# CURRICULUM VITAE
## Kiriakos Neoklis Kutulakos

Associate Professor
Department of Computer Science
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## DEGREES

| | | | |
|---|---|---|---|
| 12/1994 | Ph.D. | Computer Science | University of Wisconsin–Madison |
| 12/1989 | M.S. | Computer Science | University of Wisconsin–Madison |
| 7/1988 | B.S. | Computer Science | University of Crete, Greece |

## EMPLOYMENT

| | |
|---|---|
| 2001- | Associate Professor<br>Department of Computer Science, University of Toronto |
| 2004-05 | Visiting Scholar<br>Visual Computing Group, Microsoft Research Asia, Beijing, China (1/9/04-1/6/05) |
| Fall 2000 | Faculty Visitor<br>Pattern Recognition Group, Institute for Computer Science, University of Erlangen, Germany (23/9/00-11/10/00) |
| Summer 2000 | Consultant<br>Machine Learning and Perception Group, Microsoft Research, Cambridge, United Kingdom (3/3/00-15/7/00) |
| 1997-2001 | Assistant Professor<br>Departments of Computer Science & Dermatology, University of Rochester |
| 1994-97 | Postdoctoral Research Associate<br>Department of Computer Science, University of Rochester |
| 1991-94 | Research Assistant<br>Department of Computer Science, University of Wisconsin-Madison |
| 1990 | Summer Intern<br>Artificial Intelligence Branch, NASA-Ames Research Center |
| 1988-91 | Teaching Assistant<br>Department of Computer Science, University of Wisconsin-Madison |
| 1986-88 | Undergraduate Research Assistant<br>Computer Science Institute, FORTH, University of Crete, Greece |
| 1985 | Summer Intern<br>IBM-Athens, Greece |

## HONOURS

| | |
|---|---|
| 2006 | Winner, Honorable Mention, Best Paper Prize, European Conference on Computer Vision |
| 2005 | Winner, Honorable Mention, David Marr Prize in Computational Vision |
| 2005 | Honorary Guest Professor, Beijing University of Aeronautics and Astronautics |
| 2003 | Premier's Research Excellence Award |
| 2001 | Sloan Research Fellowship, The Alfred P. Sloan Foundation |
| 1999 | Winner, David Marr Prize in Computational Vision |
| 1999 | NSF Early Career Development Award (CAREER) |
| 1998 | Career Development Award, The Dermatology Foundation |
| 1995 | Paper invited to *Artificial Intelligence J.* special issue on Computer Vision |
| 1995 | NSF CISE Postdoctoral Research Associateship in Experimental Science |
| 1994 | Siemens Best Paper Award, Computer Vision & Pattern Recognition Conference |
| 1993 | NASA Tech Brief Award |
| 1988 | Outstanding Undergraduate Award, University of Crete |
| 1985-88 | IKY National Undergraduate Fellowship, University of Crete |

## PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- **Editorial Board**

  Associate Editor, *IEEE Transactions on Pattern Analysis and Machine Intelligence* (2005-present)
  Guest Editor, *The International Journal of Computer Vision*, Special Issue on Multi-View Modeling of Visual Scenes (v. 49, no. 2/3, summer 2002)

- **Conference Board Member**

  Workshops Chair, European Conference on Computer Vision (2010)
  Program Co-Chair, IEEE Computer Vision and Pattern Recognition Conference (2003)
  Demos Chair, IEEE Computer Vision and Pattern Recognition Conference (2000, 2001)
  Tutorials Chair, IEEE Computer Vision and Pattern Recognition Conference (1999)

- **Workshop Co-Organizer**

  2009 BIRS Workshop on Computer Vision and the Internet (with S. Seitz)
  IEEE 1999 Workshop on Multi-View Modeling and Analysis of Visual Scenes (with A. Shashua)

- **Conference Area Chair**

  IEEE International Conference on Computer Vision (2005, 2009)
  IEEE Computer Vision and Pattern Recognition Conference (2006, 2009)

- **Conference/Workshop Program Committee Member**

  IEEE International Conference on Computational Photography (2009)
  IEEE Computer Vision and Pattern Recognition Conference (1996, 1998-99, 2001, 2004-05, 2007-08)
  European Conference on Computer Vision – ECCV (2002, 2004, 2006, 2008)
  IAPR International Conference on Pattern Recognition (2008)
  Third International Symposium on 3D Data Processing, Visualization and Transmission (2007)
  IEEE International Conference on Computer Vision (2001, 2003, 2007)
  IEEE Workshop on Beyond Multiview Geometry (2007)
  IEEE Workshop on Benchmarking Calibration, Orientation and Surface Reconstruction (2005, 2007)
  IEEE Workshop on Photometric Analysis for Computer Vision (2007)
  ECCV Workshop on Vision and Modeling of Dynamic Scenes (2002)
  IEEE Workshop on Model Based 3D Image Analysis (1998)
  International Symposium on 3D Data Processing, Visualization and Transmission (2004, 2008)
  International Symposium on Computer Graphics, Image Processing, and Vision (1998)

- **Journal/Conference Reviewer**

  International Journal of Computer Vision; IEEE Transactions on Pattern Analysis and Machine Intelligence; IEEE Transactions on Robotics and Automation; CVGIP: Image Understanding; Image and Vision Computing; Information Processing Letters; ACM Computing Surveys; SIAM Journal of Scientific Computing; ACM SIGGRAPH; Eurographics Workshop on Rendering; IEEE International Conference on Computer Vision; IEEE Computer Vision and Pattern Recognition Conference; IEEE International Conference on Robotics and Automation

- **Grant Proposal Reviewer**

  Natural Sciences and Engineering Research Council of Canada
  Israel National Science Foundation
  Bi-National US-Israel Science Foundation

- **Grant Review Panel Member**

  U.S. National Science Foundation review panels

- **Keynote Speaker**

  DAGM Conference of the German Association for Pattern Recognition, Jena, Germany (2009)
  IAPR Conference on Machine Vision Applications, Yokohama, Japan (2009)
  6th International Conference on 3D Imaging and Modeling, Montreal, Quebec (2007)

- **Invited Workshop Speaker**

  International Workshop on Computer Vision, Venice, Italy (2008)
  International Workshop on Current Trends in Computer Vision, Lhasa, Tibet (2006)
  IEEE and ATR Workshop on Computer Vision for Virtual Reality Based Human Communications, Bombay, India (1998)

## PH.D DISSERTATION

*Exploring Three-Dimensional Objects by Controlling the Point of Observation*, Department of Computer Science, University of Wisconsin-Madison, December 1994. Advisor: Prof. Charles R. Dyer.

## RESEARCH AWARDS

## A. Computer Science

1. *High-Resolution Computational Photography*, PI, RTI Grants Program, 4/08-3/09, ($43K), Natural Sciences and Engineering Research Council of Canada
2. *Frontiers of Three-Dimensional Photography*, PI, Research Grants Program, 4/07-3/11, ($195K), Natural Sciences and Engineering Research Council of Canada
3. *Storage and Analysis of Image and Video Data*, co-PI, RTI Grants Program, 4/07-3/08, ($87K), Natural Sciences and Engineering Research Council of Canada
4. *Data-Driven Modeling of Shape, Reflection and Interreflection*, co-PI, Computer Vision Program, 2/05-2/08, ($335K), U.S. National Science Foundation
5. *A Laboratory for Video-Driven Physical Modeling and Simulation*, PI, Equipment Grants Program, 3/04-3/05, ($150K), Natural Sciences and Engineering Research Council of Canada
6. *Premier's Research Excellence Award*, PI, 3/03-3/07, ($150K)

7. *Theory and algorithms for practical 3D photography*, PI, Research Grants Program, 3/02-3/07, ($180K), Natural Sciences and Engineering Research Council of Canada

8. *Sloan Research Fellowship*, PI, 09/01-09/03, ($60K), The Alfred P. Sloan Foundation

9. *Appearance-Driven Reconstruction of Three-Dimensional Scenes in the Physical World*, PI, Early Career Development Award, 3/99-12/03, U.S. National Science Foundation

10. *Laboratory for large scale high resolution interaction, graphics, and vision research*, co-PI, Research Tools and Instruments Program, 3/01-3/02, Natural Sciences and Engineering Research Council of Canada

11. *Spatial Intelligence for Computer-Enhanced Interaction with a Physical Environment*, co-PI, CISE Research Infrastructure Program, 7/00-6/05, U.S. National Science Foundation

12. *A Unified Image Science and Electronic Imaging Systems Curriculum Development Initiative*, co-PI, Combined Research-Curriculum Development Program, 10/98-9/01, U.S. National Science Foundation

13. *Center for Advanced Technology: Electronic Imaging Systems-Visualization*, co-PI, 7/98-6/00, NYS Science and Technology Foundation

14. *Calibration-Free View Augmentation for Semi-Autonomous VSAMs*, co-PI, Image Understanding Program, 5/97-4/99, U.S. Defense Advanced Research Projects Agency

## B. Dermatology

15. *Digital 3D Body Mapping for Early Melanoma Detection*, PI, Career Development Award, 6/98-6/01, The Dermatology Foundation

16. *Digital Image Analysis Agreement–A Phase II/III Randomized, Double-Blind, Placebo-Controlled Trial of Celecoxib on Subjects with Actinic Keratosis*, PI, 8/00-8/02, National Cancer Institute & Searle Corp.

17. *Center for Future Health*, co-PI, 12/99-6/01, The Keck Foundation

18. *Training Program in Dermatology*, Senior Personnel, 5/99-4/04, National Institutes of Health

# SCHOLARLY AND PROFESSIONAL WORK

## A. Journal Publications

1. R. L. Carceroni, F. L. C. Pádua, G. A. M. R. Santos, and K. N. Kutulakos, "Linear Sequence-to-Sequence Alignment," *IEEE Trans. on Pattern Analysis and Machine Intelligence*. In press.

2. S. W. Hasinoff and K. N. Kutulakos, "Confocal Stereo," *Int. J. Computer Vision.* In press. Special Issue on Best Papers from ECCV 2006.

3. K. N. Kutulakos and E. Steger, "A Theory of Refractive and Specular 3D Shape by Light-Path Triangulation," *Int. J. Computer Vision*, vol. 76, no. 1, pp. 13–29, 2007.

4. S. W. Hasinoff and K. N. Kutulakos, "Photo-Consistent Reconstruction of Semi-Transparent Scenes by Density-Sheet Decomposition," *IEEE Trans. Pattern Analysis and Machine Intelligence.* vol. 29, no. 5, pp. 870–885, 2007.

5. K. N. Kutulakos and A. Shashua, "Introduction to the Special Issue on Multi-View Modeling and Rendering of Visual Scenes," *Int. J. Computer Vision*, vol. 49, no. 2, pp. 99-100, 2002.

6. R. L. Carceroni and K. N. Kutulakos, "Multi-View Scene Capture by Surfel Sampling: From Video Streams to Non-rigid 3D Motion, Shape and Reflectance," *Int. J. Computer Vision*, vol. 49, no. 2, pp. 175-214, 2002.

7. S. M. Seitz and K. N. Kutulakos, "Plenoptic Image Editing," *Int. J. Computer Vision*, vol. 48, no. 2, pp. 115-129, 2002.

8. K. N. Kutulakos and S. M. Seitz, "A Theory of Shape by Space Carving," *Int. J. Computer Vision*, vol. 38, no. 3, pp. 197–216, 2000. David Marr Prize Special Issue.

9. K. N. Kutulakos and J. Vallino, "Calibration-free augmented reality," *IEEE Trans. on Visualization and Computer Graphics*, vol. 4, no. 1, pp. 1–20, 1998.

10. K. N. Kutulakos and C. R. Dyer, "Global surface reconstruction by purposive control of observer motion," *Artificial Intelligence Journal*, vol. 78, no. 1-2, pp. 147–177, 1995. Special Issue on Computer Vision.

11. K. N. Kutulakos and C. R. Dyer, "Recovering shape by purposive viewpoint adjustment," *Int. J. Computer Vision*, vol. 12, no. 1, pp. 113–136, 1994. Special Issue on Active Vision II.

12. D. Kulkarni and K. N. Kutulakos, "Probabilistic scale-space filtering program," *NASA Tech Briefs*, vol. 17, no. 7, p. 35, 1993. Acceptance bas ed on receipt of NASA Tech Brief Award.

13. M. N. Kolountzakis and K. N. Kutulakos, "Fast computation of the Euclidean distance map for binary images," *Information Processing Letters*, vol. 43, pp. 181–184, 1992.

14. D. Kulkarni, K. N. Kutulakos, and P. Robinson, "Data analysis using scale-space filtering and Bayesian probabilistic reasoning," *Computers and Chemistry*, vol. 16, no. 1, pp. 15–23, 1992.

## B. Book Chapter

15. J. Vallino and K. N. Kutulakos, "Augmenting Reality Using Affine Object Representations" in *Augmented Reality and Wearable Computers*, W. Barfield and T. Caudell (Eds).

## C. Refereed Conference Publications

16. S. W. Hasinoff and K. N. Kutulakos, "Light-Efficient Photography," in *Proc. 10th European Conf. on Computer Vision*, 2008. *Oral. Acceptance rate: 4.6% (40 orals out of 871 submissions).*

17. A. Ecker, K. N. Kutulakos and A. D. Jepson, "Semidefinite Programming Heuristics for Surface Reconstruction Ambiguities," in *Proc. 10th European Conf. on Computer Vision*, 2008. *Poster. Acceptance rate: 27.9% (243 papers out of 871 submissions).*

18. I. Ihrke, K. N. Kutulakos, H. P. A. Lensch, M. Magnor, W. Heidrich, "State of the Art in Transparent and Specular Object Reconstruction," in *Proc. Eurographics*, 2008. *Oral. Acceptance rate unknown.*

19. N. Morris and K. N. Kutulakos, "Reconstructing the Surface of Inhomogeneous Transparent Scenes by Scatter-Trace Photography," in *Proc. 11th Int. Conf. on Computer Vision*, 2007. *Oral. Acceptance rate: 3.9% (44 orals out of 1128 submissions).*

20. S. W. Hasinoff and K. N. Kutulakos, "A Layered Restoration Framework for Variable-Aperture Photography." in *Proc. 11th Int. Conf. on Computer Vision*, 2007. *Poster. Acceptance rate: 19.5% (220 posters out of 1128 submissions).*

21. A. Ecker, K. N. Kutulakos and A. D. Jepson, "Shape from Planar Curves: A Linear Escape from Flatland," in *Proc. Computer Vision and Pattern Recognition Conf.*, 2007. *Poster. Acceptance rate: 23.4% (293 posters out of 1252 submissions).*

22. S. W. Hasinoff and K. N. Kutulakos, "Confocal Stereo." in *Proc. 9th European Conf. on Computer Vision*, pp. 620–634, 2006. *Oral. Acceptance rate: 4.9% (40 orals out of 811 submissions).* **Winner, Honorable Mention, Best Paper Award.**

23. K. N. Kutulakos and E. Steger, "A Theory of Specular and Refractive 3D Shape by Light-Path Triangulation," in *Proc. 10th Int. Conf. on Computer Vision*, pp. 1448–1455, 2005. *Oral. Acceptance rate: 3.6% (45 orals out of 1230 submissions).* **Winner, Honorable Mention, David Marr Prize in Computational Vision.**

24. S. Seitz, Y. Matsushita and K. N. Kutulakos, "A Theory of Inverse Light Transport." in *Proc. 10th Int. Conf. on Computer Vision*, pp. 1440–1447, 2005. *Oral. Acceptance rate: 3.6% (45 orals out of 1230 submissions).*

25. N. Morris and K. N. Kutulakos, "Dynamic Refraction Stereo." in *Proc. 10th Int. Conf. on Computer Vision*, pp. 1573–1580, 2005. *Poster. Acceptance rate: 19.8% (244 orals/posters out of 1230 submissions). Was among the 16 submissions with highest review scores.*

26. R. L. Carceroni, F. L. C. Pádua, G. A. M. R. Santos and K. N. Kutulakos, "Linear Sequence-To-Sequence Alignment," in *Proc. Computer Vision and Pattern Recognition Conf.*, pp. 746–753, 2004. *Poster. Acceptance Rate: 26.1% (261 orals/posters out of 1000 submissions).*

27. S. W. Hasinoff and K. N. Kutulakos, "Photo-Consistent 3D Fire by Flame Sheet Decomposition," in *Proc. 9th Int. Conf. on Computer Vision*, pp. 1184–1191, 2003. *Oral. Acceptance Rate: 4.4% (43 orals out of 966 submissions).*

28. R. Bhotika, D. Fleet and K. Kutulakos, "A Probabilistic Theory of Occupancy and Emptiness," in *Proc. 7th European Conf. on Computer Vision*, pp. 112–131, 2002. *Oral. Acceptance Rate: 7.5% (45 orals out of 600 submissions).*

29. R. L. Carceroni and K. N. Kutulakos, "Multi-View Scene Capture by Surfel Sampling: From Video Streams to Non-Rigid 3D Motion, Shape and Reflectance," in *Proc. 8th Int. Conf. on Computer Vision*, pp. 60–67, 2001. *Oral. Acceptance Rate: 7.5% (45 orals out of 596 submissions).*

30. K. N. Kutulakos, "Approximate N-View Stereo," in *Proc. 6th European Conf. on Computer Vision*, pp. 67–83, 2000. *Oral. Acceptance Rate: 16.5% (44 orals out of 266 submissions).* **Nominated for best paper award.**

31. K. N. Kutulakos and S. M. Seitz, "A Theory of Shape by Space Carving," in *Proc. 7th Int. Conf. on Computer Vision*, pp. 307–314, 1999. *Oral. Acceptance Rate: 8% (46 orals out of 575 submissions).* **Winner, David Marr Prize in Computational Vision.**

32. R. L. Carceroni and K. N. Kutulakos, "Multi-View 3D Shape and Motion Recovery on the Spatio-Temporal Curve Manifold," in *Proc. 7th Int. Conf. on Computer Vision*, pp. 520–527, 1999. *Oral. Acceptance Rate: 8% (46 orals out of 575 submissions).*

33. R. L. Carceroni and K. N. Kutulakos, "Toward Recovering Shape and Motion of 3D Curves from Multi-View Image Sequences," in *Proc. Computer Vision and Pattern Recognition Conf.*, pp. 192–197, 1999. *Poster. Acceptance Rate: 38.1% (192 orals/posters out of 503 submissions).*

34. S. M. Seitz and K. N. Kutulakos, "Plenoptic Image Editing," in *Proc. 6th Int. Conf. on Computer Vision*, pp. 17–24, 1998. *Oral. Acceptance Rate: 8.2% (41 orals out of 500 submissions).* **Nominated for David Marr Prize in Computational Vision.**

35. K. N. Kutulakos, "Shape from the Light Field Boundary," in *Proc. Computer Vision and Pattern Recognition Conf.*, pp. 53–59, 1997. *Poster. Acceptance Rate: 31.8% (173 orals/posters out of 544 submissions).*

36. K. N. Kutulakos and J. Vallino, "Affine object representations for calibration-free augmented reality," in *Proc. IEEE Virtual Reality Annual International Symposium*, pp. 25–36, 1996. *Oral. Acceptance Rate: 35% (submission number unknown).*

37. K. N. Kutulakos and J. Vallino, "Non-Euclidean object representations for calibration-free video overlay," in *ECCV'96 Workshop on Object Representations in Computer Vision*," pp. 381–401, 1996. *Oral. Acceptance rate unknown.*

38. K. N. Kutulakos, "Affine surface reconstruction by purposive viewpoint adjustment," in *Proc. 5th Int. Conf. on Computer Vision*, pp. 894–901, 1995. *Poster. Acceptance Rate: 26.8% (161 orals/posters out of 599 submissions).*

39. K. N. Kutulakos and M. Jägersand, "Exploring objects by invariant-based tangential viewpoint control," in *Proc. Int. Symp. Computer Vision*, pp. 503–508, 1995. *Oral. Acceptance rate unknown.* Extended version appears in *Proc. IROS'95 Workshop on Vision for Robots*.

40. K. N. Kutulakos and C. R. Dyer, "Occluding contour detection using affine invariants and purposive viewpoint control," in *Proc. Computer Vision and Pattern Recognition Conf.*, pp. 323–330, 1994. *Oral. Acceptance Rate: 18.4% (87 orals out of 472 submissions).* **Winner, Siemens Best Paper Award.**

41. K. N. Kutulakos and C. R. Dyer, "Global surface reconstruction by purposive control of observer motion," in *Proc. Computer Vision and Pattern Recognition Conf.*, pp. 331–338, 1994. *Oral. Acceptance Rate: 18.4% (87 orals out of 472 submissions).*

42. K. N. Kutulakos, C. R. Dyer, and V. J. Lumelsky, "Provable strategies for vision-guided exploration in three dimensions," in *Proc. IEEE Robotics and Automation Conf.*, pp. 1365–1372, 1994. *Oral. Acceptance rate unknown.*

43. K. N. Kutulakos, W. B. Seales, and C. R. Dyer, "Building global object models by purposive viewpoint control," in *Proc. Second CAD-Based Vision Workshop*, pp. 169–182, 1994. *Oral. Acceptance rate unknown.*

44. K. N. Kutulakos, V. J. Lumelsky, and C. R. Dyer, "Vision-guided exploration: A step toward general motion planning in three dimensions," in *Proc. IEEE Robotics and Automation Conf.*, pp. 289–296, 1993. *Oral. Acceptance Rate: 55% (submission number unknown).*

45. K. N. Kutulakos and C. R. Dyer, "Toward global surface reconstruction by purposive viewpoint adjustment," in *Proc. Computer Vision and Pattern Recognition Conf.*, pp. 726-727, 1993. *Poster. Acceptance Rate: 43% (176 orals/posters out of 431 submissions).*

46. K. N. Kutulakos and C. R. Dyer, "Recovering shape by purposive viewpoint adjustment," in *Proc. Computer Vision and Pattern Recognition Conf.*, pp. 16–22, 1992. *Oral. Acceptance Rate: 24% (89 orals out of 357 submissions). Was among the five highest-ranked submissions to the conference.*

## D. Invited Conference Publications

47. K. N. Kutulakos, "Light Transport Analysis for 3D Photography," in *Proc. 6th Int. Conf. on 3D Imaging and Modeling*, p. 337, 2007.

48. K. N. Kutulakos, "Refractive and Specular 3D Shape by Light-Path Triangulation," in *Proc. Int. Symp. for the CREST Digital Archiving Project*, pp. 86–93, 2005.

49. K. N. Kutulakos, "Altering Reality Through Interactive Image and Video Manipulation," in *Proc. ICCV Workshop on Computer Vision, Virtual Reality, and Human Communication*, pp. 72-77, 1998.

## E. Non-Refereed Conference Publications

50. C. Harman, K. N. Kutulakos, and B. C. Madden, "Digital Photography for Time-Lapse Monitoring of Skin Lesions," in *Abstracts of the 61st Annual Meeting of the Society for Investigative Dermatology*, May 2000.

51. R. L. Carceroni and K. N. Kutulakos, "Shape and Motion of 3D Curves from Multi-View Image Sequences," in *1998 Image Understanding Workshop*.

52. K. N. Kutulakos and J. R. Vallino, "Affine object representations for calibration-free augmented reality," in *1996 Image Understanding Workshop*, pp. 825–830, 1996.

## F. Technical Reports

53. K. N. Kutulakos and S. M. Seitz, "A Theory of Shape by Space Carving," Technical Report #692, Department of Computer Science, University of Rochester, May 1998.

54. K. N. Kutulakos and S. M. Seitz, "What Do N Photographs Tell Us about 3D Shape?" Technical Report #680, Department of Computer Science, University of Rochester, January 1998.

55. S. M. Seitz and K. N. Kutulakos, "Plenoptic Image Editing," Technical Report #647, Department of Computer Science, University of Rochester, January 1997.

56. K. N. Kutulakos, "Affine Surface Reconstruction by Purposive Viewpoint Control," Technical Report #581, Department of Computer Science, University of Rochester, January 1996.

57. K. N. Kutulakos, "Exploring Three-Dimensional Objects by Controlling the Point of Observation ," Ph.D. Dissertation, Technical Report #1251, Department of Computer Science, University of Wisconsin–Madison, October 1994.

58. K. N. Kutulakos and C. R. Dyer, "Global Surface Reconstruction By Purposive Control of Observer Motion," Technical Report #1141, Department of Computer Science, University of Wisconsin–Madison, April 1993.

59. K. N. Kutulakos, C. R. Dyer and V. J. Lumelsky, "Object Exploration By Purposive, Dynamic Viewpoint Adjustment," Technical Report #1124, Department of Computer Science, University of Wisconsin–Madison, November 1992.

60. K. N. Kutulakos, C. R. Dyer and V. J. Lumelsky, "Motion Planning in Three-Dimensions," Technical Report #1111, Department of Computer Science, University of Wisconsin–Madison, September 1992.

61. K. N. Kutulakos and C. R. Dyer, "Recovering Shape By Purposive Viewpoint Adjustment," Technical Report #1035, Department of Computer Science, University of Wisconsin–Madison, August 1991.

62. K. N. Kutulakos and C. R. Dyer, "Using the Interference Graph for the Dynamic Ordering of Vision Processing Tasks," Technical Report #977, Department of Computer Science, University of Wisconsin–Madison, October 1990.

## CURRICULUM DEVELOPMENT

- **University of Toronto**
  - Introduced new course in the undergraduate curriculum *(CSC 320H: Introduction to Visual Computing)*. All course material is available electronically at the URL
    `http://www.cs.toronto.edu/~kyros/courses/320`
  - Completely revised the content of an already-existing course in the graduate curriculum *(CSC 2530H: Visual Modeling)*. All course material is available electronically at the URL
    `http://www.cs.toronto.edu/~kyros/courses/2530`
- **University of Rochester**
  - Developed and introduced new course into the Department of Computer Science's undergraduate program *(CSC 290B/C: Visual Computing)*.
  - Co-developed new 4-year inter-disciplinary undergraduate program in *Electronic Imaging Systems and Image Science*. Program went into effect in Fall of 1999 and received funding from NSF under the Combined Research-Curriculum Development Program. Design team members: Kyros Kutulakos, Chris Brown (Computer Science); Nicholas George (Optics); Murat Tekalp, Kevin Parker (Electrical Engineering); Michael Kriss (Center for Electronic Imaging Systems); and David Hursh (Education and Human Development).
  - Co-developed a new freshman-level course as part of the undergraduate program in Electronic Imaging Systems and Image Science *(ECE 102: Introduction to Electronic Imaging systems)*.

## LIST OF COURSES

Note: Was primary instructor for all courses listed below. Detailed information and course materials are available on the web at `http://www.cs.toronto.edu/~kyros/courses/courses.html`

- **Undergraduate Courses (University of Toronto)**
  - CSC 418H Computer Graphics (Fall 2008)
  - CSC 320H Introduction to Visual Computing (Fall 2002, Winter 2004, Winter 2006, Winter 2007, Winter 2008).
  - CSC 384H Introduction to Artificial Intelligence (Winter 2002).
- **Undergraduate Courses (University of Rochester)**
  - CSC 290B Visual Computing (Fall 1999 and Spring 2001). Open to freshman through senior levels.
  - ECE 102 Introduction to Electronic Imaging Systems. Six-lecture segment on Visual Computing (Spring 1999-2001). Open to freshmen only.
  - CSC 242 Artificial Intelligence (Spring 1999). Open to juniors and seniors.
  - Guest lecturer in introductory courses offered by the Biomedical Engineering Department.
- **Graduate Courses (University of Toronto)**
  - CSC 2530H Computer Vision for Advanced Digital Photography (Winter 2007, Winter 2008).
  - CSC 2530H Visual Modeling (Fall 2001, Fall 2002, Winter 2004, Winter 2006).
- **Graduate Courses (Beijing University of Aeronautics and Astronautics)**
  - Visual Modeling (Spring 2005).
- **Graduate Courses (University of Rochester)**
  - CSC-577 3D Photography (Spring 1998).
  - CSC-449 Sensory-Motor Systems (Fall 1997).
  - CSC-577 Geometric Methods in Computer Vision (Spring 1995).

## UNIVERSITY SERVICE

- **University of Toronto**
  - Member, Faculty Hiring Committee (2008-09)
  - Member, Graduate Recruiting Committee (2008-09)
  - Member, Tenure Committee (2006-08)
  - Member, Tenure Research Evaluation Committee (2006)
  - Chair, Time Pressures Committee (2007-08)
  - Chair, Graduate Admissions Committee (2005-06, 2006-07)
  - Member, Graduate Admissions Committee (2002-04)
  - Member, Graduate Committee (2002-04)
  - co-Organizer, Graduate Recruiting Weekend (2001-02)
- **University of Rochester**
  - Member, Medical Faculty Council (2001)
  - Member, Comprehensive Examinations Committee, Department of Computer Science (2001)

- Member, Web Committee, Department of Computer Science (2000)
- Chair, Laboratory Committee, Department of Computer Science (2000)
- Member, Laboratory Committee, Department of Computer Science (1997-1999)
- Member, Graduate Admissions Committee, Department of Computer Science (1997-2000)
- Member, Resident Selection Committee, Department of Dermatology (1997-2001)
- Member, Graduate Recruitment Committee (1997)

## SUPERVISION

- **Masters Students Supervised**
  - Sam Hasinoff (hasinoff@csail.mit.edu)
    Primary supervisor, Fall 2001 - Fall 2002
    Thesis Title: *Three-dimensional reconstruction of fire from images (October 2002)*
    Current position: NSERC Postdoctoral Fellow, CSAIL, Massachusetts Institute of Technology
  - Nigel Morris (nmorris@cs.toronto.edu)
    Primary supervisor, Fall 2002 - Fall 2004
    Thesis Title: *Image-based reconstruction of water surfaces using refractive stereo (October 2004)*
    Current position: Ph.D. student, University of Toronto
  - Eron Steger (esteger@cs.toronto.edu)
    Primary supervisor, Fall 2003 - Fall 2006
    Thesis title: *Reconstructing transparent objects by refractive light-path triangulation (October 2006)*
    Current position: Software Architect, Sketch2 Corp.
- **Masters Students In Progress**
  - Matthew Patrick O' Toole (motoole@dgp.toronto.edu)
    Primary supervisor, Fall 2007-present
    Thesis title: *Capturing surface reflectance by micro-photography*
  - Sofia Karygianni (sofiakar@cs.toronto.edu)
    Primary supervisor, Fall 2007-present
    Thesis title: *Modeling and recognition of a single individual from movies and photo collections*
  - Mark McCartin-Lim (markml@cs.toronto.edu)
    Primary supervisor, Winter 2008-present
    Thesis title: *The epitome of the web*
  - Huixuan Tang (hxtang@cs.toronto.edu)
    Primary supervisor, Fall 2008-present
    Thesis title: *Focal-stack stereo*
- **Ph.D. Students Supervised**
  - Sam Hasinoff (hasinoff@csail.mit.edu)
    Primary supervisor, Fall 2004 - Fall 2008
    Ph.D. Thesis: *Variable-aperture photography (September 2008)*
    Current position: NSERC Postdoctoral Fellow, CSAIL, Massachusetts Institute of Technology
  - Rahul Bhotika (rbhotika@gmail.com)
    Primary supervisor, Fall 1998 - Summer 2003
    Ph.D. Thesis: *Scene-space methods for bayesian inference of 3D shape and motion (August 2003)*
    Current position: Member of Research Staff, GE Global Research, Schenectady, NY, USA

- Rodrigo L. Carceroni (rcarceroni@gmail.com)
  Primary supervisor, Fall 1997 - Summer 2001
  Ph.D. Thesis: *Recovering non-rigid 3D motion, shape and reflectance from multi-view image sequences: a differential-geometric approach (October 2001)*
  Current position: Engineer, Google Inc. and Assistant Professor, Departamento de Ciência da Computação, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.

- James R. Vallino (J.Vallino@se.rit.edu)
  Co-supervisor, Summer 1995 - Fall 1997
  Primary advisor: Prof. Christopher R. Brown
  Ph.D. Thesis: *Interactive augmented reality (December 1997)*
  Current position: Associate Professor, Department of Computer Science, Rochester Institute of Technology, Rochester, USA.

- **Ph.D. Students In Progress**
  - Adrian Stere (adrianst@cs.toronto.edu)
    Primary supervisor, Fall 2006 - present
    Thesis title: *Unsupervised learning of image segmentation*
  - Nigel Morris (nmorris@cs.toronto.edu)
    Primary supervisor, November 2004-present
    Thesis title: *Shape acquisition of transparent materials*
  - Ady Ecker (adyecker@cs.toronto.edu)
    Co-supervisor, November 2002-present
    Thesis title: *Single-view reconstruction*

- **Ph.D. Student Visitors**
  - Ivo Ihrke (ivoihrke@cs.ubc.ca)
    Primary supervisor for period February-May 2005
    Visiting Microsoft Research-Asia from Max-Planck-Institut fuer Informatik, Germany

- **Ph.D. Thesis Committee Member**
  - Michael Daum, Department of Computer Science, University of Toronto
  - Sami Siddique, Department of Computer Science, University of Toronto
  - Fransisco Estrada, Department of Computer Science, University of Toronto (December 2004)
  - Thomas El-Maraghi, Department of Computer Science, University of Toronto (February 2003)
  - Christopher Eveland, Department of Computer Science, University of Rochester (December 2002)
  - Andrea Selinger, Department of Computer Science, University of Rochester (July 2001)
  - Zhaohui Sun, Department of Electrical and Computer Engineering, University of Rochester (June 2000)
  - Raj Rao, Department of Computer Science, University of Rochester (December 1998)

- **Ph.D. Thesis External Reader**
  - Todd R. Zickler, Department of Computer Science, Yale University (June 2004)
    Current position: Assistant Professor, Harvard University.

- **Postdoctocal Supervision (University of Rochester))**
  - Brian Madden, Ph.D. (Fall 1997-Spring 2000)
    Current position: Research Assistant Professor, Department of Dermatology, University of Rochester

- John Tu, M.D. (Fall 2000-Summer 2001)
  Current position: Dermatology Fellow, Department of Dermatology, University of Rochester

- **Research Staff (University of Rochester)**

  Craig Harman (Summer 2000-Summer 2001)
  Current position: Research Staff, Center for Future Health, Department of Dermatology, University of Rochester

- **Undergraduate Supervision (University of Toronto)**
  - Pardis Beikzadeh, Computer Science (Summer 2008)
  - Dajiang Wei, Engineering Science (Summer 2008-present)

- **Undergraduate Supervision (University of Rochester)**
  - Craig Harman (Fall 1997 - Spring 2000)
    Current position: Research staff, Center for Future Health, Department of Dermatology, University of Rochester, Rochester, NY.
  - Aaron Gerega (Fall 1997-Spring 2000) Current position: Programmer, Lockheed-Martin, Syracuse, NY.
  - Margarita Bratkova (Summer 1999)
  - Viju Soma (Summer 1999)
  - Fred Marcus (Spring 2000 - Fall 2000)
  - David Sankel (Spring 2000 - Fall 2000)