Curriculum Vitae: D.A. Forsyth

Birth

2 May, 1963, Cape Town, South Africa.

Degrees

1. B.Sc., Electrical Engineering, U. of the Witwatersrand, Johannesburg, 1984
2. B.Sc., Electrical Engineering, U. of the Witwatersrand, Johannesburg, 1986
3. M.A., (procedural degree), Oxford University, 1989
4. D.Phil., Oxford University, 1989

Appointments

1. Fellow, Magdalen College, Oxford, Jan. 1989-Jan. 1992
2. Assistant Professor, Dept. of Computer Science, U. of Iowa, Sept. 1991-Jul. 1994
3. Associate Professor, Dept. of Computer Science, U. of Iowa, July 1994-Jul. 1996
4. Assistant Professor, Dept. of Computer Science, U. of California, Berkeley, Jul. 1994-Jun. 1996
5. Associate Professor, Dept. of Computer Science, U. of California, Berkeley, Jul. 1996-Jun. 2002
6. Full Professor, Dept. of Computer Science, U. of California, Berkeley, Jul. 2002-Jun 2006
7. Full Professor, Dept. of Computer Science, U. of Illinois, Aug. 2004-Present
8. Fulton Watson Copp Chair in Computer Science, U. of Illinois, May 2014-Present

Honors and Awards

1. Diocesan College Rhodes Scholar, 1985
2. National Science Foundation Research Initiation Award, 1992
3. National Science Foundation Young Investigator Award, 1992
4. Marr Prize, Best Paper at 1993 ICCV, 1993
5. Best Paper in Cognitive Computer Vision, ECCV, 2002
6. Okawa Foundation Fellowship, 2003
7. IEEE Technical Achievement Award, 2006
8. IEEE Fellow, 2009
9. ACM Fellow, 2014

Consulting Activities

1. Consultant, intellectual property law firm, 65 hours billed, 1998-99
2. Consultant on retainer, FujiFilm Software CA, 2001-2006
3. Consultant, venture capital firm, 3 hours billed, 2002
4. Consultant, intellectual property law firm, 13 hours billed, 2003
5. Consultant, State's attorney's general, 1 hour, 2006
6. Technical Advisor, Euclid Media, 2007-2008
7. Technical Advisor, Animate-me, 2007-2008, helped them get NSF SBIR award.
8. Technical Advisor, Snap-and-buy, 2007-2008
9. Technical Advisor, Lumenous, 2015-present, helped them get NSF SBIR award.
10. Consultant, Foley+Lardner, 2009-2010
    including reading and report preparation, 10 hours deposition, attendance at trial, about 4 hours direct examination at trial, about 2 hours cross examination at trial. Matter was 337-TA-680 in the ITC
11. Consultant, Sheridan and Ross (IP law firm), 2012-2013;
    including reading, search and report preparation; district court case number 6:11-cv-00494
12. Consultant, Fish and Richardson, 2014-2015
    including reading and report preparation, deposition in IPR invalidity, deposition on non-infringement, presenting to district court judge on technical tutorial. Matter was IpLearn-Focus, LLC vs Microsoft Corp, district court case number 3:14-cv-00151-JD. IPR's were IPR2015-00095; IPR2015-00096; IPR2015-00097.

Graduated PhD Students

1. C.A. Rothwell (co advised with A. Zisserman)
2. J.Haddon
3. F.S.Cho
4. S.J. Chenney
5. S.Ioffe
6. P.Duygulu (co-advised)
7. O.Arikan
8. D.Ramanan
9. T.Berg (nee Miller)
10. J.Edwards
11. R.White
12. L.Ikemoto
13. N.Loeff
14. A.Farhadi
15. D.Tran
16. A.Sorokin
17. G.Wang
18. V.Hedau (joint with D. Hoiem)
19. B.Jones (joint with B. Bailey)

20. R.Sodhi (joint with B. Bailey)
21. K.Karsch
22. A.Sadeghi
23. Z.Liao
24. S. Singh

Editorial Boards

1. Associate Editor, IEEE Trans. Multimedia
2. Editorial Board, Int. J. Computer Vision
3. Associate Editor, IEEE Trans Pattern Analysis and Machine Intelligence, 2 terms
4. Associate Editor, J. ACM, since 2011
5. Associate Editor, ACM Transactions on Graphics, since 2011
6. Editor in Chief, IEEE Trans. Pattern Analysis and Machine Intelligence, 2013-2017

Service

1. Committee member, U.C. Berkeley Committee on Admissions, Enrollment and Preparatory Education, 1995-2001 (Dealt with the University's response to the UC Regents order on affirmative action; established now well-known new admission policy for UC Berkeley, currently being taken up by other UC campuses).
2. Committee member, U.C. Berkeley Rhodes and Marshall Scholarship Committee, 1999-2003.
3. Member, National Research Council Committee on Tools and Strategies for Protecting Kids from Pornography and Their Applicability to Other Inappropriate Internet Content. (3 years of hearings, both closed and public, and an extensive report that was very well received by the popular press)
4. Founder and Member, Executive Committee of the Board, Berkeley Foundation for Opportunity in Information Technology. (Foundation seeks to ensure that Demographics of California University Computer Science Departments reflects that of the state, by helping targeted schoolchildren improve their understanding of science and their college application packets; by offering scholarships; and by various other means.)
5. Associate Chair, UIUC CS Department, 2011-2015
6. Scientific Advisory Board, Allen Institute for Artificial Intelligence, 2015-on

Publications

Authored books

1. Forsyth, D.A. and Ponce, J., *Computer Vision: A Modern Approach*, Prentice-Hall, 2002.
2. Forsyth, D.A. and Ponce, J., *Computer Vision: A Modern Approach,* 2002. Chinese Language Edition
3. Forsyth, D.A. and Ponce, J., *Computer Vision: A Modern Approach*, 2002. Russian Language Edition
4. Forsyth, D.A. and Ponce, J., *Computer Vision: A Modern Approach*, 2002. Japanese Language Edition
5. Forsyth, D.A., Arikan, O., Ikemoto, L., O'Brien, J., and Ramanan, D., *Computational Studies of Human Motion: Part 1, Tracking and Motion Synthesis,* ISBN: 1-933019-30-1 178pp July 2006 (also available as *Foundations and Trends in Computer Graphics and Vision Volume 1* Issue 2/3 (255pp), 2006)
6. Forsyth, D.A. and Ponce, J., Computer Vision: A Modern Approach (2e), Prentice Hall, 2011 (heavily revised edition, about 50% new material)

Edited books

1. *Computer Vision - ECCV 2008. 10'th European Conference on Computer Vision, Part I,* D.A. Forsyth, P.H.S. Torr and A. Zisserman, Springer Verlag LNCS 5302, 801 pp, 2008
2. *Computer Vision - ECCV 2008. 10'th European Conference on Computer Vision, Part II*, D.A. Forsyth, P.H.S. Torr and A. Zisserman, Springer Verlag LNCS 5303, 851pp., 2008
3. *Computer Vision - ECCV 2008. 10'th European Conference on Computer Vision, Part II,* D.A. Forsyth, P.H.S. Torr and A. Zisserman, Springer Verlag LNCS 5304, 893pp., 2008
4. *Computer Vision - ECCV 2008. 10'th European Conference on Computer Vision, Part II,* D.A. Forsyth, P.H.S. Torr and A. Zisserman, Springer Verlag LNCS 5305, 827pp., 2008
5. *Applications of Invariance in Computer Vision,* J.L. Mundy, A. Zisserman and D.A. Forsyth, (ed.s), Springer LNCS 825, 1994.
6. *Shape, contour and grouping in computer vision,* D.A. Forsyth, J.L. Mundy, R. Cipolla and V. DiGes\'u (ed.s), Springer-Verlag LNCS 1681, 2000.

Book chapters

1. Forsyth, D.A., "Colour constancy," in Blake, A. and Troscianko, T. (eds.), *AI and the Eye,* John Wiley and Sons, 1990.
2. A. Zisserman, C.A. Rothwell, D. A. Forsyth and J. L. Mundy, "Fast Recognition using Algebraic Invariants," in Mundy, J.L and Zisserman, A. (eds.), *Applications of Invariance in computer vision*, MIT press, 1992.
3. w A. Zisserman, D. A. Forsyth, C. A. Rothwell, and J. L. Mundy, "Recognising General Curved Objects Efficiently," in Mundy, J.L and Zisserman, A. (eds.), *Applications of Invariance in computer vision*, MIT press, 1992.
4. C. Coehlo, A. Heller, J.L. Mundy, D.A.Forsyth and A. Zisserman, "An experimental evaluation of projective invariants," in Mundy, J.L and Zisserman, A. (eds.), *Applications of Invariance in computer vision*, MIT press, in print, 1992.
5. Forsyth, D.A., Mundy, J.L., Zisserman, A.P. and Rothwell, C.A. "Applications of invariant theory in vision," In Kapur, D. and Donald, B.R. (eds.), *Integrating Symbolic and*

Numerical Methods for Artificial Intelligence, Academic Press, 1992.

6. D.A. Forsyth, "The outline of an algebraic surface yields the surface," *Design and application of curves and surfaces*, R.B. Fisher (ed.), OUP, 1994.
7. F.S. Cho and D.A. Forsyth, "Hidden Feature Removal," *Wiley Encyclopedia of Electrical and Electronics Engineering*, vol. 8, pp. 713-725. New York: John Wiley & Sons, 1999. (invited review).
8. D.A. Forsyth, "Foreword", in H. Aghajan and A. Cavallero, *Multi-Camera Networks*, Elsevier, 2009
9. D.A. Forsyth and J. Malik, "Chapter 24: Computer Vision", in S.J. Russell and P. Norvig, Artificial Intelligence: A Modern Approach, Pearson, 2009
10. D.A. Forsyth, T. Berg, C. Alm, A. Farhadi, J. Hockenmaier, N. Loeff, G. Wang, "Words and Pictures: Categories, Modifiers, Depiction and Iconography" in *Object Categorization: Computer and Human Vision Perspectives* S. Dickinson, A. Leonardis, B. Schiele, and M. Tarr, (eds), Cambridge University Press, 2009.

Journal Articles

1. Forsyth, D.A., "A novel algorithm for colour constancy," *International Journal of Computer Vision,* 5:1, 5-36, July, 1990. Reprinted in *Physics based vision* (3 vols.), edited by S.A. Shafer, G. Healey, and L.B. Woolff, 1992.
2. Forsyth, D.A. and Zisserman, A., "Shape from shading in the light of mutual illumination," *Image and Vision Computing*, 8:1, 42-49, 1990.
3. Forsyth, D.A., Mundy, J.L., Zisserman, A.P.. and Brown, C.M., "Projectively Invariant Representations Using Implicit Algebraic Curves," 9:2, 130-136, 1991.
4. Forsyth, D.A., Mundy, J.L., Zisserman, A.P., "Transformational Invariance- a primer," *Image and Vision Computing,* 10:1, 39-45, 1992.
5. s Forsyth, D.A., and Zisserman, A.P., "Reflections on Shading," *IEEE Trans. Pattern Analysis and Machine Intelligence*, Special issue on physical modeling in computer vision, 13:7, 671-679, Jul. 1991.
6. Forsyth, D.A., Mundy, J.L., Zisserman, A.P., Coelho, C., Heller, A. and Rothwell, C.A., "Invariant descriptors for 3D object recognition and pose," *IEEE Trans. Pattern Analysis and Machine Intelligence*, Special issue on 3D object recognition, 13:10, 971-991, Oct. 1991.
7. Rothwell, C.A., Zisserman, A.P., Marinos, C.I., Forsyth, D.A. and Mundy, J.L., "Relative motion and pose from arbitrary plane curves," *Image and Vision Computing*, 10:4, 250-262, 1992.
8. Rothwell, C.A., Zisserman, A.., Forsyth, D.A. and Mundy, J.L., "Planar Object Recognition using Projective Shape Representation," *International J. of Computer Vision*, 16:1, 57-99, Sept. 1995.
9. Zisserman, A., Forsyth, D.A., Mundy, J.L., Rothwell, C.A., and Liu, J.S., "3D Object Recognition using Invariance," *Artificial Intelligence,* 78:1-2, 239-288, Oct. 1995.
10. Forsyth, D.A., "Recognizing Algebraic Surfaces from their Outlines," *International J. Computer Vision*, 18:1, 21-40, 1996.
11. Forsyth, D.A. and Fleck, M. M., "Automatic Detection of Human Nudes," *International J. Computer Vision,* 32:1, 63-77, Aug. 1999.
12. Chenney, S., Ichnowski, J. and Forsyth, D.A., "Dynamics modeling and culling," *IEEE Computer Graphics and Applications*, 19:2, 78-87, 1999.
13. Cho, F.S. and Forsyth, D.A., "Interactive Ray Tracing with the Visibility Complex," *Computers and Graphics*, Special Issue on Visibility - Techniques and Applications, 23:5, 703-717, 1999.
14. Forsyth, D.A., "Computer Vision Tools for Finding Images," *Library Trends, Topic: Progress in Visual Information Access and Retrieval,* 48:2, Fall 1999.
15. Stephen Chenney and D. A. Forsyth. "Sampling Plausible Solutions to Multi-Body Constraint Problems," *Proceedings of SIGGRAPH 2000*, p.219-28, 2000
16. Ioffe, S. and Forsyth, D.A., "Probabilistic methods for finding people," *International J.*

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