguyen, AS Podkowa, TH Park, RJ Miller, MN Do, ML Oelze, "Use of a convolutional neural network and quantitative ultrasound for diagnosis of fatty liver", Ultrasound in Medicine & Biology 47 (3), 556-568, 2021
79. (*) T Nguyen-Ky, TD Hoang, AV Savkin, MN Do, NT Thu Van, "Real-time EEG Signal Classification for Monitoring and Predicting the Transition between Different Anaesthetic States", IEEE Transactions on Biomedical Engineering, 2021.
80. (*)(W) TY Lim, S Markowitz, MN Do, "RaDICaL: A synchronized FMCW Radar, Depth, IMU and RGB Camera dataset with low-level FMCW radar signals", IEEE Journal of Selected Topics in Signal Processing, 2021.
81. (*)(W) S. Markowitz, C. Snyder, Y. C. Eldar and M. N. Do, "Multimodal unrolled robust PCA for background foreground separation," IEEE Transactions on Image Processing, vol. 31, pp. 3553-3564, 2022.
82. (*)(W)(!) TH Hoang, M Zehni, H Xu, G Heintz, Z Christopher, MN Do "Towards a comprehensive solution for a vision-based digitized neurological examination," IEEE J Biomed Health Inform., Apr. 2022.
83. (*)(W) A. M Jankelow et al., "Smartphone clip-on instrument and microfluidic processor for rapid sample-to-answer detection of Zika virus in whole blood using spatial RT-LAMP," Analyst, 2022.
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120. (*)(W) T. Nguyen, A. Podkowa, R. J. Miller, M. L. Oelze, and M. N. Do, "In-vivo study of quantitative ultrasound parameters in fatty rabbit livers," IEEE International Ultrasonics Symposium (IUS), 2017.
121. (*)(W) B. Chidester, M. N. Do, and J. Ma, "Discriminative bag-of-cells for imaging-genomics," Pacific Symposium on Biocomputing, 23, pp. 319-330, 2018.
122. (*)(W) V. Subramanian, B. Chidester, J. Ma, and M. N. Do, "Correlating cellular features with gene expression using CCA," IEEE International Symposium on Biomedical Imaging, 2018.
123. (*)(W) T. Y. Lim, R. Yeh, Y. Xu, M. N. Do, and M. Hasegawa-Johnson, "Time-frequency networks for audio super-resolution," Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Calgary, Canada, 2018.
124. (*)(W) R. Yeh, T. Y. Lim, C. Chen, A. G. Schwing, M. Hasegawa-Johnson, M. N. Do, "Image restoration with deep generative models," Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Calgary, Canada, 2018.
125. (*)(W) M. Zehni, M. N. Do, Z. Zhao, "Multi-segment reconstruction using invariant features," Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Calgary, Canada, 2018.
126. (*)(W) M. Merler, D. Joshi, K.-N. C. Mac, Q.-B. Nguyen, S. Hammer, J. Kent, J. Xiong, M. N. Do, J. R. Smith, and R. S. Feris, "The excitement of sports: automatic highlights using audio/visual cues," Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2018.
127. (*)(W) R. A. Yeh, M. N. Do, and A. G. Schwing, "Unsupervised textual grounding: linking words to image concepts," Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Spotlight, 2018.
128. (*)(W) R. S. Pahwa, T. T. Ng, and M. N. Do, "Tracking objects using 3D object proposals," Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, APSIPA ASC 2018.
129. (*)(W) T. Nguyen, M. N. Do, M. L. Oelze, "Sensitivity analysis of reference-free quantitative ultrasound tissue classification," IEEE International Ultrasonics Symposium (IUS), 2018.
130. (*)(W) G. Meyer and M. N. Do, "Real-time 3D face verification with a consumer depth camera," Conference on Computer and Robot Vision (CRV), 2018.
131. (*)(W) V. Subramanian, W. Tang, B. Chidester, J. Ma, and M. N. Do, "Integration of spatial distribution in imaging-genetics," Medical Image Computing and Computer Assisted Intervention (MICCAI), 2018.
132. (*)(W) B Chidester, TV Ton, MT Tran, J Ma, MN Do, "Enhanced rotation-equivariant U-net for nuclear segmentation," IEEE Conference on Computer Vision and Pattern Recognition Workshops, 2019.
133. (*)(W) KT Nguyen, TH Hoang, MT Tran, TN Le, NM Bui, TL Do, VK Vo-Ho, QA Luong, MK Tran, TA Nguyen, TD Truong, VT Nguyen, MN Do, "Vehicle re-identification with learned representation and spatial verification and abnormality detection with multi-

adaptive vehicle detectors for traffic video analysis," IEEE Conference on Computer Vision and Pattern Recognition Workshops, 2019.

134. (*)(W) M Zehni, L Donati, E Soubies, ZJ Zhao, MN Do, M Unser, "Joint density map and continuous angular refinement in cryo-electron microscopy," Electronic Imaging, 2019.
135. (*)(W) R. S. Pahwa, K. Y. Chan, J. Bai, V. B. Saputra, M. N. Do, and S. Foon, "Dense 3D reconstruction for visual tunnel inspection using Unmanned Aerial Vehicle," International Conference on Intelligent Robots and Systems (IROS), 2019.
136. (*)(W) KNC Mac, D Joshi, RA Yeh, JX, RS Feris, MN Do, "Learning motion in feature space: locally-consistent deformable convolution networks for fine-grained action detection," International Conference on Computer Vision (ICCV), Oral, 2019.
137. (*)(W) C Chen, Q Chen, MN Do, and V Koltun, "Seeing motion in the dark," International Conference on Computer Vision (ICCV), Oral, 2019.
138. (*)(W) C Snyder, MN Do, "STREETS: a novel camera network dataset for traffic flow," Neural Information Processing Systems (NeurIPS), Spotlight, 2019.
139. (*)(W) KC Mac, RA Yeh, D Joshi, MN Do, R Feris, J Xiong, "Action detection by exploiting motion in receptive fields", US Patent App, 2019
140. (*)(W) M. Zehni, M. N. Do, Z. Zhao, "DeepSharpen: deep-learning based sharpening of 3D reconstruction map from cryo-electron microscopy," IEEE International Symposium on Biomedical Imaging (ISBI), 2020.
141. (*)(W) V Subramanian, MN Do, T Syeda-Mahmood, "Multimodal fusion of imaging and genomics for lung cancer recurrence prediction," IEEE International Symposium on Biomedical Imaging (ISBI), 2020.
142. (*)(W) MT Tran, TV Nguyen, T-H Hoang, T-N Le, K-T Nguyen, D-T Dinh, T-A Nguyen, H-D Nguyen,X-N Hoang, T-T Nguyen, V-K Vo-Ho, T-L Do, L Nguyen, M-Q Le, H-P Nguyen-Dinh, T-T Pham, X-V Nguyen, E-R Nguyen, Q-C Tran, H Tran, H Dao, M-K Tran, Q-T Nguyen, T-P Nguyen, G-H Diep, MN Do, "iTASK-Intelligent traffic analysis software kit", IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020
143. (*)(W) Q-H Luong, D-T Tran, NL Trung, HT Huynh, MN Do, "Simulation study of two-dimensional viscoelastic imaging of soft tissues using the extended Kalman filter for tumor detection", SAGE Publications, 2020
144. (*)(W) KT Nguyen, DT Dinh, MN Do, MT Tran, "Anomaly detection in traffic surveillance videos with GAN-based future frame prediction", International Conference on Multimedia Retrieval (ICMR), 2020
145. (*) TP Nguyen, BT Tran-Le, XD Thai, TV Nguyen, MN Do, MT Tran, "Traffic video event retrieval via text query using vehicle appearance and motion attributes," IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2021.
146. (*)(W) V Subramanian, T Syeda-Mahmood, MN Do, "Multimodal fusion using sparse CCA for breast cancer survival prediction," International Symposium on Biomedical Imaging (ISBI), 2021.
147. (*) T Moon and MN Do, "Implement your DSP algorithm on Android tablet: Real-time DSP laboratory course," ASEE Virtual Annual Conference Content Access, 2021.
148. (*) TL Nguyen-Ho, et al., "Text query based traffic video event retrieval with global-local fusion embedding," Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition, 2022.
149. (*)(W) RA Rojas-Gomez, RA Yeh, MN Do, A Nguyen, "Inverting adversarially robust networks for image synthesis," Proceedings of the Asian Conference on Computer Vision, pp. 2221-2238, 2022.
150. (*)(W) TT Nguyen, HH Pham, P Le Nguyen, TH Nguyen, MN Do, "Multi-stream fusion for class incremental learning in pill image classification," Proceedings of the Asian Conference on Computer Vision, pp. 4565-4580, 2022.
151. (*)(W) RA Rojas-Gomez, TY Lim, A Schwing, MN Do, RA Yeh, "Learnable polyphase sampling for shift invariant and equivariant convolutional networks," Advances in Neural Information Processing Systems (NeuRIPS) 35, pp. 35755-35768, 2022.
152. (*)(W) W Wang et al, "Smartphone clip-on instrument and microfluidic processor for rapid sample-to-answer detection of Zika virus in whole blood using spatial RT-LAMP," SPIE Optical Diagnostics and Sensing XXIII: Toward Point-of-Care Diagnostics, 2023.

153. (*)(W) M.-Q. Le, T. V. Nguyen, T.-N. Le, T.-T. Do, M. N. Do, M.-T. Tran, "MaskDiff: Modeling mask distribution with diffusion probabilistic model for few-shot instance segmentation," AAAI, 2024.
154. (*)(W) A. Ho, Q. Jiang, K. Peterson, R. Link, G. Monroy, D. R. Spillman, E. Aksamitiene, J. E. Kerschner, S. A. Boppart, M. N. Do, "Prognostic value of optical coherence tomography (OCT) with machine learning for assessing clinical outcomes of otitis media," Proc. Vol. PC12818, Imaging, Therapeutics, and Advanced Technology in Head and Neck Surgery and Otolaryngology, 2024.
155. (*)(W) R. A. Rojas-Gomez, T.-Y. Lim, M. N. Do, R. A. Yeh, "Making vision transformers truly shift-equivariant," Computer Vision and Pattern Recognition (CVPR), 2024.

3. Abstracts *(in print or accepted)*

4. Book Reviews *(in print or accepted)*

5. Refereed Conference Papers and Presentations

f. Pending Publications

g.i Invited Lectures and Invited Conference Presentations Since Last Promotion. *For candidates for promotion to Professor, a full (career) list of events may be provided (in other section) or, in the interest of brevity, a list of only those events since the last promotion may be provided.*

g.ii Other Invited Lectures and Invited Conference Presentations

n	Title	Conference	Location	Year
1	"Directional bases and frames for image representation," First SIAM Conference on Imaging Science, Boston, March 2002.			
2	"Contourlets: a new directional multiresolution image representation," Center for Imaging Science Seminar Series, The Johns Hopkins University, April 2002			
3	"A filter bank approach for directional multiresolution image representation," Multiscale Geometric Analysis Workshop, Institute for Pure and Applied Mathematics (IPAM), UCLA, January 2003.			
4	"Beyond wavelets: directional multiresolution image representation," Signal Processing Seminar Series, Purdue University, April 2003.			
5	"Beyond wavelets: directional multiresolution image representation," Department of Electrical Engineering and Computer Science, University of California at Berkeley, November 2003.			
6	"Contourlets: construction, approximation, and compression," Second SIAM Conference on Imaging Science, Salt Lake City, May 2004.			
7	"Discrete geometrical image processing: constructions and algorithms," Summer school on Multiscale Geometric Data Representation - Complexity, Analysis and Applications," ETH-Zurich, September 2004.			

n	Title	Conference	Location	Year
8	"Discrete geometrical image processing using contourlets," Multiscale Geometry and Analysis in High Dimensions, Institute for Pure and Applied Mathematics (IPAM), University of California at Los Angeles, Sep. 2004.			
9	"Beyond wavelets: multiscale geometric analysis," Department of Electrical and Computer Engineering, Carnegie Mellon University, Apr. 2005.			
10	"Surfacelets and directional filter banks in multidimensions," Applied and Computational Mathematics Department, California Institute of Technology, Feb. 2006.			
11	"Signal reconstruction from limited number of measurements: theory and algorithms," Bernoullli Center, Swiss Federal Institute of Technology, Lausanne, Switzerland, Mar. 2006.			
12	"Sampling signals from a union of subspaces," SIAM Conference on Imaging Science, Minneapolis, May 2006.			
13	"Sampling signals from a union of subspaces," Department of Mathematics, Vanderbilt University, Nov. 2007.			
14	"Tree-based majorize-minimize algorithm for signal reconstruction with sparse-tree prior," Information Theory and Applications Workshop, University of California at San-Diego, Jan. 2008.			
15	"Imaging for remote reality and computational photography," Agency for Science, Technology and Research (A*STAR), Singapore, Feb. 2009.			
16	"Using Computational Power to Overcome Physical Limitations in Imaging," Universal Parallel Computing Research Center, UIUC, May 2009.			
17	"Immersive Visual Communication with Depth Cameras and Parallel Computing," National University of Singapore, Mar. 2010.			
18	"Immersive Visual Communication with Depth," Microsoft Research, Redmond, June 2011.			
19	"Immersive Visual Communication with Depth," Global 3D Technology Forum, Seoul, Korea, Oct. 2011.			
20	"Immersive Visual Communication with Depth," Microsoft Research Faculty Summit, July 2012.			
21	"Immersive Visual Communication," Beckman Institute Director's Seminar, Nov. 2012.			
22	"Immersive Visual Communication," Department of Electrical and Systems Engineering, University of Pennsylvania, Apr. 2013.			
23	"Image Filtering 2.0: Efficient Edge-Aware Filtering and Their Applications," Half-day tutorial at IEEE Int. Conf. Image Processing (ICIP), Melbourne, Australia, Sep. 2013.			

n	Title	Conference	Location	Year
24	"Visual Correspondences: Taxonomy, Modern Approaches and Ubiquitous Applications," Half-day tutorial at IEEE Int. Conf. Multimedia and Expo (ICME), Torino, Italy, Jun. 2015.			
25	"Visual Correspondences: Modern Techniques and Applications," University of Nevada at Reno, Oct. 2015.			
26	"Discontinuities-Preserving Image and Motion Coherence: Computational Models and Applications," Half-day tutorial at IEEE Int. Conf. Acoustics, Speech and Signal Processing (ICASSP), Shanghai, China, Mar. 2016.			
27	"Quantifying and Extracting Visual Information from Mobile Devices," Keynote at International Conference on Advanced Technologies for Communications (ATC), Hanoi, Vietnam, Oct. 2016.			
28	"Visual Representation and Sensing from Mobile Cameras and Other Information," Dow AgroSciences, 2017.			
29	"Visual Representation and Sensing from Mobile Cameras and Other Information," Zhejiang University, 2018.			
30	"Visual Sensing and Perception from Mobile and Network Cameras," PPG Industries, 2018.			
31	"Visual Sensing and Perception from Mobile and Network Cameras," VinGroup, 2018.			
32	"Visual Representation and Sensing from Mobile Cameras and Other Information," Qualcomm, 2019.			
33	"Imaging Genomics", Cornell University, 2019.			
34	"Radar: History (as the Game Changer of WWII) and Current Research (for Self-Driving Cars)", VinUniversity, 2021.			
35	"Imaging and Genomics from bulk to spatial omics", Vietnam National University, Ho Chi Minh City, 2021.			
36	"Towards a Comprehensive Solution for Vision-based Neurological Examination," OSF Healthcare, 2022.			
37	"Multi-modality fusion using canonical correlation analysis methods," Regenstrief Institute, 2023.			
38	"Multi-modality fusion using canonical correlation analysis methods," GSK, 2023.			
39	"Multi-modality fusion using canonical correlation analysis methods," Sandia National Labs, 2023.			
40	"Multi-modality fusion using canonical correlation analysis methods," PathAI, 2023.			
41	"Signal Processing for Modeling and Analyzing Human Motion", EPFL, 2023.			
42	"Modeling and Analyzing Human Motion," Illinois AI and Health Summit, 2024.			

h. Other Publications *(patents, bulletins or reports, magazine articles, etc.)*

1. Patents

1. Ha T. Nguyen and Minh N. Do, "Signal processors, signal processing methods, and digital filter configuration methods," US Patent 7,847,719 (2010).
2. Q. H. Nguyen, M. N. Do, S. J. Patel, "System for executing 3D propagation for depth image-based rendering," US Patent 8,643,701 (2014).
3. Q. H. Nguyen, M. N. Do, S. J. Patel, D. P. Dabbelt, D. J. Lin, "System for background subtraction with 3D camera," US Patent 8,649,592 (2014).
4. C. Ayeung, A. Tabatabai, M. Do, "Optimal separable adaptive loop filter," US Patent 8,787,449 (2014).
5. Q. H. Nguyen, G. Meyer, M. N. Do, D. J. Lin, and S. J. Patel, "Systems and methods for accurate user foreground video extraction," US Patent 8,818,028 (2014).
6. M. Dikmen, S. J. Patel, D. J. Lin, Q. H. Nguyen, and M. N. Do, "Systems and methods for illumination correction of an image," US Patent 9,008,457 (2015).
7. D. J. Lin, Q. H. Nguyen, M. N. Do, and S. J. Patel, "Systems and methods for generating a virtual camera viewpoint for an image," US Patent 9,053,573 (2015).
8. M. N. Do, Q. H. Nguyen, B. Chidester, L. B. Dang, and S. J. Patel, "System and method for generating a depth map and fusing images from a camera array," US Patent 9,300,946 (2016).
9. Q. H. Nguyen, M. N. Do, L. Truong, D. J. Lin, S. Kowshik, and S. J. Patel, "Transmitting video and sharing content via a network using multiple encoding techniques," US Patent 9,386,303 (2016).
10. M. N. Do, Q. Nguyen, D. Lin, and S. Patel, "Systems and methods for embedding a foreground video into a background feed based on a control input," US Patent 9,628,722 (2017).
11. Q Nguyen, L Dang, C Nguyen, D Lin, S Venshtain, M Do, "Methods and systems for classifying pixels as foreground using both short-range depth data and long-range depth data," US Patent 10,244,224 (2019).
12. KNC Mac, RA Yeh, D Joshi, MN Do, R Feris, JJ Xiong, "Action detection by exploiting motion in receptive fields," US Patent 11,521,044 (2022).

2. Bulletins

3. Magazine Articles

4. Reports

2. Grants, contracts and gifts *(in chronological order up to past ten years)*

a.i. Research Grants Received Since Last Promotion at Illinois.

a.ii. Other Research Grants Received at Illinois

n	#PI's and lead PI if not this prof	Source of Funds	Years (Inclusive)	Total Funding	Funds Allocated to this prof	Brief Title or Description
1	1 PI	National Science Foundation	2003-2008	$400,001	$400,001	CAREER: Directional Multiresolution Image Processing: Theory, Algorithms and Applications
2	2 PI's; PI: Prof. Doug Jones, UIUC	National Science Foundation	2003-2006	$326,735	$163,366	ITR: Remote Reality: 4-D Audio-Visual Reconstruction and Compression from Multiple Sensors
3	2 PI's; PI: Prof. David Munson, University of Michigan	National Science Foundation	2004-2007	$449,993	$175,320	A Modern Autofocus Methodology with Applications to Radar Imaging
4	2 PI's; PI: Prof. Yoram Bresler, UIUC	National Science Foundation	2006-2009	$530,926	$265,456	Practical Compressed Sensing
5	1 PI	National Science Foundation	2009 - 2011	$335,635	$335,635	Sparse and Geometric Representations of Images and Multidimensional Signals
6	~20 faculty PI's from UIUC; PI: Prof. Marianne S Winslett	A*STAR, Singapore	2009-2014	$50,000,000	~$1,500,000	Advanced Digital Science Center (ADSC)
7	~20 faculty PI's from UIUC; PI: Prof. Josep Torrellas	Intel and Microsoft	2009-2014	$10,000,000	~$300,000	Universal Parallel Computing Research Center (UPCRC); later became Illinois-Intel Parallel Center (I2PC)
8	2 PI's; PI: Prof. Rohit Bhargava, UIUC	National Science Foundation	2010-2013	$400,000	$200,000	Novel Acquisition and Computation in Vibrational Spectroscopic Imaging

n	#PI's and lead PI if not this prof	Source of Funds	Years (Inclusive)	Total Funding	Funds Allocated to this prof	Brief Title or Description
9	1 PI	Intel	2011-2012	$25,000	$25,000	Real-Time Remote Reality for Telepresence
10	1 PI (change in PI from Yi Ma)	National Science Foundation	2011-2015	$368,875	$368,875	Collaborative Research: Advances in the Theory and Practice of Low-Rank Matrix Recovery and Modeling
11	1 PI (change in PI from Yi Ma)	National Science Foundation	2011-2014	$450,000	$450,000	A Region-Based Approach to Reconstructing Urban Scenes
12	1 PI	Intel	2012-2015	$30,000	$30,000	Develop Mobile Visual Computing Building Blocks and Applications
13	1 PI	National Science Foundation	2012-2015	$390,510	$390,510	Image and Video Processing with Depth
14	1 PI	Texas Instruments	2013-2014	$30,000	$30,000	Perceptual Signal Processing for Digital Touch
15	2 PI's	Advanced Digital Science Center (ADSC), A*STAR, Singapore	2014-2017	$1,287941	$1,287,941	Visual Modeling and Analytics of Dynamic Environments for the Masses
16	1 PI	Texas Instruments	2015-2017	$30,000	$30,000	Video Stereo Matching
17	1 PI	DAQRI	2015-2017	$50,000	$50,000	Efficient multi-modal SLAM (Simultaneous Localization and Mapping)
18	1 PI	Personify	2015-2017	$22,000	$22,000	3D Imaging with Multiple RGB-D cameras
19	1 PI	Jump Labs	2016-2018	$35,000	$35,000	Making Sense of Big Data

n	#PI's and lead PI if not this prof	Source of Funds	Years (Inclusive)	Total Funding	Funds Allocated to this prof	Brief Title or Description
20	1 PI	Sandia National Labs	2015-2016	$27,000	$27,000	Internal Structure Mapping with X-Ray Phase Contrast Imaging
21	1 PI	Sandia National Labs	2016-2017	$65,000	$65,000	Inferential and Feature Selection Methods for Video Imaging
22	10 PI's; PI: Prof. Wen-mei Hwu	IBM	2016-2019	$3,000,000	$300,000	IBM-Center of Cognitive Systems Research
23	1 PI	UIUC-ZJU Research Collaboration	2018-2021	$75,000	$75,000	Visual Representation and Sensing from Mobile Cameras
24	2 PI's; PI: Prof. Ramavarapu "RS" Sreenivas	Sandia National Labs	2017-2018	$170,000	$85,000	Towards a Science of Actionable Intelligence
25	1 PI	UIUC-ZJU Research Collaboration	2018 - 2019	$75,000	$75,000	Visual Representation and Sensing from Mobile Cameras
26	1 PI	PPG Industries	2018 - 2020	$205,000	$205,000	Color Matching and Style Transfer
27	1 PI	FutureWei	2018 - 2020	$100,000	$100,000	Video AI
28	1 PI	Sandia National Labs	2018 - 2020	$134,000	$134,000	Foreground-Background Modeling with Object-Level Semantics
29	1 PI	Intel Labs	2018 - 2021	$55,000	$55,000	Gift to Research in Image Synthesis
30	2 PI's; Co-PI: Dr. Joseph Evans (OSF)	Jump ARCHES	2019 - 2020	$75,000	$54,000	Lung Cancer Radiomics and Radiogenomics
31	1 PI	Texas Instruments	2019 - 2020	$40,000	$40,000	Gift to Research in Radar Fusion

n	#PI's and lead PI if not this prof	Source of Funds	Years (Inclusive)	Total Funding	Funds Allocated to this prof	Brief Title or Description
32	1 PI	Sandia National Labs	2019-2020	$76,930	$76,930	Data Processing Algorithms and Software
33	4 PI's	Jump-ARCHES	2020-2021	$75,000	$50,000	Digital Neurological Examination (DNE)
34	3 PI's; PI: Prof. Cunningham	NIH	2019-2023	$447,937	$82,000	Smartphone-Linked System for Diagnosis and Epidemiological Reporting of Pathogens at the Point of Care
35	1 PI	Univ of Basel	2020-2021	$149,872	$149,872	Inverse Problems and Geometry
36	1 PI	Sandia National Labs	2020-2021	$75,000	$75,000	Moving Target Detection and Tracking from a Moving Camera
37	1 PI	Sandia National Labs	2021	$47,967	$47,967	Analysis of Traditional Transfer Learning Techniques and Probabilistic Learning
38	3 PI	Jump-ARCHES	2022-2024	$149,780	$114,134	Digitized Neurological Exams (DNE) with Smartphones/Tablets - A Clinical Recording Pilot Study
39	1 PI	Vingroup	2022-2032	$13,500,000	$13,500,000	VinUni-Illinois Smart Health Center (VISHC)
40	2 PI's; PI: Prof. Stephen Boppart	National Institutes of Health (National Institute on Deafness and Other Communication Disorders)	2022-2026	$1,346,328	$500,000	Otitis Media Diagnosis and Treatment

n	#PI's and lead PI if not this prof	Source of Funds	Years (Inclusive)	Total Funding	Funds Allocated to this prof	Brief Title or Description
41	3 PI's; PI: Prof. Bill King	FIT	2023-2025	$1,080,392.00	$300,000	Smart Metrology
42	1 PI	GSK	2023-2024	$145,000	$145,000	Multivariate Radiomics and Other Omics Data Integration
43	3 PI's; PI: Prof. Han Zhao	IBM	2023-2025	$400,000	$133,000	Foundation Model for Geospatial Image Analysis
44	1 PI	Sandia National Labs	2023-2025	$150,000	$150,000	Remote Sensing Data Processing and Fusion

b.i. Instructional Grants Received Since Last Promotion at Illinois

b.ii. Other Instructional Grants Received at Illinois

n	#PI's and lead PI if not this prof	Source of Funds	Years (Inclusive)	Total Funding	Funds Allocated to this prof	Brief Title or Description
1	3 PI's	National Science Foundation	2006-2008	$38,170	$38,170	US-Vietnam Seminar: Digital Signal Processing
2	4 PI's; PI: Richard S. Laugesen, UIUC	National Science Foundation	2007-2010	$18,000	$18,000	Illinois/Missouri Applied Harmonic Analysis Seminar
3	3 PI's	UIUC College of Engineering	2013-2014	$15,030	$15,030	Harnessing Multiple Modes of Visual Communication to Enhance the Student Experience in Distance Learning

3. Areas of Research *(brief description, key words are adequate)*

1. Signal processing
2. Computational imaging
3. Data science
4. Smart health

4. Graduate Thesis Research Advising *(list co-advisor, if any)*

a. M.S. Thesis Students *(name and year granted or anticipated)*

n	Student Name	Year Graduated	Thesis Title	Placement
1	Duncan Po	2003	Image Modelling in Contourlet Domain	The MathWorks
2	Hien M. Nguyen	2007	Joint Estimation in MRI using Harmonic Retrieval Methods	Continue Ph.D. at UIUC
3	Chinh La	2007	Signal Reconstructions from Limited Measurements using Sparse-Tree Priors	Quantum Dynamics, Inc.
4	Joseph Coombs	2007	A Novel Defocus Blurring Model of Layered Depth Scenes for Computational Photography	Texas Instruments
5	Spencer Brady	2009	Spectral and Spatial Reconstruction of Fourier Transform Infrared Imaging Data	Cisco Systems
6	Quang H. Nguyen (co-advised with Prof. Sanjay J. Patel)	2009	Three-Dimensional Propagation Algorithm for Depth Image-Based Rendering	Nuvixa Inc.
7	Alex Dapore (co-advised with Prof. William D. O'Brien)	2010	Analysis of Human Fibroadenomas using Three-dimensional Impedance Maps	L-3 Commmunications
8	Joshua Blackburn	2010	Geometric Lifting for Image Representation	Jacobs Engineering
9	Dan Kubacki (co-advised with Prof. Sanjay J. Patel)	2011	Signed Distance Registration for Depth Image Sequence	Jacobs Engineering
10	Tan H. Nguyen	2012	Computational Methods for Fourier Transform Infrared (FT-IR) Spectroscopic Imaging	Continue Ph.D. at UIUC
11	Ramanpreet Singh Pahwa	2013	Depth Camera Calibration using Depth Measurements	Continue Ph.D. at UIUC
12	Benjamin Chidester	2014	Evaluation of Stereo Matching for Mobile Platforms with Applications for Assisting the Visually Impaired	Continue Ph.D. at UIUC
13	Greg Meyer	2014	3D Face Modeling with a Consumer Depth Camera	Continue Ph.D. at UIUC
14	Trong N. Nguyen	2014	Passive Monitoring of High-Intensity Focused Ultrasound	Continue Ph.D. at UIUC
15	Andres Guzman-Ballen	2014	Virtual Reality System with Haptics Integration	

n	Student Name	Year Graduated	Thesis Title	Placement
16	Raymond Yeh	2016	Stable and Symmetric Convolutional Neural Network	UIUC
17	Dario Aranguiz	2017	Low-cost Time-of-Flight-based Localization Techniques for Robotic Applications	Petronics
18	Teck Yian Lim	2018	Audio Super-Resolution with Deep Neural Networks	UIUC
19	Vaishnavi Subramanian	2018	Multimodal Data Analysis Applied to a Medical Setting	UIUC
20	Jason Nie	2019	Compression Artifact Suppression for Color Images with Dual-domain SE-ARResNet	Aurora Innovation
21	Kirk Busche	2019	Frequency-Modulated Continuous-Wave Radar Processing Fundamentals	North Star Imaging
22	Andy Lai	2020	Dynamic Object Tracking and Classification from a Moving Platform	Sandia National Laboratories
23	Corey Snyder	2020	STREETS: a Benchmark Dataset for Suburban Traffic Forecasting	UIUC
24	Daniel Gonzales	2020	Unsupervised Monocular Depth Estimation: Learning to Generalize	8i
25	Anh Leu	2021	Survival Analysis for Lung Cancer Patients	
26	Spencer Markowitz	2021	One Millimeter for Man, One Meter for Mankind: Establishing Millimeter Wave Radar as a Ubiquitous Sensor in Consumer Applications	RadSee
27	Molly Dasso	2021	Lung Cancer Malignancy Prediction with Recurrent Neural Networks	Google
28	Shitao "Mercury" Liu			
29	Linjie Tong			

b. Ph.D. Thesis Students *(name and year granted or anticipated)*

n	Student Name	Year Graduated, if not yet graduated add expected date and prelim date if taken	Thesis Title	Placement
1	Jianping Zhou	2005	Multidimensional Multirate Systems: Characterization, Design, and Applications	Texas Instruments, Intel, Apple
2	Arthur L. A. da Cunha	2006	Geometrical Representation, Processing, and Coding of Visual Information	JPMorgan, BNP Paribas
3	Robert L. Morrison Jr.	2007	Multichannel Methods for Image Restoration in Computed Imaging	MIT Lincoln Laboratory
4	Yue Lu	2007	Multidimensional Geometrical Signal Representation: Constructions and Applications	Harvard University
5	Ha T. Nguyen	2007	Multi-Sensor Signal Processing: Theory and Algorithms for Image-Based Rendering and Multi-Channel Sampling	Sony USA, Techburg
6	Matthieu Maitre	2008	"Travelling Without Moving": A Study on the Reconstruction, Compression, and Rendering of 3D Environments for Telepresence (co-advised with Prof. Yoshihisa Shinagawa)	Microsoft
7	Ka Lung Law (Ph.D. in Math; co-advised with Prof. Robert M. Fossum)	2008	"Laurent Polynomial Inverse Matrices and Multidimensional Perfect Reconstruction Systems"	Technische Universit虞 Darmstadt
8	Hien M. Nguyen (co-advised with Prof. Zhi-Pei Liang)	2011	"Towards High-Resolution Magnetic Resonance Spectroscopic Imaging: Spatiotemporal Denoising and Echo-Time Selection"	Stanford University
9	Ha Q. Nguyen	2014	Efficient Image Representations: Theory And Algorithms	Swiss Federal Institute of Technology Lausanne (EPFL)
10	Huy Q. Bui	2015	Image Restoration From Noisy And Limited Measurements With Applications In 3D Imaging	
11	Andre Luiz Nunes Targino da Costa	2015	Integrating Visual and Haptics Perceptual Processing on Wearables	

n	Student Name	Year Graduated, if not yet graduated add expected date and prelim date if taken	Thesis Title	Placement
12	Tan H. Nguyen (co-advised with Prof. Gabriel Popescu)	2016	Computational Phase Imaging for Biomedical Applications	Butterfly Imaging
13	Siying Liu	2016	Physically Based Geometry and Reflectance Recovery from Images	A*STAR
14	Gregory Meyer	2016	Real-time 3D Face Localization and Verification	Uber
15	Benjamin Chidester	2017	Histopathological Image Analysis With Connections to Genomics	CMU
16	Ramanpreet Singh Pahwa	2017	3D Sensing and Mapping using Mobile Color and Depth Sensors	A*STAR, Singapore
17	Chen Chen	2018	Image Processing and Synthesis: from Hand-crafted to Data-driven Modeling	Apple
18	Trong N. Nguyen	2019	Toward Model-free and Reference-free Quantitative Ultrasound	Children's National Hospital
19	Raymond Yeh	2021	Extracting and Learning Structures from Data (co-advised with Prof. Alex Schwing)	Purdue
20	Khoi-Nguyen Mac	2021	Learning Temporal Information across Domains: from the Viewpoints of Appli- cations and Modeling	Amazon Ads.
21	Vaishnavi Subramanian	2022	Cross-Correlations in Medical Data: Theory, Algorithms, and Applications in Disease Analytics	EPFL
22	Teck Yian Lim	2022	Data-Driven Techniques in Signal restoration and Detection Problems	DSO, Singapore
23	Mona Zehni	2023	Towards geometry-aware and learning-based solutions for inverse problems	Apple
24	Renan A. Rojas			
25	Corey Snyder			
26	Qian Jiang			
27	Hieu Hoang			
28	Abhi Kamboj			
29	Huyen Nguyen			

n	Student Name	Year Graduated, if not yet graduated add expected date and prelim date if taken	Thesis Title	Placement
30	Nick Bampton			
31	Anh-Duy Nguyen			

5. Editorships of Journals or Other Learned Publications *(list year)*

1. Associate Editor of the IEEE Transactions on Image Processing (2007 - 2011).
2. Guest Editor of the Journal of Visual Communication and Image Representation, Special Issue on Multicamera Imaging, 2009.

6. Post-doctoral Associates and Visiting Scientists *(>3 months stay in the past three years) (list name, year(s), country of origin, permanent employer)*

n	Name	Title (percent time)	Country of Origin	Permanent Employer	Years
1	Mathews Jacob	Beckman Postdoctoral Fellow	India	University of Iowa	2003-2006
2	Yoonsik Choe	Visiting Professor	Korea	Yonsei University	2006
3	S. Derin Babacan	Beckman Postdoctoral Fellow	Turkey	Google Inc.	2010-2012
4	Dongbo Min	Research Scientist	Korea	Advanced Digital Sciences Center (ADSC), University of Illinois at Urbana-Champaign	2010-2015
5	Jiangbo Lu	Senior Research Scientist	China	Advanced Digital Sciences Center (ADSC), University of Illinois at Urbana-Champaign	2009-2016
6	Viet-Anh Nguyen	Postdoc	Vietnam	Advanced Digital Sciences Center (ADSC), University of Illinois at Urbana-Champaign	2010-2016
7	Nianjuan Jiang	Postdoc	China	Advanced Digital Sciences Center (ADSC), University of Illinois at Urbana-Champaign	2013-2016
8	Daniel Lin	Postdoc	Singapore	Advanced Digital Sciences Center (ADSC), University of Illinois at Urbana-Champaign	2013-2018

n	Name	Title (percent time)	Country of Origin	Permanent Employer	Years
9	Suma P. Bhat	Beckman Postdoctoral Fellow	India	University of Illinois at Urbana Champaign	2012-2015
10	Yanwen Guo	Visiting Professor	China	Nanjing University	2013-2016
11	Minh-Triet Tran	Visiting Professor	Vietnam	Vietnam National University	2015-2016
12	Linh-Trung Nguyen	Visiting Professor	Vietnam	Vietnam National University	2016-2017
13	Hieu Pham	Visiting Professor	Vietnam	VinUniversity	2023
14	Gaoang Wang	Visiting Professor	China	ZJU-UIUC Institute, Zhejiang University	2024

7. Other Scholarly Activities in the past five years *(conferences organized or chaired, unpublished presentations, etc.)*

1. Reviewer for: IEEE Transactions on Image Processing; IEEE Transactions on Signal Processing; IEEE Signal Processing Letters; IEEE Transactions on Circuits and Systems; IEEE Transactions on Communications; IEEE Transactions on Systems, Man and Cybernetics; Signal Processing (EURASIP); International Journal of Computer Vision; Applied and Computational Harmonic Analysis; IEEE International Conferences on Image Processing; IEEE International Conferences on Acoustics, Speech, and Signal Processing

a. Conferences Organized or Chaired

1. Member of Technical Program Committee, SPIE Wavelet Applications in Signal and Image Processing Conference, 2003 - 2009.
2. Program Co-Chair of the 27th Picture Coding Symposium, Chicago, 2009.
3. Member of Program Committee, IS&T and SPIE Conference on Computational Imaging, 2012
4. Member of Technical Committee of IEEE International Workshop on Hot Topics in 3D (Hot3D), 2012
5. Technical Program Co-Chair of the IEEE GlobalSIP Symposium on Mobile Imaging, Austin, 2013.
6. Member of Organizing Committee of the IEEE IVMSP Workshop on 3D Image/Video Technologies and Applications, Seoul, 2013.
7. Member of Program Committee of the Workshop on Consumer Depth Cameras for Computer Vision (2012 - 2015)
8. Co-Chair, Allerton Conference on Communication, Control, and Computing, 2015 & 2016.
9. Area Chair of the Computer Vision and Pattern Recognition (CVPR) Conference, 2019 & 2021.
10. Steering Co-Chair of the 22nd IEEE Statistical Signal Processing (SSP) workshop, 2023.

b. Unpublished Presentations

c. Other Scholarly Activities

C. Service

1. Professional Societies *(list membership; office held, with dates; major committees or boards)*

1. Fellow of the Institute of Electrical and Electronics Engineers (IEEE).
2. Member of the Society for Industrial and Applied Mathematics (SIAM).
3. Member of Signal Processing Theory and Methods Technical Committee, IEEE Signal Processing Society (elected; 2007-2013).
4. Member of Image and Multi-Dimensional Signal Processing Technical Committee, IEEE Signal Processing Society (elected; 2007-2013).
5. Member of the Big Data Special Interest Group, IEEE Signal Processing Society (elected, 2016 - 2019).
6. Member of the Machine Learning for Signal Processing Technical Committee, IEEE Signal Processing Society (elected, 2018 - 2021).

2. University *(department, college and campus committees, administration, etc. for past five years)*

a. Department

1. ECE Advisory Committee (elected; 2006-2008)
2. ECE Curriculum Committee (2002-2003, 2004-2005).
3. ECE Seminar Committee (2003-2004, 2014-2015).
4. ECE Graduate Committee (2005-2007, 2012-2013, 2013-2014, 2022-2024).
5. ECE Fellowship Committee (2005-2006, 2008-2009, 2009-2010, 2012-2013, 2013-2014).
6. ECE Graduate Recruitment Committee (2007-2008, 2008-2009, 2009-2010, 2011-2013)
7. ECE Scholarships, Student Awards, and Honors Committee (2007-2008)
8. ECE Graduate Admission Committee (2011-2013, 2019-2020).
9. ECE Faculty Search Committee (2014-2015, 2019-2020, 2022-2024)
10. Chair, ECE Graduate Committee (2016-2018).

b. College

1. Coordinated Science Lab Policy and Planning Committee (2014-2015)
2. College of Engineering Executive Committee (elected; 2019-2020)

c. Campus

1. Interdisciplinary Working Group for Computation, Data and Information (2014)
2. Working Group 5: Education for Society's Grand Challenges (2014)
3. Steering Committee, Illinois Data Science Initiative (2017-2018)

3. Federal and State *(government commissions or panels, community, industrial extension, etc.)*

1. Review panel for the National Science Foundation, 2003, 2007, 2014, 2017, 2019.
2. Member of a team of professors selected by the U.S. National Academies and the Vietnam Education Foundation traveling to Vietnam to select talented students for graduate studies in the U.S. in science and technology, 2004 and 2005.

4. Other Outside Service

1. Member of Pre-Screening Committee of VinFuture Prize, 2020 - present.

D. Improvement Activities *(list any specific programs in which you have participated it improve teaching and professional competence)*

1. Fast Start (The Teaching College Faculty Development Program), The Academy for Excellence in Engineering Education, UIUC, Spring 2002.
2. Annual UIUC Faculty Retreat on Active Learning, February 2002.
3. Annual UIUC Faculty Retreat on The Scholarship of Teaching and Learning, February 2003.
4. Individual program on improving public speaking skills with Dean Papajohn, Office of Instructional Resource, January 2002 - December 2002.
5. Workshop for new engineering faculty on Career Planning and Development, UIUC, February 2003.
6. Annual UIUC Faculty Retreat on Active Learning, January 2005.
7. Workshop on Practical Mentoring of Graduate Students, The Graduate College, UIUC, January 11, 2006.
8. Annual UIUC Faculty Retreat on Understanding and Enhancing Student Development, January 2007.
9. Workshop on The Engineer of the Future, UIUC College of Engineering, September 2007.
10. Workshop on Practical Mentoring of Graduate Students, UIUC, January 2008.
11. Mid-Career Faculty Symposium, UIUC, August 2010.
12. Annual UIUC Faculty Retreat on "Harnessing the Science of Emotion to Spark Learning", Mar 2020.
13. Annual UIUC Faculty Retreat on "Breaking Down the Garden Walls: A Promise of Access to Success", 2022.
14. Annual UIUC Faculty Retreat on "The Value of Reflection: True Stories from the Classroom", 2022.

E. Professional Highlights

F. Biography, Statements and Updates

Minh N. Do received the B.Eng. degree in Computer Engineering from the University of Canberra, Australia, in 1997, and the Dr.Sci. degree in Communication Systems from the Swiss Federal Institute of Technology Lausanne (EPFL) in 2001. Since 2002, he has been on the faculty at the University of Illinois at Urbana-Champaign, where he is currently the Thomas and Margaret Huang Endowed Professor in Signal Processing & Data Science in the Department of Electrical and Computer Engineering, and holds affiliate appointments with the Coordinated Science Laboratory, the Beckman Institute for Advanced Science and Technology, the Department of Bioengineering, and the Department of Computer Science. He received a Silver Medal from the 32nd International Mathematical Olympiad in 1991, University Medal from the University of Canberra in 1997, Doctorate Award from the EPFL in 2001, CAREER Award from the National Science Foundation in 2003, Xerox Award for Faculty Research from UIUC in 2007, and Young Author Best Paper Award from IEEE in 2008. He was an Associate Editor of the IEEE Transactions on Image Processing, and a member of several IEEE Technical Committees on Signal Processing. He was elected as an IEEE Fellow in 2014 for his contributions to image representation and computational imaging. He has contributed to several tech-transfer efforts, including as a co-founder and CTO of Personify and Chief Scientist of Misfit. During 2020-2021 he served as the Vice-Provost, and then continues as Honorary Vice-Provost, for VinUniversity, the first private, not-for-profit Vietnamese university established based on international standards. He also serves as the Director of the joint VinUni-Illinois Smart Health Center.

G. Diversity, Equity, Inclusion, or Access

List any specific activities participated that promote or contribute to improving Diversity, Equity, Inclusion, Access, Climate, or Culture through your research, teaching, service, outreach, or public engagement..

(@) Department Activity
(%) College Activity
(^) Campus Activity
(=) UI System Activity
(!) Represents most important activity
(@@) External Local Activity
(@%) State Activity
(^^) Federal Activity
(==) Professional Society Activity

1. **INDIVIDUAL impacts**

   a. Undergraduate

   b. Graduate

   c. Postdoctoral or Professional Scholar

2. **PROGRAMMATIC impacts**

3. **INSTITUTIONAL impacts**

4. **CLIMATE and CULTURE impacts**

5. **TRAINING**

6. **DIVERSITY STATEMENT**

   1. I believe that diversity leads to strength and excellence in any group and institution. Diverse background, perspective, experience, and expertise in an inclusive environment would lead to cross-fertilization of ideas and complementary strengths to accomplish far more than any uniform group. Currently, my research group has 7 PhD students who come from 7 different countries (China, India, Iran, Peru, Singapore, US, and Vietnam). And 3 out of these 7 are female students. I have consciously recruited my diverse group of PhD students from the above conviction. Beyond diverse recruitment, we also need to ensure the working environment is inclusive. For example, I noticed some male students often like to display their knowledge by immediately asking questions during research presentations, while some female students are often shy or even turn off by such perceived aggressive behavior. In these cases, I offer gentle coaching to some aggressive male students and ask some shy female students for their comments on the research presentation. I support students to organize social hours, and host parties at my house where students can share their cultural stories and foods. Over time, I ensure our group builds up a culture where everyone feel safe and encouraged to share their ideas and contribute their individual expertise, while learning from and empathizing with others. In teaching classes, I also ensure an equity and inclusion learning environment. A few years ago, UIUC College of Engineering conducted a climate survey and found out many domestic students expressed concerns that with the increasing number of international students who tend to ace the exams, and hence make much harder for domestic students to get A in classes. In response to this concern, in my classes I do not use grading on a curve, but instead communicate clearly to the students at the beginning of the semester what is the class standard for A, B, C, D (above 90%, 80%, 70%, 60% in total assessments) and each student just has to complete with himself/herself for the final grade. Moreover, I ensure class assessments have diverse components including homework, group work, projects, exams, so that students with different strengths can still demonstrate their mastery of class materials. In sum, I believe DEI is crucial for excellence. The key to improve DEI is to make conscious

efforts to build a diverse group, to empathize with people from different background, and to nurture a culture of inclusion in the group. As educators, our actions in DEI will be a lasting role model for the future generations.