

Curriculum Vitae  
**GERARD A. ENGH, MD**

**PERSONAL**

Born November 14, 1941 - Alexandria, Virginia  
Citizenship: U. S. A.  
Married, four children

**ORTHOPAEDIC PRACTICE**

Anderson Orthopaedic Institute  
2501 Parker's Lane, Suite 200  
Alexandria, VA 22306

**EDUCATION**

Davidson College (1962)

*Medical Degree* University of Virginia (1966)

*Internship* Yale - New Haven Hospital (1966-1967)  
New Haven, Connecticut

*Residency* Yale - New Haven Hospital (1967- 1971)  
New Haven, Connecticut  
Specialty: Orthopaedic Surgery

**CERTIFICATION**

American Board of Orthopaedic Surgery (1972)

**LICENSURE**

Virginia # 0101017915

**MAJOR RESEARCH INTEREST** Total Knee Arthroplasty

**MILITARY SERVICE**

*Major*, Department of Orthopaedics (1971-1973)  
DeWitt Army Hospital  
Ft. Belvoir, Virginia

**PROFESSIONAL WORK EXPERIENCE**

Private Practice (1973 – Present)  
Anderson Orthopaedic Institute  
2501 Parker's Lane, Suite 200  
Alexandria, VA 22306

President  
Anderson Orthopaedic Research Institute  
2501 Parker's Lane, Suite 200  
Alexandria, VA 22306

**HOSPITAL AFFILIATIONS**

INOVA Mt. Vernon Hospital  
2501 Parker's Lane  
Alexandria, VA 22306

## **FACULTY POSITIONS**

Clinical Associate Professor (7/1/04 – Present)  
University of Maryland

## **MAJOR ACADEMIC TASKS**

President (1985 - Present)  
Director, Knee Research  
Anderson Orthopaedic Research Institute

Trustee  
The Anderson Clinic Post-Graduate Medical Education  
Foundation

## **PROFESSIONAL MEMBERSHIP**

1975 *Fellow*, American Academy of Orthopaedic Surgeons

1990 Orthopaedic Research Society

1992 The Knee Society  
Secretary / Treasurer 1999  
3<sup>rd</sup> Vice President 2003  
2<sup>nd</sup> Vice President 2004

1992 Association for Arthritic Hip and Knee Surgery

1995 Honorary Member – South African Arthroplasty Society

1997 American Orthopaedic Society

Washington Orthopaedic Society  
*President* 1991 - 1992  
Vice President 1990 - 1991  
Secretary/Treasurer 1989 - 1990

Virginia Orthopaedic Society

Yale Orthopaedic Society

## **EDITORIAL TASKS**

*Surgery*

Consultant Reviewer: *The Journal of Bone and Joint*

Member of Editorial Review Board: *The Journal of Arthroplasty*

## **GRANT SUPPORT**

6/30/94 - 7/1/95

The Neglected Side of the Joint Replacement: The Critical Role of Damaged Femoral Components in Total Knee Arthroplasty Failure  
Arthritis Foundation

Direct costs awarded: \$ 225,000.00

## **LOCAL ACTIVITIES**

Consultant Orthopaedist (1972 – 1980)  
U.S. Public Health Service  
Washington, DC

## **AWARDS**

- 1997 Ranawat Award**      The Histology of Nine Structural Bone Grafts Used in Total Knee Arthroplasty.  
Authors: NL Parks and **GA Engh**.
- 1998 Coventry Award**      Modular Tibial Insert Micromotion. A Concern with Contemporary Knee Implants.  
Authors: NL Parks, **GA Engh**, LDT Topoleski, and J Emperado.
- 1998 Ranawat Award**      Comparison of Surgical Approaches in Total Knee Arthroplasty.  
Authors: RL Barrack, P Smith, B Munn, **GA Engh**, and CH Rorabeck.

## **PUBLICATIONS**

### ***BOOKS***

Revision Total Knee Arthroplasty. Editors: **Engh GA** and Rorabeck CH. Publisher: Williams & Wilkins, Baltimore, MD. Copyright 1997.

### ***BOOK CHAPTERS***

**Engh GA** and Dwyer KA. Mechanical Failure: Implant Breakage and Loosening. In: Fu F, Harner CD, and Vince KG. *Knee Surgery*. Baltimore, MD: Williams & Wilkins, 1994.

**Engh GA** and Parks NL. The Management of Bone Defects in Revision Total Knee Arthroplasty. *AAOS Instructional Course Lectures* Vol. 46, 1997, pp. 227-236.

**Engh GA** and Ammeen DJ. Periprosthetic Fractures Adjacent to Total Knee Implants: Treatment and Clinical Results. *AAOS Instructional Course Lectures* Vol. 47, 1998, pp. 437-448.

**Engh GA** and McAuley JP. Unicondylar Arthroplasty: An Option for High Demand Patients with Gonarthrosis. *AAOS Instructional Course Lectures* Vol. 48, 1999, pp. 143-148.

**Engh GA** Medial Epicondylar Osteotomy: A Technique Used with Primary and Revision Total Knee Arthroplasty to Improve Surgical Exposure and Correct Varus Deformity. *AAOS Instructional Course Lectures* Vol. 48, 1999, pp. 153-156.

**Engh GA** and Ammeen DJ. Bone Loss with Revision Knee Arthroplasty: Defect Classification and Alternatives for Reconstruction. *AAOS Instructional Course Lectures* Vol. 48, 1999, pp. 167-175.

**Engh GA** and Ammeen DJ. Revision Total Knee Replacement: Bone Defect Classification. *AAOS Orthopaedic Knowledge Update. Hip and Knee Reconstruction 2*. Rosemont, IL: American Academy of Orthopaedic Surgeons, 2000, pp. 342-345.

Lewandowski PJ and **Engh GA**. Patello-Femoral Complications Following Total Knee Arthroplasty. In: Malek MM. *Knee Surgery – Complications, Pitfalls and Salvage*. New York, NY: Springer, 2001, pp. 380-392.

**Engh GA** Extensor Mechanism Reconstruction with a Semitendinosus Graft. In: Harner CD, Vince KG, and Fu FH.

*Techniques in Knee Surgery*. Philadelphia, PA: Williams & Wilkins, 2001, pp. 274-279.

Sanchez F and **Engh GA**. Revision Knee Arthroplasty: How I Do It. In: Insall JN and Scott WN. *Surgery of the Knee, 3<sup>rd</sup> Edition*. Philadelphia, PA: Churchill Livingstone, 2001, pp. 1942-1948.

**Engh GA** and Ammeen DJ. Periprosthetic Osteolysis with Total Knee Arthroplasty. *AAOS Instructional Course Lectures* Vol. 50, 2001, pp. 391-398.

Terefenko KM, McAuley JP, and **Engh GA**. Osseous Defects in Total Knee Replacement and Revision: Tibia. In: Callaghan JJ, Rosenberg AG, Rubash HE, Simonian PT, and Wickiewicz TL. *The Adult Knee*. Philadelphia, PA: Lippincott Williams & Wilkins, 2003, pp. 1199-1206.

**Engh GA** and Ammeen DJ. Epidemiology of osteolysis: backside implant wear. *AAOS Instructional Course Lectures* Vol. 53, 2004, pp. 243-249.

**Engh GA**, McAuley JP and Ammeen DJ. Treatment of the unstable total knee arthroplasty. *AAOS Instructional Course Lectures* Vol. 53, 2004, pp. 237-241.

#### **JOURNAL ARTICLES**

Bollet AJ, **Engh GA**, and Parson W. Epidemiology of Osteoporosis I - Sex and Race Incidence of Hip Fractures. *Archives of Internal Medicine*, Vol. 116, August 1965, pp. 191-194.

Bollet AJ, **Engh GA**, Parson W, and Hardin G. Epidemiology of Osteoporosis II - Incidence of Hip Fractures in Mental Institutions. *Journal of Bone and Joint Surgery* Vol. 50-A No. 3, April 1968, pp. 557-562.

Quintiliani R and **Engh GA**. Overwhelming Sepsis Associated with Group A Beta Hemolytic Streptococci. *Journal of Bone and Joint Surgery* Vol. 53-A No. 7, October 1971, pp. 1391-1399.

**Engh GA** and Chrisman OD. Experimental Arthritis in Rabbit Knees: A Study of Relief of Pressure on One Tibial Plateau in Immature and Mature Rabbits. *Clinical Orthopaedics and Related Research*, No. 125, June 1977, pp. 221-226.

Petersen T and **Engh GA**. Radiographic Assessment of Knee Alignment after Total Knee Arthroplasty. *Journal of Arthroplasty*, Vol. 3 No. 1, March 1988, pp. 67-72.

Tillet ED, **Engh GA**, and Petersen T. A Comparative Study of Extramedullary and Intramedullary Alignment Systems in Total Knee Arthroplasty. *Clinical Orthopaedics and Related Research*, Vol. 230, May 1988, pp. 176-181.

**Engh GA**, Bobyn JD, and Petersen TL. Radiologic and Histologic Study of Porous Coated Tibial Component Fixation in Cementless Total Knee Arthroplasty. *Orthopaedics*, Vol. 11 No. 5, May 1988, pp. 725-731.

Lombardi AV Jr, **Engh GA**, Volz RG, Albrigo JL, and Brainard BJ. Fracture/Dissociation of the Polyethylene in Metal-Backed Patellar Components in Total Knee Arthroplasty. *Journal of Bone and Joint Surgery*, Vol. 70-A No. 5, June 1988, pp. 675-679.

**Engh GA.** Failure of the Polyethylene Bearing Surface of a Total Knee Replacement within Four Years. A Case Report. *Journal of Bone and Joint Surgery*, Vol. 70-A No. 7, August 1988, pp. 1093-1096.

**Engh GA** and Petersen TL. Comparative Experience with Intramedullary and Extramedullary Alignment in Total Knee Arthroplasty". *Journal of Arthroplasty*, Vol. 5 No. 1, March 1990, pp. 1-8.

Corpe RS and **Engh GA.** A Quantitative Assessment of Degenerative Changes Acceptable in the Unoperated Compartments of Knees Undergoing Unicompartmental Replacement. *Orthopaedics*, Vol. 13 No. 3, March 1990, pp. 319-323.

**Engh GA.** The Use of Bonegrafts in Difficult Primary and Revision Total Knee Arthroplasty. *Orthopaedic Review*, Vol. XIX Supplement, October 1990, pp. 64-70.

**Engh GA** and Dwyer KA. The Anatomic Modular Knee (AMK) - A 2 to 4 Year Follow-up of the First 113 Cases. *American Journal of Knee Surgery*, Vol. 4 No. 2, Spring 1991, pp. 51-58.

Peters JD, **Engh GA**, and Corpe RS. The Metal Backed Patella: An Invitation for Failure? *Journal of Arthroplasty* Vol. 6 No. 3, September 1991, pp. 221-228.

Dwyer KA, Topoleski LDT, Bauk DJ, Nakielny R, and **Engh GA.** Wear in Total Knee Arthroplasties: An Initial Surface Damage Analysis of Retrieved Femoral Components. *Trans. Society for Biomaterials*, Implant Retrieval Symposium, St. Charles, IL, 1992.

**Engh GA**, Dwyer KA, and Hanes CK. Polyethylene Wear of Metal-backed Tibial Components in Total and Unicompartmental Knee Prostheses. *Journal of Bone and Joint Surgery* Vol. 74-B No. 1, January 1992, pp. 9-17.

Parsley BS, **Engh GA**, and Dwyer K. Preoperative Flexion: Does It Influence Postoperative Flexion After Posterior-Cruciate-Retaining Total Knee Arthroplasty? *Clinical Orthopaedics and Related Research*, No. 275, February 1992, pp. 204-210.

Peters PC Jr, **Engh GA**, Dwyer KA, and Vinh TN. Osteolysis after Total Knee Arthroplasty without Cement. *Journal of Bone and Joint Surgery* Vol. 74-A No. 6, July 1992, pp. 864-876.

Cadambi A and **Engh GA.** Use of a Semitendinosus Tendon Autogenous Graft for Rupture of the Patellar Ligament after Total Knee Arthroplasty. A Report of Seven Cases. *Journal of Bone and Joint Surgery* Vol. 74-A No. 7, August 1992, pp. 974-979.

Dwyer KA, Topoleski LDT, Bauk DJ, Nakielny R, and **Engh GA.** The Neglected Side of the Wear Couple: Analysis of Surface Morphology of Retrieved Femoral Components. *Trans. 38th Annual Meeting, Orthopaedic Research Society*, p. 82, 1993.

Coutts RD, **Engh GA**, Mayor MB, Whiteside LA, Wilde AH. The Painful Total Knee Replacement and the Influence of Component Design. *Contemporary Orthopaedics*, Vol. 28, No. 6, June 1994, pp. 523-536, 541-545.

Cadambi A, **Engh GA**, Dwyer KA, and Vinh TN. Osteolysis of the Distal Femur after Total Knee Arthroplasty. *Journal of Arthroplasty*, Vol. 9 No. 6, December 1994, pp. 579-594.

**Engh GA**, Parks NL, and Ammeen DJ. Tibial Osteolysis in Cementless Total Knee Arthroplasty: A

Review of 25 Cases Treated With and Without Tibial Component Revision. *Clinical Orthopaedics and Related Research* No. 309, December 1994, pp. 33-43.

**Engh GA**, Parks NL and Ammeen DJ. Influence of Surgical Approach on Lateral Retinacular Releases in Total Knee Arthroplasty. *Clinical Orthopaedics and Related Research* No. 331, October 1996, pp. 56-63.

**Engh GA**, Holt BT, Parks NL. A Midvastus Muscle-Splitting Approach for Total Knee Arthroplasty. *Journal of Arthroplasty* Vol. 12 No. 3, April 1997, pp. 322-331.

**Engh GA**, Herzwurm PJ, and Parks NL. Treatment of Major Defects of Bone with Bulk Allografts and Stemmed Components During Total Knee Arthroplasty. *Journal of Bone and Joint Surgery* Vol. 79-A No. 7, July 1997, pp. 1030-1039.

**Engh, GA** and Ammeen DJ. Periprosthetic Fractures Adjacent to Total Knee Implants. Treatment and Clinical Results.” *Journal of Bone and Joint Surgery* Vol. 79-A No. 7, July 1997, pp. 1100-1113.

Engh CA Jr., Moore KD, Vinh TN, and **Engh GA**. Titanium Prosthetic Wear Debris in Remote Bone Marrow. A Report of Two Cases. *Journal of Bone and Joint Surgery* Vol. 79-A No. 11, November 1997, 1721-1725.

Holt BT, Parks NL, **Engh GA** and Lawrence JM. Comparison of Closed-Suction Drainage and No Drainage after Primary Total Knee Arthroplasty. *Orthopaedics* Vol. 20 No. 12, December 1997, pp. 1121-1125.

Parks NL and **Engh GA**. The Ranawat Award. Histology of Nine Structural Bone Grafts Used in Total Knee Arthroplasty. *Clinical Orthopaedics and Related Research* No. 345, December 1997, pp. 17-23.

Wasielowski RC, Parks NL, Williams I, Surprenant H, Collier JP, **Engh GA**. Tibial Insert Undersurface as a Contributing Source of Polyethylene Wear Debris. *Clinical Orthopaedics and Related Research* No. 345, December 1997, pp. 53-59.

Bugbee WD, Ammeen DJ, Parks NL, and **Engh GA**. 4- to 10-year Results with the Anatomic Modular Total Knee. *Clinical Orthopaedics and Related Research* No. 348, March 1998, pp. 158-165.

**Engh GA** and Ammeen DJ. Classification and Preoperative Radiographic Evaluation: Knee. *Orthopaedic Clinics of North America* Vol. 29 No. 2, April 1998, pp. 205-217.

**Engh GA** and Parks NL. Surgical Technique of the Midvastus Arthrotomy. *Clinical Orthopaedics and Related Research* No. 351, June 1998, pp. 270-274.

Parks NL, **Engh GA**, Topoleski LD, and Emperado J. The Coventry Award. Modular Tibial Micromotion. A Concern with Contemporary Knee Implants. *Clinical Orthopaedics and Related Research* No. 356, November 1998, pp. 10-15.

Barrack RL, Smith P, Munn B, **Engh GA**, and Rorabeck CH. Comparison of Surgical Approaches in Total Knee Arthroplasty. *Clinical Orthopaedics and Related Research* No. 356, November 1998, pp. 16-21.

Barrack PL, Matzkin E, Ingraham R, **Engh GA**, and Rorabeck CH. Revision Knee Arthroplasty with Patella Replacement versus Bony Shell. *Clinical Orthopaedics and Related Research* No. 356, November 1998, pp. 139-143.

**Engh GA** and Ammeen DJ. Clinical Manifestations of a Sometimes Silent Disease. *Orthopaedics* Vol. 22 No. 9, September 1999, pp. 799-801.

Scott RD, **Engh GA**, Freeman MA, Hofmann AA, Ranawat CS and Ritter MA. Knee Challenges: What Would You Do? *Orthopaedics* Vol. 22 No. 9, September 1999, pp. 891-895.

**Engh GA** and Ammeen DJ. Results of Total Knee Arthroplasty with Medial Epicondylar Osteotomy to Correct Varus Deformity. *Clinical Orthopaedics and Related Research* No. 367, October 1999, pp. 141-148.

**Engh GA**, Koralewicz LM, and Pereles TP. Clinical Results of Modular Polyethylene Insert Exchange with Retention of Total Knee Arthroplasty Components. *Journal of Bone and Joint Surgery*, Vol. 82-A No. 4, April 2000, pp. 516-523.

**Engh GA**. Orienting the Femoral Component at Total Knee Arthroplasty. *The American Journal of Knee Surgery* Vol. 13 No. 3, Summer 2000, pp. 162-165.

Koralewicz LM and **Engh GA**. Comparison of Proprioception in Arthritic and Age-Matched Normal Knees. *The Journal of Bone Joint Surgery*, Vol. 82-A No. 11, November 2000, pp. 1582-1588.

Bugbee WD, Ammeen DJ and **Engh, GA**. Does Implant Selection Affect Outcome of Revision Knee Arthroplasty? *The Journal of Arthroplasty*, Vol. 16 No. 5, August 2001, pp. 581-585.

Barrack RL, Rorabeck CH and **Engh GA**. Patellar Options in Revision Total Knee Arthroplasty. *Orthopaedics*, Vol. 24 No. 9, September 2001, pp. 899-900.

Saleh KJ, Macaulay A, Radosevich DM, Clark CR, **Engh GA**, Gross A, Haas S, Johanson NA, Krackow KA, Laskin R, Norman G, Rand JA, Saleh L, Scuderi G, Sculco T, and Windsor R. The Knee Society Index for Severity for Failed Total Knee Arthroplasty. *Clinical Orthopaedics & Related Research* 392, November 2001, pp. 166-173.

Benjamin J, **Engh GA**, Parsley B, Donaldson T, and Coon T. Morselized Bone Grafting of Defects in Revision Total Knee Arthroplasty. *Clinical Orthopaedics & Related Research* 392, November 2001, pp. 62-67.

McAuley JP, **Engh GA**, and Ammeen DJ. Revision of Failed Unicompartamental Knee Arthroplasty. *Clinical Orthopaedics & Related Research* 392, November 2001, pp. 279-282.

**Engh GA**, Lounici S, Rao AR, Collier MB. In vivo deterioration of tibial baseplate locking mechanisms in contemporary modular total knee components. *Journal of Bone Joint Surgery*, Vol.83-A No. 11, November 2001, pp. 1660-1665.

Ridgeway SR, McAuley JP, Ammeen DJ, and **Engh GA**. The Effect of Alignment of the Knee on the Outcome of Unicompartamental Knee Replacement. *Journal of Bone Joint Surgery*, Vol. 84-B No. 3, April 2002, pp. 351-355.

**Engh GA.** Orthopaedic Crossfire – Can We Justify Unicondylar Arthroplasty as a Temporizing Procedure? In the Affirmative. *Journal of Arthroplasty* Vol. 17 No. 4 (Supplement), June 2002, pp. 54-55.

McGovern TF, Ammeen DJ, Collier JP, Currier BH, and **Engh GA.** Rapid Polyethylene Failure of Unicondylar Tibial Components Sterilized with Gamma Irradiation In Air and Implanted After a Long Shelf Life. *Journal of Bone Joint Surgery* Vol. 84-A No. 6, June 2002, pp. 901-906.

Trousdale RT, Thornhill TS, **Engh GA,** Gustke KA, and Ranawat CS. Case Challenges in Knee Surgery: What Would You Do? *Orthopaedics* Vol. 25 No. 9, September 2002, 987-988.

Rao AR, **Engh GA,** Collier MB, and Lounici S. Tibial Interface Wear In Retrieved Total Knee Components And Correlations With Modular Insert Motion. *Journal of Bone Joint Surgery*, Vol.84-A No. 10, October 2002, pp. 1849-1855.

McAuley JP, Harrer MF, Ammeen D, **Engh GA.** Outcome of Knee Arthroplasty in Patients with Poor Preoperative Range Of Motion. *Clinical Orthopaedics and Related Research* No. 404, November 2002, pp. 203-207.

**Engh GA** and Ammeen D. Session II: Polyethylene Wear. *Clinical Orthopaedics and Related Research* No. 404, November 2002, pp. 71-74.

Pollock DC, Ammeen DJ and **Engh GA.** Synovial Entrapment: A Complication of Posterior Stabilized Total Knee Arthroplasty. *Journal of Bone Joint Surgery*, Vol. 84-A No.12, December 2002, pp. 2174-2178.

Mabrey JD, Afsar-Keshmiri A, **Engh GA,** Sychterz CJ, and Wirth MA. Standardized analysis of UHMWPE wear particles from failed total joint arthroplasties. *Journal of Biomedical Materials Research*, Vol. 63 No. 5, pp. 475-483.

Barrack RL, **Engh G,** Rorabeck C, Sawhney J, and Woolfrey W. Patient satisfaction and outcome after septic verses aseptic revision total knee arthroplasty. *Journal of Arthroplasty* Vol. 15 No. 8, 2000, pp. 990-993.

Barrack RL, Butler RA, Andrews P, Rorabeck C, and **Engh G.** Managing the infected knee: As good as it gets. *Orthopaedics* Vol. 23 No. 9, 2000, 991-992.

Barrack RL, Rorabeck C, Partington P, Sawhney J, and **Engh G.** The Results of Retaining a Well-Fixed Patellar Component in Revision Total Knee Arthroplasty. *Journal of Arthroplasty* Vol. 15 No. 4, 2000, pp. 413-417.

Saleh KJ, Macaulay A, Radosevich DM, Clark CR, **Engh G,** Gross A, Haas S, Johanson NA, Krackow K, Laskin R, Norman G, Rand JA, Saleh L, Scuderi G, Sculco T, Windsor R. The Knee Society Index of Severity for Failed Total Knee Arthroplasty: Development and Validation. *Clinical Orthopaedics and Related Research* 392, 2001, 153-165.

Saleh KJ, Macaulay A, Radosevich DM, Clark CR, **Engh G,** Gross A, Haas S, Johanson NA, Krackow K, Laskin R, Norman G, Rand JA, Saleh L, Scuderi G, Sculco T, Windsor R. The Knee Society Index of Severity for Failed Total Knee Arthroplasty: Practical Application. *Clinical Orthopaedics and Related Research* 392, 2001, 166-173.

Rosenberg AG, Cameron HU, **Engh GA**, Hanssen AD, Rorabeck CH, Thornhill TS. Case challenges in knee surgery: what would you do? *Journal of Arthroplasty* 2003; Vol. 18 No. 3 (Supplement 1):pp55-67.

**Engh GA** and Wolf R. Responsibilities When Confronting a Defective Surgical Implant. *Clinical Orthopaedics and Related Research* 407, February 2003, pp. 54-58.

**Engh GA** and Ammeen DJ. The Midvastus Approach to the Knee. *The Journal of Knee Surgery* 2003; Vol. 16 No. 1: pp 48-51.

McAuley JP and **Engh GA**. Constraint in Total Knee Arthroplasty: When and What? *Journal of Arthroplasty* 2003; Vol. 18 No. 3 (Supplement 1): pp 51-54.

Rosenberg AG, Cameron HU, **Engh GA**, Hanssen AD, Rorabeck CH, Thornhill TS. Case Challenges in Knee Surgery: What Would You Do? *Journal of Arthroplasty* 2003; Vol. 18 No. 3 (Supplement 1): pp 55-57.

**Engh GA**. The Difficult Knee – Severe Varus or Valgus. *Clinical Orthopaedics and Related Research* 416, November 2003; pp. 58-63.

**Engh GA** and Ammeen DJ. Epidemiology of Osteolysis: Backside Implant Wear. *AAOS Instructional Course Lectures* 2004; Vol. 53: pp. 243-249.

McAuley JP, **Engh GA**, Ammeen DJ. Treatment of the Unstable Total Knee Arthroplasty. *AAOS Instructional Course Lectures 2004*; Vol. 53: pp. 237-241.

Collier MB, McAuley JP, Szuszczewicz ES, **Engh GA**. Proprioceptive deficits are comparable before unicondylar and total knee arthroplasties, but greater in the more symptomatic knee of the patient. *Clinical Orthopaedics and Related Research* 423, June 2004;pp. 138-143.

Collier MB, Engh CA Jr, **Engh GA**. Shelf Age of the Polyethylene Tibial Component and Outcome of Unicondylar Knee Arthroplasty. *Journal of Bone and Joint Surgery American* 2004; Vol. 86-A No. 4: pp 763-769.

Collier MB, Engh CA Jr., McAuley JP, **Engh GA**. Factors Associated With Tibial Polyethylene Wear In Total Knee Arthroplasty: Analysis Of Inserts Retrieved At Revision And At Autopsy. *Journal of Arthroplasty* 2004; Vol. 19 No. 2: pp 257.

**Engh GA**. Structural Femoral Head Allografting with Revision TKA. *Orthopaedics* 2004; Vol. 27 No. 9: pp. 999-1000.

**Engh GA**, and Ammeen DJ. Is an intact anterior cruciate ligament needed in order to have a well-functioning unicondylar knee replacement? *Clinical Orthopaedics and Related Research* 428, November 2004; pp 170-173.

Howe DJ, Taunton OD Jr., **Engh GA**. Retained cement after unicondylar knee arthroplasty. A report of four cases. *Journal of Bone and Joint Surgery- American* 2004; Vol. 86-A No 10: pp 2283-2286.

Hockman DE, Ammeen D, **Engh GA**. Augments and allografts in revision total knee arthroplasty. *Journal of Arthroplasty* 2005; Vol. 20 No. 1: pp 35-41.

Callaghan JJ, Dorr LD, **Engh GA**, Hanssen AD, Healy WL, Lachiewicz PF, Lonner JH, Lotke PA, Ranawat CS, Ritter MA, Salvati EA, Sculco TP, Thornhill TS, American College of Chest Physicians. Prophylaxis for thromboembolic disease: recommendations from the American College of Chest Physicians – are they appropriate for orthopaedic surgery? *Journal of Arthroplasty* 2005; Vol. 20 No. 3:pp 273-274.

**Engh GA**, Ammeen DJ. Isolated liner exchange: not always a useful option in revision TKA. Counterpoint. *Orthopaedics* 2005 Sep;28(9):pp 993-994.

Collier MB, Engh CA Jr, McAuley JP, Ginn SD, **Engh GA**. Osteolysis after total knee arthroplasty: influence of tibial baseplate surface finish and sterilization of polyethylene insert. Findings at five to ten years postoperatively. *Journal of Bone and Joint Surgery* 2005, Vol. 87-A No. 12:pp 2702-2708.

Burke WV, Ammeen DJ, **Engh GA**. Isolated revision of failed metal-backed patellar components: Outcome with minimum 4-year follow-up. *Journal of Arthroplasty* 2005, Vol. 20 No. 8:pp 998-1001.

Urban JA, Collier MB, Engh CA Jr, **Engh GA**. Relationship between product demand, tibial polyethylene insert shelf age, and total knee arthroplasty survival: retrospective review of total knees of one design. *Journal of Arthroplasty* 2006, Vol. 21 No. 3:pp 330-337.

Mulhall KJ, Gromrawi HM, **Engh GA**, Clark CR, Lotke P, Saleh KJ. Radiographic prediction of intraoperative bone loss in knee arthroplasty revision. *Clinical Orthopaedics & Related Research* 446, May 2006;pp 51-58.

Booth RE Jr, **Engh GA**, Laskin RS, Lotke PA, Jones RE, Vince KG. What would you do? Case challenges in knee surgery. *Journal of Arthroplasty* 2006, Vol. 21 No. 4 (Suppl 1); pp 61-67.

Eikmann TH, Collier MB, Sukezaki F, McAuley JP, **Engh GA**. Survival of media unicondylar arthroplasties placed by one surgeon 1984-1998. *Clinical Orthopaedics & Related Research* 452, Nov 2006; pp 143-149.

Hamilton WG, Collier MB, Tarabee E, McAuley JP, Engh CA Jr, **Engh GA**. Incidence and reasons for reoperation after minimally invasive unicompartmental knee arthroplasty. *Journal of Arthroplasty* 2006, Vol. 21 No. 6 (Suppl 2):pp 98-107.

Collier MB, Eickmann THG, Sukezaki F, McAuley JP, **Engh GA**. Patient, implant, and alignment factors associated with revision of medial compartment unicondylar arthroplasty. *Journal of Arthroplasty* 2006, Vol. 21 No. 6 (Suppl 2):pp 108-115.

**Engh GA**. The lateral unicompartmental replacement: a road less traveled. *Orthopaedics* 2006 Sep;29(9):pp 825-826.

Naudie DD, Ammeen DJ, **Engh GA**, Rorabeck CH. Wear and osteolysis around total joint arthroplasty. *J Am Acad Orthop Surg*. January 2007, Vol. 15 No.1;pp 53-64.

Collier MB, Engh CA Jr, McAuley JP, **Engh GA**. Factors associated with the loss of thickness of polyethylene tibial bearings after knee arthroplasty. *Journal of Bone and Joint Surgery* 2007, 89-A:1306-1314.

## **SCIENTIFIC EXHIBITS**

**Engh GA**, Bobyn JD, Petersen T, and Furman WK. "Radiographic & Histologic Study of Cementless Tibial Component Fixation in Total Knee Arthroplasty". Scientific exhibit at the **Annual Meeting of the American Academy of Orthopaedic Surgeons**, January 22-27, 1987.

**Engh GA** and Parks NL. "The Use of a Bone Defect Classification System in Revision Total Knee Arthroplasty". Scientific exhibit at the **61st Annual Meeting of the American Academy of Orthopaedic Surgeons**, New Orleans, LA, February 1994.

**Engh GA**, Rao A, Ammeen DJ, and Sychterz CJ. Tibial Baseplate Wear: A Major Source of Wear Debris with Contemporary Modular Knee Implants. Scientific exhibit at the **67<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons**, Orlando, FL March 2000.

**Engh GA**, Collier MB, Engh CA Jr, Wright TM, Currier BH, Currier JH, Fehring TK. Polyethylene Wear in Knee Arthroplasty: A Contemporary Perspective. Scientific exhibit at the **73<sup>rd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons**, Chicago, IL, March 2006.

## **POSTER PRESENTATIONS**

"Anterior Cruciate Ligament Reconstruction: The Intra-articular Tendon Loop Technique". Poster exhibit at the **Annual Meeting of the American Academy of Orthopaedic Surgeons**, February 1984.

Albrigo JL, Engh CA, **Engh GA**. "Total Hip Replacement with Non-cemented Femoral Component - 3 1/2 to 8 Years Follow-up". Poster exhibit at the **Annual Meeting of the American Academy of Orthopaedic Surgeons**, January 24-29, 1985.

Hanes CK, Dwyer KA, **Engh GA**, "The Effects of Screw Holes and Overhang on Polyethylene Stresses in Metal-Backed Tibial Components Using Finite Element Analysis". Poster exhibit at the **38<sup>th</sup> Annual Meeting of the Orthopaedic Research Society**, Washington, DC, February 1992.

"The Interaction of Joint Line Elevation and Posterior Cruciate Ligament Strain in Total Knee Arthroplasty (TKA): A Cadaver Study". Poster presentation at the **9<sup>th</sup> Combined Meeting of the Orthopaedic Associations of the English-speaking World**, Toronto, Ontario, Canada, June 1992.

"The Neglected Side of the Wear Couple: Analysis of Surface Morphology of Retrieved Femoral Components". Poster exhibit the **39<sup>th</sup> Annual Meeting of the Orthopaedic Research Society**, San Francisco, CA February 1993.

**Engh GA**, McAuley JP, Lounici S, and Rao A. "Tibial Baseplate Wear: A Major Source of Wear Debris with Contemporary Modular Knee Implants". Poster presentation at the **113<sup>th</sup> Annual Meeting of the American Orthopaedic Association**, Hot Springs, VA, June 2000.

Pollock DC, Ammeen DJ, and **Engh GA**. "Synovial Entrapment: A Unique Complication of Posterior-Stabilized Total Knee Arthroplasty" Poster exhibit at the **10<sup>th</sup> Annual AAHKS Fall Meeting**, Dallas, TX, November 2000.

Ridgeway SR, McAuley JP, Ammeen DJ, and **Engh GA**. "The Effect of Knee Alignment on the Outcome of Unicompartmental Knee Arthroplasty". Poster exhibit at the **10<sup>th</sup> Annual AAHKS Fall Meeting**, Dallas, TX, November 2000.

Harrer MF, McAuley JP, and **Engh GA**. "The Outcome of Total Knee Arthroplasty in Patients with Poor Preoperative Range of Motion." Poster exhibit at the **10<sup>th</sup> Annual AAHKS Fall Meeting**, Dallas, TX, November 2000.

Lounici S, Rao AR, and **Engh GA**. "Correlation Between Tibial Baseplate Wear and Locking Mechanism Micromotion in Modular Knee Implants." Poster exhibit at the **68<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons**, San Francisco, CA, March 2001.

Ridgeway SR, McAuley JP, Ammeen DJ, and **Engh GA**. "The Effect of Knee Alignment on the Outcome of Unicompartmental Knee Arthroplasty." Poster exhibit at the **68<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons**, San Francisco, CA, March 2001.

Collier MB, **Engh GA**, Engh CA Jr. "100 Consecutive Unicompartmental Arthroplasties Featuring Gamma-Sterilized Polyethylene Inserts: Impact of Insert Shelf Life on Six-year Clinical Outcomes." Poster exhibit at the **12<sup>th</sup> Annual AAHKS Meeting**, Dallas, TX, November 2002.

Collier MB, Engh CA Jr, McAuley JP, **Engh GA**. "Surgical Placement of the Mechanical Weight bearing Axis and Its Impact on Wear of Posterior Cruciate-Retaining Tibial Inserts" Poster exhibit at the **49<sup>th</sup> Annual Meeting of the Orthopaedic Research Society**, New Orleans, LA, February 2003.

Collier MB, Engh CA Jr, McAuley JP, **Engh GA**. "Relative contributions of the Patient, Surgical Technique, and Polyethylene Tibial Component to Wear in Total Knee Arthroplasty." Poster exhibit at the **71<sup>st</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons**, San Francisco, CA, March 2004.

Collier MB, McAuley JP, Engh GA. Relative Contributions of the Patient, Surgical Technique, and Tibial Component to Wear and Survivorship of Unicompartmental Knee Arthroplasty. Poster exhibit at the **71<sup>st</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons**, San Francisco, CA, March 2004.

## **FILMS/AUDIOVISUAL PRODUCTIONS**

"Anterior Cruciate Ligament Reconstruction (The Intra-articular Tendon Loop Technique)". Sound/slide program, **Annual Meeting of the American Academy of Orthopaedic Surgeons** and incorporated into the Academy's Library, February 1984.

Holt BT, Parks NL, **Engh GA**. Videotape. The Midvastus Surgical Approach to Total Knee Arthroplasty, 62nd Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, 1995.

**Engh GA**. Surgical Challenges in Revision Total Knee Replacement: Management of Bone Defects in Total Knee Replacement. Physicians' Video Journal, February 1996.

**Engh GA**. Knee Replacement: Which Option is Best? and Unicompartmental Replacement. *Audio Digest Orthopaedics*, Volume 19, Number 09, September 1996.

**Engh GA**. Management of Periprosthetic Fractures after Hip or Knee Replacement: A Difficult Problem On the Increase. American Academy of Orthopaedic Surgeons, 1997 Annual Meeting Symposium Series, San Francisco, California, February 13-17, 1997.

**Engl GA.** Total Knee Replacement: Therapeutic Challenges. *Audio-Digest Orthopaedics*, Volume 20, Number 04, April 1997.

**Engl GA.** Three Options for Correcting Varus Deformity. Video presentation at meeting *Issues in Orthopaedics*, Snowmass, Colorado, January 29-31, 1998.

## **PRESENTATIONS**

"The Losee Procedure for Anterior Cruciate Ligament Instability -A 2 to 4 Year Reassessment". Presentation at the **Virginia Orthopaedic Society**, Hot Springs, Virginia, May 1982.

**Engl GA** and Petersen T. "Comparative Analysis of Intramedullary and Extramedullary Alignment in Total Knee Arthroplasty". Presentation at the **Annual Meeting of the American Academy of Orthopaedic Surgeons**, February 2-7, 1988.

"Clinical Biomechanics of the Knee", "Patellofemoral Complications in Total Knees", Round Table - "Surgical Treatment of the Rheumatoid Knee" presented at the **First Carioca Symposium of Knee Surgery** sponsored by Instituto Nacional de Assistencia Medica, Da Previdencia Social, Rio de Janeiro, Brazil, July 1989.

"The AMK Total Knee System: Design Rationale, Surgical Technique & Clinical Findings" presented at the AMK (Anatomic Modular Knee) Symposium sponsored by the **University of Maryland Medical School**, July 1989.

"Biomechanics of Knee Implant Failure", "Patellofemoral Complications with Total Knees", "The Key to Success: Preoperative Radiographic Evaluation" presented at **AMK/AML Target Meeting**, Washington, DC, September 1989.

"Preoperative Templating - Planning for the Total Knee Replacement", "Design Rationale in Total Knee Replacement", "Anatomic Modular Knee - AMK Primary Replacement and Revision", "Total Knee Replacement - Complications" presented at the **First International Congress on Hip & Knee Surgery**, Rio de Janeiro, Brazil, October 1989.

"Biomechanics of Knee Implant Failure", "The Key to Success: Preoperative Radiologic Evaluation", "The Use of Allografts in Revision Knee Surgery", "Patellofemoral Complications" presented at symposium **Fixed Bearing Knee System**, Marco Island, FL, October 1989.

"Patella Problems" presented at the **Seventh Annual University of Utah Orthopaedic Symposium: The Arthritic Hip, Knee and Shoulder** sponsored by the University of Utah School of Medicine, January 1990.

"Biomechanics of Knee Implant Failure", "Patellofemoral Complications in Total Knee Arthroplasty", "The Key to Success: Preoperative Radiographic Evaluation", "The Use of Allografts in Revision Knee Surgery" presented at symposium **Issues in Orthopaedic Implant Technology**, Park City, UT, March 1990.

"Biomechanics of Total Knee Arthroplasty" presented at **Howard University Grand Rounds**, April 1990.

"Patellofemoral Problems in the Total Knee" and "Intra-operative Decision Making in Total Knee Replacement" presented at the **1990 Annual Spring Meeting of the New Jersey Orthopaedic Society in**

**conjunction with the New York State Society of Orthopaedic Surgeons** sponsored by the Academy of Medicine of New Jersey, Antigua, W.I., April 1990.

"Preoperative Planning", "Results of Cementless Femoral Revision", "AMK Design Rationale", and Moderator of **Bioskills Conference on Total Knee and Revision Total Hip Replacement** sponsored by St. John's Hospital & Health Center, Santa Monica, CA, April 1990.

"The Use of Allografts in Revision Total Knee Replacement" and AMK Revision Bioskills presented at symposium **Current Issues in Revision Hip & Knee Arthroplasty**, Scottsdale, AZ, May 1990.

"Biomechanics of Knee Implant Failure" presented at **University of Maryland Grand Rounds**, May 1990.

"Biomechanics of Knee Implant Failure", "Patellofemoral Complications in Total Knee Arthroplasty", "The Key to Success: Preoperative Radiographic Evaluation" presented at symposium **Current Issues in Total Hip and Knee Arthroplasty**, Bolton Landing, NY, June 1990.

"Design Rationale of the AMK Knee", "Clinical Experience with the AMK Total Knee Arthroplasty", "Structural Bone Grafts in Total Knee Replacement Surgery" presented at the **Pan American - Brazilian Orthopaedic Conference**, Rio de Janeiro, Brazil, August 1990.

"Preoperative Planning and Templating for Total Knee Arthroplasty", "Femoral Downsizing with Proximal Joint Migration and the Resultant Influence on Posterior Cruciate Ligament Strain", and "The Patellofemoral Joint in Total Knee Arthroplasty" presented at the **Eighth Annual Fellow's Day - Current Concepts in Total Knee Arthroplasty**, sponsored by Joint Implant Surgeons and Grant Medical Center, Columbus, OH, September 1990.

"Normal Biomechanics - Patellofemoral Design/Complications", "The Varus Knee", "Results - Clinical Experience Fixed Bearing Knee", "The Use of Bone Graft in Primary and Revision Total Knee Arthroplasty" presented at symposium **Issues in Orthopaedic Implant Technology**, Hilton Head, SC, October 1990.

"Knee Implant Design - Methods of Alignment and Tensioning" and "Polyethylene Wear - Failure of Patellar Components" presented at the **Second Annual Conference on Techniques and Science for Successful Joint Arthroplasty** sponsored by Dartmouth-Hitchcock Medical Center, Burlington, VT, October 1990.

Moderator and Coordinator of program "Am I Too Old for Joint Replacement?" an **Educational Seminar** sponsored by the Northern Virginia Consortium for Continuing Medical Education, Alexandria, VA, November 1990.

"Restoring Balance and Alignment in Total Knee Arthroplasty" presented at the **University of Cincinnati Grand Rounds**, Cincinnati, OH, December 1990.

"Preoperative Templating in Total Knee Replacement" and "Methods of Alignment and Ligament Balancing" presented at symposium **Total Knee Arthroplasty in the 1990's** sponsored by Methodist Hospital of Indiana, Inc., December 1990.

"Influence of Design on Implant Failure: The Patellofemoral Joint", "Clinical Results: The Anderson Clinic Experience", "Dynamic Balancing of the Varus Knee", and "The Use of Bone Graft in Primary and Revision Total Knee Arthroplasty" presented at symposium **Issues in Orthopaedic Implant Technology**, Breckenridge, CO, January 1991.

Peters, Jr., P., **Engh, GA**, and Dwyer, K., "Aggressive Endosteal Erosion in Cementless Total Knee Arthroplasty", presentation at the **58th Annual Meeting of the American Academy of Orthopaedic Surgeons**, March 1991.

**Engh, GA**, Dwyer, K., Hanes, C. and Hilbert, S., "Catastrophic Failure of Metal-Backed Tibial Components Secondary to Polyethylene Wear in Total Knee Arthroplasty". Presentation at the **58th Annual Meeting of the American Academy of Orthopaedic Surgeons**, March 1991.

Peters, Jr., P., Engh, GA, Dwyer, K., "Aggressive Endosteal Erosion in Cementless Total Knee Arthroplasty: A Radiographic, Implant and Histologic Analysis". Poster Presentation at the **Annual Meeting of the Orthopaedic Research Society**, March 1991.

"Design Related Complications of Total Knee Arthroplasty" presented at the **University of Texas Grand Rounds**, April 1991.

"Techniques for the Varus Knee", "Bone Grafting in Primary Total Knee Arthroplasties" and "Patellofemoral Complications" presented at **Charlotte Knee Symposium**, Charlotte, NC, April 1991.

"Preoperative Planning for Total Knee Arthroplasty" and "Polyethylene Wear and Osteolysis in Total Knee Replacement Surgery" presented at the **University of Western Ontario, Canada Resident's Night and Grand Rounds**, May 1991.

"Influence of Design on Implant Failure", "Clinical Results at the Anderson Orthopaedic Research Institute" presented at symposium **Update and Issues in Total Joint Replacement**, Pinehurst, NC, June 1991.

"Templating and Ligament Balancing for Successful Total Knee Arthroplasty" and "Failure Mechanisms Following Total Knee Arthroplasty" presented at the **First Annual Orthopaedic Symposium** sponsored by St. Mary's Hospital, Richmond, VA, June 1991.

"Patellofemoral Problems and Design Consideration", "Polyethylene Wear in TKA" presented at **Queen's University Grand Rounds**, Kingston, Ontario, Canada, July 1991.

"A Comparison of Methods of Tibial Component Fixation", "Aggressive Granulomatous Bone Resorption Following Cementless Total Knee Arthroplasty", "The Varus Knee - Surgical Technique", presented at the **Second International Symposium of Cementless Total Joint Reconstruction in Tokyo**, Hirakawa, Tokyo, August 1991.

"The Clinical Results of Cementless Hip Revision Arthroplasty", "Alignment and Balancing in Total Knee Surgery", "Patellofemoral Complications with Total Knee Arthroplasty" presented at symposium **Revision Total Hip Replacement & Total Knee Replacement** sponsored by Central DuPage Hospital, Glen Ellyn, IL, September 1991.

"Failure Mechanism - A Clinical Perspective", "Design Solutions -Patellofemoral Joint", "Valgus Knee Correction from the Medial Approach" presented at symposium **Current Controversies in Total Knee Arthroplasty**, Toronto, Ontario, Canada, November 1991.

"Patellofemoral Design Considerations", "Ligamentous Balancing- Varus, Valgus, Flexion Contractures", "Bone Graft in Total Knee Replacement" presented at symposium **Issues in Orthopaedic Implant Technology**, Marco Island, Florida, November 1991.

"Tibia Vara", Round Table Discussion - "Articular Knee Replacement vs. Osteotomy" presented at **AMOT XI Congreso Nacional De Ortopedia Y Traumatologia**, Mazatlan, Sinaloa, Mexico, November 1991.

Peters PC Jr, Vinh TN, Johnson F, **Engh GA**, Head WC, Emerson RH Jr. "The Use of Oil-Red-O Stain to Characterize Particulate Polyethylene and the Macrophage Response in Cases of Osteolysis Associated with Cementless Total Hip and Total Knee Arthroplasty". Presentation at the **38th Annual Meeting of the Orthopaedic Research Society**, Washington, DC, February 1992.

Knezevich S, **Engh GA**, Predis FE, Dwyer KA, Peters PC Jr. "Comparison of Subvastus Quadriceps-Sparing and Standard Anterior Quadriceps-Splitting Approaches in Total and Unicompartmental Knee Arthroplasty". Presentation at the **59th Annual Meeting of the American Academy of Orthopaedic Surgeons**, Washington, DC, February 1992.

"Ligament Balance - The Varus Knee", "Ligament Balance - The Valgus Knee", "Problems in Total Knee Replacement - The Solution: Design Considerations" presented at symposium **Issues in Orthopaedic Implant Technology**, Breckenridge, CO, March 1992.

"Unicondylar Replacement" and "Exposure in Revision TKR" presented at the **Total Knee Replacement Conference** sponsored by Baptist Center for Medical Education, Baptist Hospital, Nashville, TN, May 1992.

"Total Knee Arthroplasty: Preoperative Planning and Soft Tissue Balancing" and "Revision Total Knee Arthroplasty: Surgical Technique" presented at **The Charnley Era Meeting**, Wrightington Hospital, Wigan, England, September 1992.

"Intramedullary or Extramedullary Guides", "The Valgus Knee" and "Osteolysis" presented at **The Canadian Orthopaedic Association Arthritic Hip & Knee Symposium** sponsored by The Canadian Orthopaedic Association and, The University of Western Ontario Department of Orthopaedic Surgery, Ontario, Canada, October 1992.

"The Patellofemoral Joint in Total Knee Arthroplasty: Problems and Solutions" and "Management of Bony Defects in Total Knee Arthroplasty: Wedges, Cement, Bone Grafts" presented at the **Eighth Annual Review Course in Orthopaedics**, Royal Victoria Hospital, Montreal, Quebec, October 1992.

"Soft Tissue Balancing in Total Knee Replacement: Varus vs. Valgus" and "Autograft vs. Allografts for Total Knee Replacement" presented at the **7th Annual Joint Replacement Symposium** sponsored by Education Design, October 1992.

"Ligament Balancing I & II" and "Rationale for Saving the PCL" presented at **Issues in Orthopaedic Implant Technology** sponsored by Joint Implant Surgery and Research Foundation, Rancho Mirage, CA, November 1992.

"Soft Tissue Balancing: The Varus Knee", "Total Knee Arthroplasty: Polyethylene Wear and Osteolysis" and "Management of Bone Defects in Total Knee Arthroplasty" presented at the **7th Annual Vail Course, State of the Art: Total Knee Replacement**, January 1993.

"Ligament Balance - Varus/Valgus Knee", "Soft Tissue Balance in Revision Total Knee Replacement" and "Difficulties in Revision Total Knee Replacement" presented at **Hip and Knee Symposium**, Whistler, British Columbia, February 1993.

"Treatment of Arthrofibrosis After Total Knee Arthroplasty" and "Soft Tissue Balancing: Varus & Valgus Deformities" presented the **Charlotte Knee Symposium**, Charlotte, NC, April 1993.

"Wear Debris and Osteolysis After Total Knee Arthroplasty" presented at the **3rd Annual Harvard Knee Course**, Boston, MA, April 1993.

"The Patellofemoral Joint in Total Knee Arthroplasty: Problems and Solutions", "Unicompartmental Knee Replacement: Pitfalls and Results", and "Wear Debris and Osteolysis after Total Knee Arthroplasty" presented at the **St. Mary's Arthritic Hip & Knee Symposium**, Williamsburg, VA, September 1993.

"Preoperative Planning for Total Knee Replacement" and "Osteolysis and Polyethylene Wear" presentation at the **University of Virginia Grand Rounds**, October 1993.

"Exposing the Knee that is Tight", and "Classification of Bone Deficiencies" presented at symposium **Revision Total Knee Arthroplasty**, Hilton Head, SC, October 1993.

Presentation of "*Bone Defect Classification System*" to the **Knee Society Interim Meeting**, Beverly Hills, CA, October 1993.

"Diagnosis and Management of Osteolysis Relative to Failed Total Knee Arthroplasty", "Preoperative Planning and Soft Tissue Balancing in Total Knee Arthroplasty" and "Bone Defects and Bone Grafts in Revision Total Knee Arthroplasty" presented at the **University of Texas Southwestern Orthopaedic Grand Rounds**, Dallas, TX, December 1993.

"Metal Backed Tibia" and "Correcting the Valgus Knee Deformity" presented at symposium **Total Joint Arthroplasty: Addressing Today's Concerns**, Marathon, FL, January 1994.

"Polyethylene" symposium at the **40th Annual Meeting of the Orthopaedic Research Society**, New Orleans, LA, February 1994.

"Micromotion of Modular Tibial Components in Total Knee Arthroplasty" presented at the **40th Annual Meeting of the Orthopaedic Research Society**, New Orleans, LA, February 1994.

"Osteolysis in Cementless Total Knee Arthroplasty: A Review of 23 Tibial Lesions Surgically Treated With or Without Tibial Component Retention" presented at **Specialty Day Meeting of The Knee Society**, New Orleans, LA, February 1994.

"Medial Compartment Unicompartmental Knee Arthroplasty: A Clinical and Radiographic Outcome Study With Cost Analysis" presentation at the **61st Annual Meeting of the American Academy of Orthopaedic Surgeons**, New Orleans, LA, February 1994.

"Structural Autogenous Bone Grafting of Tibial Defects in Primary Total Knee Arthroplasty" presentation at the **61st Annual Meeting of the American Academy of Orthopaedic Surgeons**, New Orleans, LA, February 1994.

"Exposure in Revision Total Knee Arthroplasty", "Revision Total Knee Arthroplasty Bone Defect Classification" and workshop "Techniques in Revision Total Knee Replacement" presented at symposium

**Reconstruction of the Hip and Knee: Problems and Solutions in 1994**, Whistler, British Columbia, March 1994.

"Osteolysis and Poly Wear" presented at **Total Knee Replacement Symposium**, Baptist Hospital, Nashville, TN, April 1994.

"Advantages of PCL Retention", "Revision Knee Defect Classification System", and "Defect T3 with the Coordinate", presented at symposium **Issues in Orthopaedic Implant Technology**, Keystone, CO, April 1994.

"Avoiding Osteolysis" and Moderator of "The Patella in Total Knee Arthroplasty" presented at the 11th Annual International Symposium, **New Developments in Total Joint Reconstruction**, Orlando, FL, June 1994.

"Polyethylene Wear" and "AMK Intermediate Results" presented at the **XV Annual Meeting of the Italian Society of Knee Surgery**, Montecatini, Italy, June 1994.

"The Importance of Proper Soft Tissue Balancing", "Bone Defect Classification", and "Coordinate Design Rationale" presented at symposium **Design and Materials Issues: Considerations in Implant Selection**, Kansas, MO, September 1994.

"Total Knee Arthroplasty - My Approach" presented at the **Maryland Orthopaedic Society Meeting**, September 1994.

"Anatomy of Total Knee Replacement Surgery" presented at **Yale University School of Medicine Grand Rounds**, September 1994.

Moderator of "Total Knee Arthroplasty" session at the **AAHKS Fourth Annual Meeting**, Washington, DC, September 1994.

"The Use of Drains in Knee Replacement Surgery" presented at the **Knee Society Interim Meeting**, Baltimore, MD, October 1994.

"Bone Cuts and Ligament Balance in Total Knee Arthroplasty", "Wear Debris and Osteolysis in Total Knee Arthroplasty" and "Revision Total Knee Arthroplasty - Management of Bone Defects" presented at the **XXXI Argentine Orthopaedic Meeting**, Buenos Aires, October 1994.

"Revision Total Knee Joint Replacement: Problems and Classification of Bone Defects" and "Femoral Bone Defects-Should Be Grafted" presented at symposium **Revision Hip & Knee Arthroplasty: The Cost Equation**, Scottsdale, AZ, November 1994.

"AMK", "Osteolysis", and "Bone Defect Classification" presented at **Contemporary Treatment of the Arthritic Knee Symposium**, London, Ontario, Canada, November 1994.

"Surgical Techniques and Soft Tissue Balancing To Accelerate Recovery" presented at symposium **Cost Containment Issues: Consideration in Implant Selection**, San Francisco, CA, January 1995.

"Polyethylene Failure in Metal-Backed Unicompartamental Tibial Components" presented at the **62nd Annual Meeting of the American Academy of Orthopaedic Surgeons**, Orlando, FL, February 1995.

“Extensor Mechanism Rupture” presented at symposium Extensor Mechanism Problems in TKA, **62nd Annual Meeting of the American Academy of Orthopaedic Surgeons**, Orlando, FL, February 1995.

“A Comparative Study of the Effects of Closed Suction Drainage vs. No Drainage After Total Knee Arthroplasty” presented at the **62nd Annual Meeting of the Academy of Orthopaedic Surgeons Meeting**, Orlando, FL, February 1995.

“Management of Bone Defects in TKR” presented at symposium **Outcomes in Orthopaedics**, Olympic Valley, CA, March 1995.

“Separation and Characterization of Polyethylene Wear Debris from Synovial Fluid Samples of Revised Knee Replacements” and “The Near-Surface Composition of Retrieved Cast CoCrMo Femoral Components” presented at the **21st Annual Meeting of the Society for Biomaterials**, San Francisco, CA, March 1995.

“The Case Against Cementless Fixation”, “Osteolysis: A Problem with Cementless Fixation”, and “Primary Total Knee Replacement - DePuy AMK - 5 -10 Year Results” presented at symposium **Total Knee Replacement 1995**, Cambridge, MA, April 1995.

“Clinical Manifestations of Wear in Total Knee Arthroplasty” presented at the **American Society for Testing and Materials F04 Workshop on the Characterizations and Performance of Articular Surfaces**, Denver, CO, May 1995.

“Preoperative Planning and Ligament Balancing for Primary Knee Replacement”, “Osteolysis: Diagnosis, Management & Prevention”, “Patella Resurfacing”, and “Bone Defects & Their Management in Revision Total Knee Arthroplasty” presented at the **11th Congress of the South African Arthroplasty Society**, Durban, South Africa, June 1995.

“Why Do Knees Fail?”, “Soft Tissue Balance in Total Knee Replacement - The Saggital View”, “A Defect Classification System for Revision Knee Surgery”, and “Surgical Techniques for Revision Knee Arthroplasty” presented at the **International Hip & Knee Symposium**, Gleneagle, Scotland, September 1995.

“Manifestations of Wear in Total Knee Replacement” presented at the **NIH/AAOS Workshop on Considerations of Implant Wear for the Future of Total Joint Replacement**, Oakbrook, IL, September 1995.

“Evolution of a Fixed Bearing Knee”, “Bone Defect Classification”, “Structural Bulk Grafts”, and “Soft Tissue Balancing: An Anatomic Measured Resection” presented at symposium **Outcomes in Orthopaedics**, Hilton Head, SC, September 1995.

“Uni-Replacement - Success/Failures/Pitfalls”, “Midvastus Approach”, “Maximizing Knee Flexion in Total Knee Replacements”, “Polywear in Total Knee Replacement”, “Surgical Exposure/Extensor Preservation” and “Management of Bone Defects” presented at the **Arthritic Hip & Knee Symposium**, Williamsburg, VA, October 1995.

“Soft Tissue Balancing for Varus Knees”, “Midvastus Muscle Splitting Approach for Total Knee Arthroplasty”, “Managing the Valgus Knee”, “AMK Results - 4 to 8 Years” and “Allografts in Revision Knee Surgery” presented at the **Brazilian Hip & Knee Society Meeting**, Rio de Janeiro, Brazil, December 1995.

“The Use of a Bone Defect Classification System in Revision Total Knee Arthroplasty”, “Exposure in Revision Total Knee Arthroplasty”, and “Extensor Mechanism Rupture” presented at **Hip and Knee Reconstruction: An Advanced Course**, Vancouver, Canada, February 1996.

“Bone Defects in Complex Primary and Revision Total Knee Arthroplasty-Classification, Management, Outcome” presented at **Tulane University Grand Rounds**, New Orleans, Louisiana, March 1996.

“Polyethylene Considerations in TKA”, “The Mid Vastus Approach”, and “Classifications of Defects” presented at **Issues in Orthopaedics: Clinical Results & Economic Outcomes**, Vail, Colorado, March 1996.

“Primary Knee Replacement”, “Why Do Knees Fail?”, “Defect Classification System”, and “Pre-Operative Planning” presented at **Current Challenges in Total Knee Arthroplasty**, Arrowe Park Symposium, Manchester, England, March 1996.

“Relationship of Bone Resection and Ligament Balance in Total Knee Surgery” presented at **Oxford University Grand Rounds**, Nuffield Orthopaedic Center, Oxford, England, March 1996.

“Management of Bone Defects in Primary and Revision Total Knee Arthroplasty”, Guest Lecturer, **North Manchester General Hospital**, Manchester, England, March 1996.

“Primary Arthroplasties: The LCS Experience” presented at **Primary Arthroplasties-The LCS Experience**, Hotel Sofitel Saint-Jacques, Paris, France, March 1996.

“The Coordinate Revision System”, “Approach to Rigid Knees”, “Classification of Bone Defects”, and “Augments and Allografts”, presented at **Revision Arthroplasties-The Practice**, Hotel Sofitel Saint-Jacques, Paris, France, March 1996.

“Prostalac Technique” and “Prostalac Results” presented at **Knee Day-The Infection**, Hotel Sofitel Saint-Jacques, Paris, France, March 1996.

“Corrective Release for Varus Deformity”, “Retrieval Analysis of Total Knee Replacement and Its Impact on Prosthetic Components”, “Unicompartmental Replacement-Changing Indications”, and “Patellar Problems Post Total Knee Replacement”, presented at **Total Knee Replacement Conference**, Nashville, TN, May 1996.

“Unicondylar TKR: Good or Bad?”, “Midvastus Approach for TKR”, “Osteolysis in TKR”, “Defect Classification”, and “Revision Total Knee Replacement” presented at Symposium **The Arthritic Knee**, Ottawa, Canada, May 1996.

“Osteolysis-Assessing and Managing Bone Loss”, “Assessing the Need for Prosthetic Constraint”, and “Managing Extensor Mechanism Failure” presented at **The Complex Painful Knee: Current Decision Making and Treatment Options**, Rush Presbyterian Hospital, Chicago, IL, June 1996.

“Primary Total Knee Surgery -The Surgical Approach” and “Revision Total Knee Surgery – Classification of Defects” presented **Issues in Total Hip & Knee Arthroplasty**, Kiawah Island, South Carolina, November 1996.

“The Mid-Vastus Approach for Total Knee Arthroplasty”, “Extensor Mechanism Rupture after Total Knee Arthroplasty”, and “Clinical Manifestations of Particulate Wear Debris” presented at the 11<sup>th</sup>

Annual Vail Orthopaedic Symposium- **State-of-the-Art: Total Knee Replacement Controversies & Solutions**, Vail, Colorado, January 1997.

“Complex Reconstruction in Primary and Revision Total Knee Replacement”, **AAOS Instructional Course Lecture - 64th Annual Meeting**, San Francisco, California, February 1997.

“Management of Periprosthetic Fractures After Hip or Knee Replacement: A Difficult Problem on the Increase” presented at **AAOS Symposium - 64th Annual Meeting**, San Francisco, California, February 1997.

“Controversies in Primary TKR: Cemented vs. Cementless Fixation”, “Revision Surgery and Socioeconomic Aspects: Structural Allograft in Revision Total Knee Replacement”, and “Systemic Versus Selective Patellar Resurfacing” presented at the **IV International Course on Reconstructive Knee Surgery**, Madrid, Spain, March 1997.

“Bone Defect Classification” and “The 4- to 9-Year Results with the Modular AMK Total Knee” presented at symposium **Changing Issues in Orthopaedics**, Olympic Valley, California, March 1997.

“Assessing and Managing Bone Loss”, and “Extensor Repairs – Autogenous and Allograft” presented at **AAOS Orthopaedic Learning Center - Complex Knee Problems: From Sports Injuries to Total Knee Arthroplasty**, Rosemont, Illinois, April 1997.

“Debate: Screws and Osteolysis in Total Knee Replacement” presented at **The Fourth Annual Masters Series: Techniques in Arthritis Surgery**, Pasadena, California, May 1997.

“Total Knee Replacement - Exposures and Management of Complications: Epicondylar Osteotomy-Technique”, “Extensor Mechanism Rupture After TKA: Management”, and “Component Rotation and Ligament Balancing” presented at **Contemporary Techniques in Total Hip & Knee Arthroplasty**, Nisswa, Minnesota, June 1997.

“Choices of Incision and Exposure”, “Which Comes First – Bone Cuts”, “Correction of Varus Deformity”, “Evaluation of the Painful Knee Arthroplasty” and “The Results and Outcomes of Revision Total Knee Arthroplasty” presented at **The Summer University – An Instructional Course in Knee Arthroplasty**, Edinburgh, Scotland, July 1997.

“Primary and Revision Knee Replacement” presented at the **Arthritic Hip and Knee Symposium**, Williamsburg, Virginia, October 1997.

“Infected vs. Non-infected Revision Total Knee Arthroplasty” presented at conference **The Coordinate Revision Knee - A Clinical Perspective**, Sawgrass, Florida, October 1997.

“Clinical and Histologic Studies with Bone Grafts in Primary and Revision Total Knee Arthroplasty” presented at the **85<sup>th</sup> Annual Meeting with the Greater Kansas City Orthopaedic Society and the Kansas State Orthopaedic Society**, Kansas City, Missouri, October 1997.

“Modular Tibial Inserts: Eliminating a Potential Source of Wear Debris” and “The Use of a Bone Defect Classification System in Revision TKA” presented at conference **Issues in Orthopaedics: Clinical Results and Economic Outcomes**, Snowmass Village, Colorado, January 1998.

“Revision Total Knee Joint Replacement: “Osteolysis Knee – The Problem”, “Other Exposures”, and “Bone Defect Classification” presented at symposium **Hip and Knee Reconstruction: An Advanced Course**, Whistler, British Columbia, February 1998.

“Comparison of Vastus Muscle Splitting Versus Median Peripatella Approach in Total Knee Arthroplasty”, “Anatomy of the Nerve Supply to the Vastus Medialis for Exposure in Total Knee Arthroplasty”, and “Patellofemoral Complication Following Total Knee Arthroplasty: The Consequences of Malrotation with Normal Axial Alignment” presented at the **65th Annual Meeting of the American Academy of Orthopaedic Surgeons**, New Orleans, LA, March, 1998.

“Revision Total Knee Arthroplasty: Planning, Management and Controversies: Bone Loss Classification and Alternatives for Reconstruction” presented at the **American Academy of Orthopaedic Surgeons Instructional Course Lectures**, 65th Annual Meeting, New Orleans, LA, March 1998.

“Management of the Arthritic Knee without Total Knee Replacement: What Works, What Doesn’t Work, What the Future Holds” presented at the **American Academy of Orthopaedic Surgeons Instructional Course Lectures**, 65th Annual Meeting, New Orleans, Louisiana, March 1998.

“Periprosthetic Fractures After Hip or Knee Replacement: A Difficult Problem on the Increase” presented at the **Academy of Orthopaedic Surgeons Instructional Course Lectures**, 65th Annual Meeting, New Orleans, LA, Course, March 1998.

“Total Knee Arthroplasty: Wear, Debris, and Clinical Manifestations” and “Bone Grafts with Primary and Revision Total Knee Arthroplasty” presented at the **Annual Spring Meeting of the Academy of Medicine of New Jersey, the New Jersey Orthopaedic Society and the New York State Society of Orthopaedic Surgeons**, Palm Springs, California, April 1998.

“Unicompartmental Arthroplasty”, “Exposures for Primary Total Knee Arthroplasty”, “How to Correct Valgus and Varus Deformity”, “Management of Bone Loss with Bone”, and “Patellar Ligament Disruption and Necrosis” presented at the **1998 Baptist Hospital Total Joint Symposium**, Nashville, Tennessee, May 1998.

“Surgical Exposure: Options and Indications”, “Immediate Exchange is the Best Treatment for the Infected Total Knee Replacement”, and “Allografting Techniques in Revision Surgery” presented at **AAOS Current Issues and Controversies in Hip and Knee Arthroplasty**, Washington, DC, May 1998.

“Advances and Current Issues in Total Knee Arthroplasty” presented at the INOVA Institute of Research & Education: **Medical Management of Total Joint Replacement**, Fairfax, Virginia, May 1998.

“Assessing and Managing Bone Loss” presented at **AAOS Orthopaedic Learning Center – The Complex Painful Knee**, Rosemont, Illinois, June 1998.

“Exposure: The Way In – Midvastus”, “The Difficult Primary Total Knee Replacement”, “Complications of Total Knee Replacement Wear: Clinical Manifestations of Wear”, “Complications of Total Knee Replacement – Supracondylar Fractures”, “Revision TKA – Massive Bone Grafts”, and “The Use of Allografts” presented at the conference **State of the Art in Total Knee Arthroplasty**, Alice Springs, Australia, July 1998.

“Modular Tibial Insert Micromotion: A Concern With Contemporary Knee Implants” presented at the **Combined Meeting of the Australian Knee Society and the Australian Arthroplasty Society – Sails on the Desert**, Ayers Rock, Australia, July 1998.

“The Forgotten Bearing Surface” and “Management of Bone Loss in Total Knee Arthroplasty” presented at the **Second Annual Salmon Derby Meeting - Contemporary Issues in Hip and Knee Arthroplasty**, Thompsonville, Michigan, August 1998.

“Consequences of Material Failure”, “Exposing the Difficult Knee”, and “Extensor Mechanism Rupture” presented at **The Insall Scott Kelly Institute Sports Medicine and Total Knee Symposium**, September 1998.

“Addressing Bony Defects: Setting a Game Plan”, “Eliminating Potential Source of Wear Debris in Modular Knees”, and “Clinical Outcomes of Conventional Total Knee Arthroplasty” presented at symposium **Outcomes in Orthopaedics: Results Oriented Healthcare**, September 1998.

“Alternatives to Total Knee Replacement: Unicompartamental Replacement” and “Management of the Infected TKA: Evaluating the Painful Total Knee Arthroplasty” presented at the **6<sup>th</sup> Annual Symposium – Current Concepts in Knee Reconstructive Surgery**, Rye, New York, October 1998.

“Bone Defect Classification in Revision TKA” and “Outcomes of Revision TKA Based on Bone Defect” presented at symposium **Revision Hip and Knee Arthroplasty: Techniques for a Positive Outcome**, Miami, Florida, October 1998.

“Varus Deformity” and “Bone Grafts” presented at **The Knee Society Total Knee Review Course**, Scottsdale, Arizona October 1998.

“Clinical Results of Modular Polyethylene Insert Exchange with Total Knee Implant Retention” presented at the **AAHKS Annual Fall Meeting**, Dallas, Texas, November 1998.

“Dealing with Deformity in Total Knee Replacement”, “The Management of Bone Loss with Revision Total Knee Arthroplasty” and “Preoperative Planning for Total Knee Arthroplasty” presented at **The Southern Orthopaedic Update/Review Course**, New Orleans, Louisiana, November 1998.

“Clinical Manifestations of a Sometimes Silent Disease” presented at the **15<sup>th</sup> Annual Current Concepts in Joint Replacement Meeting**, Orlando, Florida, December 1998.

“Complex Case Controversies in Primary and Revision Total Knee Arthroplasty” presented at the **American Academy of Orthopaedic Surgeons Instructional Course Lectures**, Anaheim, California, February 1999.

“Revision Total Knee Arthroplasty: Planning, Management and Controversies: Bone Loss Classification and Alternatives for Reconstruction” presented at the **American Academy of Orthopaedic Surgeons Instructional Course Lectures**, Anaheim, California, February 1999.

“The Clinical Results of Medial Epicondylar Osteotomy to Correct Severe Varus Deformity with Total Knee Arthroplasty” presented at the **Specialty Day Meeting of The Knee Society**, Anaheim, California, February 1999.

“Periprosthetic Hip and Knee Replacement Fractures, Prevention, Specifics of Management and Results to Date: Knee: Tibial and Patellar Fractures” presented at the **American Academy of Orthopaedic Surgeons Instructional Course Lectures**, Anaheim, California, February 1999.

“Avoidance and Treatment of Complications: Primary and Revision Total Knee Arthroplasty, The Patellofemoral Joint - Getting It Right and Revising When It Is Wrong” presented at the **American Academy of Orthopaedic Surgeons Symposium**, Anaheim, California, February 1999.

“Management of Bone Defects in Revision Total Knee Arthroplasty” and “Ligament Balancing for Varus Deformity” presented at symposium **Outcomes in Orthopaedic Surgery: Total Hip and Knee Arthroplasty**, Vail, Colorado, March 1999.

“Changing Concept of Ligament Balancing Techniques with TKA” presented at the **Long Island Joint Replacement Association**, Long Island, New York, April 1999.

“Preoperative Planning for Total Knee Arthroplasty” and “Cascade of Exposure Options in Revision Total Knee Arthroplasty” presented at the **Charlotte Knee Symposium**, Charlotte, North Carolina, April 1999.

“Polyethylene Wear in Total Knee Arthroplasty” presented at **The George Washington University Grand Rounds**, Washington, DC, April 1999.

“Clinical Aspects in the Use of Structural Grafts in Knee Repair” presented at the **Charles H. Herndon International Symposium on Bone Allografts**, Washington, DC, May 1999.

“Revision Total Knee: Basic Concepts: Management of Bone Loss” presented at the **ISAKOS Congress, International Society of Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine**, Washington, DC, June 1999.

“Total Knee Arthroplasty” and “Revision Total Knee Replacement”, **Johns Hopkins University School of Medicine and Union Memorial Hospital Orthopaedic Review Course**, Baltimore, Maryland, June 1999.

“Instrumenting the Primary Total Knee - What’s New?” and “Gap Balancing” presented at the **1999 Knee Society Interim Meeting Symposium**, Southampton, Bermuda, September 1999.

“Consequences of Material Failure”, “Exposing the Difficult Knee”, and “Extensor Mechanism Disruption” presented at the **2nd Annual ISK Institute - Sports Medicine and Total Knee Symposium**, New York City, New York, September 1999.

“Balancing the Varus Knee”, “Why I Balance and Retain”, and “Classification of Bone Defects: Influence on Surgical Treatment” presented at the **Early Fall Clinical Course: Current Issues, Concepts & Considerations**, Kiawah Island, South Carolina, September 1999.

“The Modular Tibial Interface: A Major Source of Wear Debris with Contemporary Total Knee Implants”, “Ligament Balancing in Total Knee Arthroplasty”, and “Bone Loss Classification and Alternatives for Reconstruction” presented at the **Combined Meeting of the New Zealand Orthopaedic Association and the New Zealand Knee Society**, Wellington, New Zealand, October 1999.

“Unicondylar Knee Replacement”, “Preoperative Planning for Total Knee Replacement”, “Exposure in Revision Total Knee Replacement”, and “Patellofemoral Complications after Total Knee Replacement”, **Arthritic Hip and Knee Symposium**, Williamsburg, Virginia, October 1999.

“Femoral Defects and Treatment Options Outcomes of Revision Total Knee Arthroplasty” presented at **Blending Revision Philosophies for A Positive Outcome**, Rancho Mirage, California, November 1999.

“Tibial Baseplate Wear: A Major Source of Wear Debris With Contemporary Modular Knee Implants”, **AAHKS Annual Fall Meeting**, Dallas, TX, November 1999.

“Tibial Locking Mechanisms” presented at **Contemporary Techniques and Issues in Orthopaedics**, Snow Mass, Colorado, February 2000.

“Osteolysis: The Problem”, “Epicondylar Osteotomy”, and “Bone Defect Classification”, **Hip and Knee Reconstruction: An Advanced Course**, Whistler, British Columbia, February 2000.

“Bone Loss Classification and Alternatives for Reconstruction” presented at the **American Academy of Orthopaedic Surgeons Instructional Course Lecture**, 67th Annual Meeting, Orlando, Florida, March 2000.

“Complex Case Controversies in Primary and Revision Total Knee Arthroplasty” presented at the **American Academy of Orthopaedic Surgeons Instructional Course Lecture**, 67th Annual Meeting, Orlando, Florida, March 2000.

“Management of the Stiff and Painful Knee” and “Periprosthetic Osteolysis after Total Knee Arthroplasty”, **American Academy of Orthopaedic Surgeons Instructional Course Lecture**, 67th Annual Meeting, Orlando, Florida, March 2000.

“Correcting Instability without Constrained Components” presented at **American Academy of Orthopaedic Surgeons Symposium**, 67th Annual Meeting, Orlando, Florida, March 2000.

“Femur Fracture” and “Tibial Bone Loss” presented at **Specialty Day Meeting of the Knee Society**, Orlando, Florida, March 2000.

“Which Approach Will Be Favored in 2010 - Modularity” and “Surgical Approaches - Midvastus” presented at the **7th Annual Masters Series: Techniques in Arthritis Surgery**, Pasadena, California, April 2000.

“Backside Wear - The Hidden Offender” and “Massive Bone Loss - Option of Treatment” presented at **Total Joint Symposium**, Nashville, Tennessee, April 2000.

“All Patellae Should Be Replaced - Con” and “Cruciate Retaining Designs are the Best for All Patients - Pro”, debate topics at **Current Issues and Controversies in Hip and Knee Arthroplasty**, Colorado Springs, Colorado, May 2000.

“The Use of a Bone Defect Classification System in Revision Total Knee Arthroplasty” and “Immediate Exchange is the Best Treatment for Infected Total Knee Arthroplasty” presented **Revision Total Knee Arthroplasty - Orthopaedica Belgica 2000**, Namur, Belgium, May 2000.

“Is There a Need for Unicompartamental Knee Arthroplasty?” and “Exposure in Revision Total Knee Arthroplasty” presented at **Hip and Knee Orthopaedic Symposium**, Pinehurst, North Carolina, September 2000.

“Revision of Failed Unicompartamental Knee Arthroplasty” presented at the **Knee Society Interim Meeting**, Boston, Massachusetts, September 2000.

“Technical Considerations: Open versus Minimally Invasive UKA” and “Exposures – Proximal and Distal Enhancements” presented at **Contemporary Techniques and Issues in Orthopaedics – Reconstructive Program**, Coeur d’Alene, Idaho, September 2000.

“Implant to Implant Alignment” and “TKA and UKA Revisited: What Has Worked?” presented at **AAOS Learning Center - Unicdylar, Primary, and Revision Total Knee Arthroplasty: Basic Techniques and Solutions to Difficult Problems**, Rosemont, IL, October 2000.

“Unicompartmental Arthroplasty”, “Cruciate Retaining Knee – Operative Perils and Results”, and “Bone Defects in Revision TKA: Classification and Reconstruction” presented at the **Pennsylvania Orthopaedic Society Fall Meeting**, Philadelphia, Pennsylvania, November 2000.

“Bone Defect Management” presented at the **12<sup>th</sup> Annual Holiday Total Knee Course**, New York City, New York, November 2000.

“Primary Total Knee Replacement - Ligament Balancing in TKR – Tips and Tricks” and “Revision Total Knee Replacement - Classification of Bone Defects” presented at the **Winter 2001 Clinical Course**, Paradise Island, Bahamas, January 2001.

“The Unicompartmental Knee: What Has Worked” and “Exposure Techniques” presented at **Contemporary Techniques and Issues in Orthopaedics**, Vail, Colorado, February 2001.

Moderator and coordinator of symposium - “Extra-Articular Long Bone Deformity with Primary and Revision Total Hip and Knee Arthroplasty: Planning, Surgical Options and Results” and lecture - “Nuances of TKA Bone Resections with Extra-Articular Deformity” presented at the **American Academy of Orthopaedic Surgeons**, 68<sup>th</sup> Annual Meeting, San Francisco, California, March 2001.

Moderator and coordinator of symposium - “Polyethylene Wear and Osteolysis with Total Hip and Knee Arthroplasty: Evaluation, Management Options, and Results with Revision Surgery” and lecture - “Revision Total Knee Arthroplasty for Wear: Options and Results”, **American Academy of Orthopaedic Surgeons**, 68<sup>th</sup> Annual Meeting, San Francisco, California, March 2001.

Moderator and coordinator of Instructional Course Lecture – “Prevention and Management of Instability in Total Hip and Knee Arthroplasty” and lecture - “Correcting Instability without Constrained Components”, **American Academy of Orthopaedic Surgeons**, 68<sup>th</sup> Annual Meeting, San Francisco, California, March 2001.

“Tibial Modularity: The Cause of Premature Failure of TKR” presented at the **AAHKS and Knee Society Combined Specialty Day Meeting**, San Francisco, California, March 2001.

Moderator of “TKR Techniques”, Co-moderator of Live Knee Revision Surgery, Panel member – Revision Techniques and video presentation “Epicondylar Osteotomy” at the **Masters Series 2001**, Pasadena, California, April 2001.

Moderator – Management Factorials in Primary TKA: Bring Home a Winner, Video Vignette – Exposure Options in Revision TKA: “The Dealer’s Choice”, and “Can We Justify the Uni as a Temporizing Procedure? – Affirmative” presented at **Current Concepts in Joint Replacement – Spring 2001**, Las Vegas, Nevada, May 2001.

“Uni-Replacement: Indications – ‘Fad or Reality’”, “Deformities in TKR/Technical ‘Pearls’: Valgus Knee”, “Management of Extensor Ruptures”, and “Complications After TKR: Wear Mechanisms” presented at the **Arthritic Hip and Knee Symposium**, Williamsburg, Virginia, October 2001.

“Catastrophic Polyethylene Failure of Unicondylar Implants with a Long Shelf Life Following Gamma Irradiation in Air” presented at the **11<sup>th</sup> Annual AAHKS Fall Meeting**, Dallas, Texas, November 2001.

“Can We Justify the Uni As A Temporizing Procedure? – In the Affirmative” and “A Cascade of Surgical Exposure Options” presented at the **Eighteenth Annual Current Concepts in Joint Replacement Meeting – Winter 2001**, Orlando, Florida, December 2001.

Moderator and coordinator of Instructional Course Lecture – “Prevention and Management of Instability in Total Hip and Knee Arthroplasty” and lecture - “Managing Instability Without Constraint”, **American Academy of Orthopaedic Surgeons**, 69<sup>th</sup> Annual Meeting, Dallas, Texas, February 2002.

Moderator and coordinator of symposium - “A Rebirth of Unicondylar Arthroplasty: The Impact of Minimally Invasive Surgery” and lecture - “Implants and Instruments for UKR”, **American Academy of Orthopaedic Surgeons**, 69<sup>th</sup> Annual Meeting, Dallas, Texas, February 2002.

Moderator of Symposium “Polyethylene Wear” presented at the **AAHKS and Knee Society Combined Specialty Day Meeting**, Dallas, Texas, February 2002.

“Implants and Instruments for Minimally Invasive Knee Arthroplasty” and “Instability: What Doesn’t Work” presented at **Contemporary Techniques and Issues in Orthopaedics**, Whistler, British Columbia, March 2002.

Moderator of live Revision Knee Surgery, performed Virtual Reality Cadaver Knee Surgery and presented lectures, “Fixed-Bearing Knees” and “All Polyethylene Tibia”, at the **Masters Series: Techniques in Arthritis Surgery Conference**, Pasadena, California, April 2002.

“The History of UKA” and “The Preservation Philosophy Vs. The Others” presented at the **Preservation™ Uni-Compartmental Knee Learning Center**, Rosemont, Illinois, April 2002.

“Indications for Uni-condylar Total Knee Replacement”, “Implant Wear in Total Knee Arthroplasty: Management Options”, “Backside Wear: A Source of Debris in Total Knee Arthroplasty” and “Extensor Mechanism Rupture (TKA): Management Options” presented at the **Center for Hip and Knee Surgery Annual Orthopaedic Symposium**, Mooresville, Indiana, May 2002.

“Modular Interface Wear: A Major Source of Debris in Total Joint Arthroplasty” and “Unicondylar Arthroplasty – The Impact of Minimally Invasive Surgery” presented at the **Connecticut Orthopaedic Society Annual Meeting**, Hartford, Connecticut, May 2002.

Moderator of symposium “Minimally Invasive Unicondylar Knee Replacement: Progress or Regress” with presentation of “Implants & Instruments” at the **55<sup>th</sup> Annual Meeting of the Virginia Orthopaedic Society**, Hot Springs, Virginia, May 2002.

“The Uni is Not a Definitive Procedure: Once is Never Enough – In Opposition” and video vignette “Exposure Options in Revision TKA: Dealer’s Choice” presented at the **Current Concepts in Joint Replacement Spring 2000 Meeting**, Las Vegas, Nevada, May 2002.

“Indications and Contra-indications”, “Surgical Technique”, and “Analysis of Retrieved Unicondylar Implants” presented at **Minimally Invasive Surgery of the Knee**, Rocky Gap Resort, Cumberland, Maryland, June 2002.

“Pitfalls with Unicondylar Arthroplasty” presented at the **19<sup>th</sup> Annual Knee Society Interim Meeting**, Philadelphia, Pennsylvania, September 2002.

Symposium: A New Look at Unicompartamental TKA - “Selecting Patients for UKA” and “Implant and Instrument Options for MIU” presented at the **Eastern Orthopaedic Society Meeting**, Amelia Island, Florida, October 2002.

“Wear of Retrieved Unicondylar Knee Arthroplasty Tibial Components” presented at the **12<sup>th</sup> Annual AAHKS Fall Meeting**, Dallas, TX, November 2002.

Moderator and coordinator of Instructional Course Lecture – “Prevention and Management of Instability in Total Hip and Knee Arthroplasty” and lecture - “Managing Instability Without Constraint”, **American Academy of Orthopaedic Surgeons**, 70<sup>th</sup> Annual Meeting, New Orleans, Louisiana, February 2003.

Moderator and coordinator of Instructional Course Lecture - “Polyethylene Wear and Osteolysis with Total Hip and Knee Arthroplasty: Evaluation, Management Options, and Results with Revision Surgery” and lecture - “Revision Total Knee Arthroplasty for Wear: Options and Results”, **American Academy of Orthopaedic Surgeons**, 70<sup>th</sup> Annual Meeting, New Orleans, Louisiana, February 2003.

“Sources of Osteolysis around TKA: Backside Wear” presented at symposium “Wear and Osteolysis Around Total Knee Arthroplasty: An Emerging Problem for the Next Decade”, **American Academy of Orthopaedic Surgeons**, 70<sup>th</sup> Annual Meeting, New Orleans, Louisiana, February 2003.

“Acute/Early Extensor Mechanism Rupture After TKA” presented at symposium “Management of Early Complications of Total Knee Replacement: State of the Art in 2003”, **American Academy of Orthopaedic Surgeons**, 70<sup>th</sup> Annual Meeting, New Orleans, Louisiana, February 2003.

“Severe Varus or Valgus” presented at symposium “The Difficult Primary Knee” presented at the **AAHKS and Knee Society Combined Specialty Day Meeting**, New Orleans, Louisiana, February 2003.

“Unicompartamental Knee Arthroplasty verses Total Knee Arthroplasty”, a Point – Counterpoint Discussion presented at the **Advances in Orthopaedic Surgery – Treatment Options in Reconstructive Surgery**, Vail, Colorado, March 2003.

“Minimally Invasive Unicondylar Knee Replacement” presented at **the Interlaken Ski Meeting**, Interlaken, Switzerland, March 2003.

“Unicompartamental Arthroplasty” presented at the **Ohio State University Grand Rounds**, Columbus, Ohio, May 2003.

“Unicompartamental Arthroplasty: Past, Present, and Future” presented at **Minimal Intervention Knee Surgery Conference**, Barcelona, Spain, September 2003.

“Osteolysis: Surgical Treatment” presented at the **NIAMS/OMAR/NIH Consensus Development Course**, Bethesda, Maryland, December 2003.

“Structural Femoral Head Allografting” and “Unicompartamental Replacement: An Overuse Syndrome- In Opposition” Presented at the **20<sup>th</sup> Annual Current Concepts in Joint Replacement – Winter 2003 Meeting**, Orlando, Florida, 2003.

Moderator and coordinator of Instructional Course Lecture – “Prevention and Management of Instability in Total Hip and Knee Arthroplasty” and lecture - “Managing Instability Without Constraint”, **American Academy of Orthopaedic Surgeons**, 2004 Annual Meeting, San Francisco, California, March 2004.

Moderator and coordinator of Instructional Course Lecture - “Polyethylene Wear and Osteolysis with Total Hip and Knee Arthroplasty: Evaluation, Management Options, and Results with Revision Surgery” and lecture - “Revision Total Knee Arthroplasty for Wear: Options and Results”, **American Academy of Orthopaedic Surgeons**, 2004 Annual Meeting, San Francisco, California, March 2004.

“Why Are We Seeing An Upsurge of Patients for Unis?” presented at the **2004 Combined Specialty Day Meeting of The Knee Society and The American Association of Hip and Knee Surgeons (AAHKS)**, San Francisco, California, March 2004.

“Minimally Invasive Surgery – Is It The Standard?” presented at the **11<sup>th</sup> Annual Masters Series**, Pasadena, California, April 2004.

“All We Have Learned About Polyethylene Wear at AORI” presented at **The Ohio State University Orthopaedic Grand Rounds**, Columbus, Ohio, May 2004.

“Why the Upsurge in Minimally Invasive Knee Arthroplasty” and “ Role of Unis in 2004” presented at **Contemporary Techniques in Total Hip and Knee Arthroplasty**, Nisswa, Minnesota, June 2004.

“Patient Selection for UKR” presented at **Minimally Invasive Joint Replacement: State of the Art**, The Methodist Hospital, Houston, Texas, September 2004.

“Uni compartmental Arthritis – Uni: Past, Present, & Future” presented at the **University of Pennsylvania Grand Rounds**, Philadelphia, Pennsylvania, October 2004.

“Patient Indications for UKA” presented at **Innovative Solutions in Total Hip and Total Knee Arthroplasty**, Dallas, Texas, October 2004.

“Wear in Total Knee Arthroplasty: A 2004 Perspective” and “UKA – Past, Present & Future” presented at the **Eighth Annual Charles M. Schwartz, MD Memorial Lecturer , Loyola University Medical Center**, Chicago, Illinois, December 2004.

“Extreme Unis – The Road to Perdition” and “Isolated Liner Exchange: A Useful Option in Revision TKA – In Opposition” presented at the **21<sup>st</sup> Annual Current Concepts in Joint Replacement - Winter 2004 Meeting**, Orlando, Florida, December 2004.

“Why I Think Unis Are a Good Option for Patients” and “Causes of Polyethylene Wear” presented at the **2005 Combined Specialty Day Meeting of the AAHKS and The Knee Society**, Washington, DC, February 2005.

“Extramedullary Anatomic Alignment Technique: Results & Pitfalls (Fixed and Mobile Bearing)” presented at the Instructional Course Lecture Series Unicompartmental Knee Replacement: Optimizing Results at the, Washington, DC, February 2005.

“Tibial Bone Loss: Graft Options and Augments” and “Fixed Bearing Unicompartmental Replacement: Has the Dust Settled or Will We See Growth?” presented at **Transforming Orthopaedics: Technology for Improved Surgical Outcomes**, Whistler, British Columbia, Canada, March 2005.

“Repair of Bone Defects with Revision TKA” and “Causes of Implant Wear with TKA/UKA” presented at **National Orthopaedic Hospital Knee Meeting**, Dublin, Ireland, March 2005.

“Unicompartmental Arthroplasty – Lessons Learned”, “Factors that Influence Wear with Total Knee Arthroplasty”, and “Management of Bone Defects in Revision Total Knee Arthroplasty” presented at the **IV International Course in Arthroplasties**, Barcelona, Spain, April 2005.

“THR and TKR with Navigation: *Position- Computer Navigation is not required for TKR*” presented at the **2005 Masters Series – Techniques in Arthritis Surgery Conference**, Pasadena, California, April 2005.

“TKR for Unicompartmental Disease: First Among Equals – In Opposition” and Structural Femoral Head Allografting – A Bone Loss Bailout” presented at **Current Concepts in Joint Replacement – Spring 2005**, Las Vegas, Nevada, May 2005.

“Factors Associated with Survival of Medial Unicompartmental Arthroplasty: A Single-Center Study of 443 Knees Replaced Between 1984 and 1998” presented at the **Knee Society Interim Meeting**, New York, New York, September 2005.

“Unicompartmental Knee Arthroplasty: Durability & Wear”, “Structural Allograft in Knee Revision Surgery” Presented at the **90<sup>th</sup> Annual Congress of the Italian Society of Orthopaedics and Traumatology (SIOT)**, Florence, Italy, October 2005.

“Classification of Bone Loss and Its Importance in the Choice of the Right Prosthesis Model” presented at the **90<sup>th</sup> Annual Congress of the Italian Society of Orthopaedics and Traumatology (SIOT)** Instructional Course on Revision Total Knee Arthroplasty, Florence, Italy, October 2005.

“How to Deal with Bone Loss in Revision Total Knee Arthroplasty”, “We Should Be Doing More Unicompartmental Knees”, “Unicompartmental Knee Arthroplasty” presented to the **2005 Fall Scientific Meeting of the Pennsylvania Orthopaedic Society**, Pittsburgh, Pennsylvania, November 2005.

“The Role of Crosslinked Poly in TKR”, “The Intracapsular THR”, “Mobile Bearing Knees Aren’t My Choice” and “Patient Selection for UKA” presented at **Advances in Hip and Knee Arthroplasty**, Rio Grande, Puerto Rico, January 2006.

“Factors That Influence Wear with Total Knee Arthroplasty”, “The Use of Structural Allograft with Revision Total Knee Arthroplasty”, “Unicompartmental Arthroplasty: Lessons Learned” presented at the **Julius Nevaizer Lectureship at Washington Hospital Center**, Washington, DC, January 2006.

“Wear in the Knee”, “Dealing with Bone Loss”, and “Picking the Uni Patient” presented at the **North American Hip and Knee Symposium**, Copper, Colorado February 2006.

“Pitfalls & Complications of Minimally Invasive Uni Knee Surgery” presented at **Transforming Orthopaedics: Advances in Technology and Techniques**, Vail, Colorado, February 2006.

“Extramedullary Alignment Technique – Results and Pitfalls” presented at the **73<sup>rd</sup> Annual AAOS Meeting Instructional Course Lecture: Unicompartmental Knee Replacement: Optimizing Results**, Chicago, IL, March 2006.

“Less Invasive Surgery with Ligament Balancing” presented at the **73<sup>rd</sup> Annual AAOS Meeting Symposium: Less Invasive Knee Replacement Surgery**, Chicago, IL, March 2006.

“Structural Allograft for Severe Tibial Bone Loss in Revision TKA” presented at the **73<sup>rd</sup> Annual AAOS Meeting (Podium Presentation)**, Chicago, IL, March 2006.

“Information from Autopsy and Revision Retrievals” presented at the **2006 Combined Specialty Day Meeting of the AAHKS and The Knee Society**, Chicago, IL, March 2006.

“Dealing with Bone Loss” presented at the **73<sup>rd</sup> Annual AAOS Meeting Symposium: Less Invasive Knee Replacement Surgery**, Chicago, IL, March 2006.

“Unicompartmental Arthroplasty: Indications, Surgical Technique, and Pearls” and “Stems in Revision Total Knee Arthroplasty: My Indications and Review of Literature” presented at **Advances in Total Joint Replacement Conference**, White Sulphur Springs, WV, May 2006.

“TKA for Unicompartmental Disease: First Among Equals – Opposes” and “Alternate Allograft Techniques in Revision Total Knee Arthroplasty” (video vignette) presented at the **7<sup>th</sup> Annual Current Concepts in Joint Replacement – Spring 2006**, Las Vegas, NV, May 2006.

“Current Indications/Market Conditions for MIUKR” presented at the **Tissue Sparing Surgery Course**, Rosemont, IL, May 2006.

“Causes and Consequences of Wear Following Total Knee Arthroplasty” presented at **the University of Maryland Baltimore County Graduation Ceremonies**, June 2006.

“What’s All the Fuss About? Patella Replacement”, “Patella Femoral Replacement: Indications and Limitations”, and “DEUCE: A New Bicompartamental Solution” presented at **Horizons in Biology & Joint Function International Sports Medicine & Knee Arthroplasty Meeting**, Rhodes, Greece, September 2006.

“Radiographic Narrowing of the Lateral Compartment at 10 to 18 Years After Medial UKA: Has the Role of Knee Alignment Been Overstated? Presented at the **Interim Meeting of the Knee Society**, Alexandria, VA, September 2006.

“Unicondylar Knee Arthroplasty Using Extramedullary Alignment Technique: Results and Pitfalls” and “Bone Grafting Techniques” presented at **Knee Arthroplasty: Insight and Evaluation of New Techniques #3014, AAOS Orthopaedic Learning Center**, Rosemont, IL, October 27-29, 2006.

“Unicompartmental Replacement is a Valuable Procedure for the TKR Patient” presented at the **18<sup>th</sup> Holiday Total Knee Course**, New York, NY, November 2006.

“Biologic Arthroplasty for the Young Arthritic: The Logical Solution – Opposes” and “A Bi-Compartmental Solution: What is the Deuce?” presented at **Current Concepts in Joint Replacement – Winter Meeting**, Orlando, FL, December 2006.

“Hot Topics – XLPE/Gender/High Flex Knees”, “Bone Loss in the Knee”, “Total Revision Knee – Horrendoplasty”, and “Resurfacing the Knee” presented at the **North American Hip & Knee Symposium**, Copper Mountain, CO, February 2007.

“Extramedullary Alignment Technique – Results and Pitfalls” presented at the **74th Annual AAOS Meeting Instructional Course Lecture: Unicompartmental Knee Replacement: Optimizing Results**, San Diego, CA, February 2007.

“The Use of Allografts” and “Debate: Not Cementing the Stem” presented at the **74th Annual AAOS Meeting Symposium: What to Do When Knee Arthroplasties Fail? Challenges and Controversies**, San Diego, CA, February 2007.

“Tissue Guided Surgery: Can We Radically Improve the Kinematics of TKA?” presented at the **2007 Combined Specialty Day Meeting of the AAHKS and the Knee Society**, San Diego, CA, February 2007.

“Bone Loss in the Knee”, “Extramedullary Alignment Technique – Results and Pitfalls”, “Tissue Guided Surgery: Can We Radically Improve the Kinematics of TKA?”, “Patient Selection for Unicompartmental Arthroplasty”, and “Mobile Bearing Knees Aren’t My Choice” presented at **Seminar on Complex Total Joint Procedures**, St. Johns, VI, March 2007.

“Patient Selection for Unicompartmental Arthroplasty” and “Mobile Bearing Knees Aren’t My Choice” presented at **Advances in Hip and Knee Arthroplasty**, Orlando, FL, April 2007

“Gender Specific Knees – Solutions for a Non-Existent Problem (Affirms)”, “Tissue Guided Surgery: Assuring an Optimal Outcome”, and “Preoperative Planning: Avoiding Chaos (Revision Knee Arthroplasty) presented at **Current Concepts in Joint Replacement - Spring 2007**, Las Vegas, NV, May 2007.

“Factors that Influence Polyethylene Wear” and “Knee Kinematics” presented at **International Symposium on Current Topics in Primary Knee Arthroplasty**, Marbella, Spain, June 2007.

“Resurfacing Total Knee Arthroplasty” presented at the **AAOS Orthopaedic Learning Center: Minimally Invasive Hip & Knee Arthroplasty: Techniques and Computer Navigation #3112**, Rosemont, IL, June 2007.