

**Course Reader for  
CSE P557 - Computer Graphics  
Autumn 2006  
Instructor: Zoran Popović**

---

**Topic: Image Processing**

Book/Journal Title: Machine Vision  
Article/Chapter: Chapters 4 and 5  
Author: Ramesh Jain, Rangachar Kasturi, and Brian G. Schunck  
Page#s (from - to): 115 – 127, 132 – 136, 143 – 161  
Publisher: McGraw-Hill Inc.  
Copyright year: 1995  
ISBN/ISSN: 0-07-032018-7

Book/Journal Title: Computer Graphics Proceedings of SIGGRAPH 90  
Article/Chapter: Paint by Numbers: Abstract Image Representations  
Author: Paul E. Haeberli  
Page#s (from - to): 207 – 214  
Volume/Edition: 24 (4)  
ISBN/ISSN: 0-201-50933-4

---

**Topic: Color**

Book/Journal Title: Computer Graphics  
Article/Chapter: Chapter 13  
Author: James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes  
Page#s (from - to): 574 – 603  
Publisher: Addison-Wesley  
Copyright year: 1996  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-84840-6

---

**Topic: Display Devices**

Book/Journal Title: Computer Graphics C Version  
Article/Chapter: Chapter 2  
Author: Donald Hearn and M. Pauline Baker  
Page#s (from - to): 36 – 48  
Publisher: Prentice Hall, Inc.  
Copyright year: 1997  
Volume/Edition: second edition  
ISBN/ISSN: 0-13-530924-7

Book/Journal Title: Computer Graphics C Version  
Article/Chapter: Chapter 4  
Author: Donald Hearn and M.Pauline Baker  
Page#s (from - to): 154 – 157  
Publisher: Prentice Hall, Inc.  
Copyright year: 1997  
Volume/Edition: 2nd edition  
ISBN/ISSN: 0-13-530924-7

---

**Topic: Affine Transformations**

Book/Journal Title: Computer Graphics  
Article/Chapter: Chapter 5  
Author: James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes  
Page#s (from - to): 201 – 227  
Publisher: Addison-Wesley  
Copyright year: 1996  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-84840-6

---

**Topic: Hierarchical Modeling**

Book/Journal Title: Interactive Computer Graphics, A Top-Down Approach  
Article/Chapter: Chapter 8  
Author: Edward Angel  
Page#s (from - to): 334 – 357  
Publisher: Addison Wesley Longman, Inc.  
Copyright year: 2000  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-38597-X

---

**Topic: Projections**

Book/Journal Title: Interactive Computer Graphics, A Top-Down Approach  
Article/Chapters: Chapters 1 and 5  
Author: Edward Angel  
Page#s (from - to): 19 – 31, 194 – 217  
Publisher: Addison Wesley Longman, Inc.  
Copyright year: 2000  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-38597-X

---

**Topic: Hidden Surface Algorithms**

Book/Journal Title: Computer Graphics  
Article/Chapter: Chapter 15  
Author: James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes  
Page#s (from - to): 649 – 651, 668 – 686  
Publisher: Addison-Wesley  
Copyright year: 1996  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-84840-6

---

**Topic: Shading**

Book/Journal Title: Computer Graphics  
Article/Chapter: Chapter 16  
Author: James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes  
Page#s (from - to): 722 – 741  
Publisher: Addison-Wesley  
Copyright year: 1996  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-84840-6

Book/Journal Title: Communications of the ACM  
Article/Chapter: An Improved Illumination Model for Shaded Display  
Author: T. Whitted  
Page#s (from – to): 343 – 349  
Publisher: The Association for Computing Machinery  
Copyright year: 1980  
Volume/Edition: 23 (6)

---

**Topic: Ray Tracing**

Book/Journal Title: Computer Graphics  
Article/Chapter: Chapters 15 and 16  
Author: James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes  
Page#s (from - to): 701 – 715, 776 – 793  
Publisher: Addison-Wesley  
Copyright year: 1996  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-84840-6

Book/Journal Title: Graphics Gems I  
Article/Chapter: Properties of Surface-Normal Transformations  
Author: Ken Turkowski  
Page#s (from - to): 539 – 547  
Publisher: Academic Press  
Copyright year: 1990

---

**Topic: Texture Mapping**

Book/Journal Title: Interactive Computer Graphics, A Top-Down Approach  
Article/Chapter: Chapter 9  
Author: Edward Angel  
Page#s (from - to): 373 – 386  
Publisher: Addison Wesley Longman, Inc.  
Copyright year: 2000  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-38597-X

Book/Journal Title: IEEE Computer Graphics and Applications  
Article/Chapter: Survey of texture mapping  
Author: Paul S. Heckbert  
Page#s (from - to): 56 – 67  
Publisher: IEEE  
Copyright year: 1986  
Volume/Edition: 6 (11)

---

**Topic: Parametric Curves and Surfaces**

Book/Journal Title: Computer Graphics  
Article/Chapter: Chapter 11  
Author: James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes  
Page#s (from - to): 478 – 516, 517 – 528  
Publisher: Addison-Wesley  
Copyright year: 1996  
Volume/Edition: second edition  
ISBN/ISSN: 0-201-84840-6

Book/Journal Title: An Introduction to Splines for Use in Computer Graphics and Geometric Modeling  
Author: Richard Bartels, John Beatty, and Brian Barsky  
Page#s (from - to): 9 – 17  
Publisher: Morgan Kaufmann Publishers, Palo Alto, CA  
Copyright year: 1987

---

**Topic: Subdivision Surfaces**

Book/Journal Title: Wavelets for Computer Graphics: Theory and Applications  
Article/Chapter: Chapters 6, 10, and Appendix A  
Author: Eric J. Stollnitz, Tony D. DeRose, David H. Salesin  
Page#s (from - to): 61 – 72, 141 – 149, 203 – 208  
Publisher: Morgan Kaufmann Publishers, Inc.  
Copyright year: 1996  
ISBN/ISSN: 1-55860-375-1

---

**Topic: Particle Systems**

Book/Journal Title: SIGGRAPH 1999 (course notes on Physically Based Modeling)  
Article/Chapter: Differential Equation Basics  
Author: Andrew Witkin and David Baraff  
Page#s (from - to): B1 - B8  
Publisher: <http://cdserver.icemt.iastate.edu/cd/s99cn2/courses/36/course36.pdf>  
Copyright year: 1999

Book/Journal Title: SIGGRAPH 1999 (course notes on Physically Based Modeling)  
Article/Chapter: Particle System Dynamics  
Author: Andrew Witkin  
Page#s (from - to): C1 - C12  
Publisher: <http://cdserver.icemt.iastate.edu/cd/s99cn2/courses/36/course36.pdf>  
Copyright year: 1999

Book/Journal Title: SIGGRAPH 1999 (course notes on Physically Based Modeling)  
Article/Chapter: Physically Based Modeling  
Author: David Baraff  
Page#s (from - to): D1 - D5  
Publisher: <http://cdserver.icemt.iastate.edu/cd/s99cn2/courses/36/course36.pdf>  
Copyright year: 1999

---

**Topic: Character Animation**

Book/Journal Title: Proceedings of SIGGRAPH (Computer Graphics)  
Article/Chapter: Principles of traditional animation applied to 3D computer animation  
Author: John Lasseter  
Page#s (from - to): 35 – 44  
Publisher: The Association for Computing Machinery  
Copyright year: 1987  
ISBN/ISSN: 0-89791-227-6

Article/Chapter: Quaternions  
Author: Ken Shoemake  
Publisher: University of Pennsylvania

Article/Chapter: Inverse Kinematics and Geometric Constraints for Articulated Figure Manipulation  
Author: Chris Welman  
Publisher: Simon Fraser University  
Copyright year: 1993

---

**Topic:                   Realistic Character Animation**

Book/Journal Title:    Proceedings of SIGGRAPH (Computer Graphics)  
Article/Chapter:        Animating Human Athletics  
Author:                 Jessica K. Hodgins, Wayne L. Wooten, David C. Brogan, James F. O'Brien  
Publisher:              The Association for Computing Machinery  
Copyright year:        1995