

CURRICULUM VITAE

JULIE A. SKIPPER, PH.D.

julie.skipper@wright.edu

STATUS

Citizenship: U.S.A.

EDUCATION

B.S.B.E. Biomedical Engineering
Wright State University, Dayton, OH, 1991

Ph.D. Biomedical Sciences (Bioengineering and Medical Physics track)
Wright State University, Dayton, OH, 2003

PROFESSIONAL EXPERIENCE

Assistant Professor, 2003-present
Department of Biomedical, Industrial and Human Factors Engineering
Wright State University
Dayton, OH

Acting Director, 2003-2004
BioMedical Imaging Laboratory
Wright State University and Miami Valley Hospital
Dayton, OH

HONORS AND AWARDS

University Scholarship, 1995-1997
Predoctoral Fellowship, 1997-2003
Tau Beta Pi Engineering Honor Society
Travel Award, 15th International Bone Densitometry Workshop, 2002
Honor Roll, College of Engineering and Computer Science Faculty Excellence in Teaching Award, 2004
Air Force Summer Faculty Fellowship, 2006

COURSES TAUGHT

BME 402	Biomedical Engineering Design Laboratory II
BME 403	Biomedical Engineering Design Laboratory III
BME 422/622	Engineering Biophysics
BME 470/670	Photon Radiation
BME 471/671	Medical Imaging
BME 699	Special Problems in Biomedical Engineering
BME 734	Processing of Medical Images
BME 890	Instrumentation for Radiation Measurement
BME 899	Thesis
ISE 301	Statistical Methods for Testing, Development and Manufacturing I

THESIS AND DISSERTATION SUPERVISION

Wright State University (M.S.)

Sujata Kamath	Automatic segmentation of dental radiographs for bone density evaluation	2005
Priya Ganapathy	Measurement of phalangeal bone mineral density by radiographic absorptiometry	2005
Hrishikesh Karvir	Comparison of digital- and film-based systems for dual-energy radiographic absorptiometry	2006
Christina Schrider	A robust histogram-based visual target detection system	In progress

Wright State University (Ph.D.)

Priya Ganapathy	Automatic object localization and identification using multiple features in images	In progress
Hrishikesh Karvir	Representation of physical information in image fusion algorithms	In progress

RESEARCH FUNDING

1. Internal

Research Challenge Fund

Research and Sponsored Programs, Wright State University
October 25, 2005 to October 24, 2006, principle investigator

New Faculty Start-Up Fund

College of Engineering and Computer Science, Department of Biomedical, Industrial and Human Factors Engineering and BioMedical Imaging Laboratory, Wright State University
July 1, 2003 until exhausted, principle investigator

2. External

Central Analysis for “A phase II, randomized, double blind, placebo-controlled, multicenter study of the safety and efficacy of zoledronic acid for improvement of bone mineral density in patients with Gaucher disease who are beginning with enzyme replacement therapy with Cerezyme®”

Genzyme Pharmaceuticals
September 1, 2003 to December 31, 2005, co-investigator

Numerical studies on enhanced nonlinear visual target detection system

Air Force Research Laboratories/Dayton Area Graduate Studies
July 1, 2005 to June 30, 2006, principle investigator

Nonlinear enhancement of visual target detection

Applied Imaging Sciences, Inc.
Aug 1, 2005 to April 30, 2006, principle investigator

PROFESSIONAL AFFILIATIONS

American Association of Physicists in Medicine
National Osteoporosis Foundation
American Society for Engineering Education

PATENTS

Mass Screening Tool for Osteoporosis, co-inventor, 35 claims, submitted March 2003

PUBLICATIONS

Dissertation

Feasibility of radiographic absorptiometry of the mandible as an osteoporosis screening method. Jun 2003.

Journal Articles

Skipper, JA and Hangartner, TN. (2002) Deblurring of x-ray spectra acquired with a NaI-photomultiplier detector by constrained least squares deconvolution. *Med Phys* 29(5), 787-796.

Skipper, JA and Hangartner, TN. (submitted to *Phys Med Biol*) Feasibility of radiographic absorptiometry of the mandible as an osteoporosis screening method.

Ganapathy P and Skipper JA. (submitted to *Osteoporosis Int*) Measurement of phalangeal bone mineral density by dual-energy radiographic absorptiometry: a pilot study.

Published Conference Proceedings

Skipper, JA and Hangartner, TN. (1996) Optimizing x-ray spectra for dual-energy radiographic bone densitometry. Proceedings of the 15th Southern Biomedical Engineering Conference.

Hangartner, TN and Skipper, JA. (2003) Radiographic absorptiometry of the mandible as a screening method for osteoporosis. Proceedings of the 2003 International Osteoporosis Conference, Beijing, China: 29-34.

Abstracts

Skipper, JA and Hangartner, TN. (2000) Improvement of energy resolution of NaI-photomultiplier detector using spectral deconvolution. World Congress on Medical Physics and Biomedical Engineering.

Skipper, JA and Hangartner, TN. (2002) Dual-energy radiographic absorptiometry (DRA) of the manible: a new osteoporosis screening technique. 15th International Bone Densitometry Workshop.

Hangartner, TN and Skipper, JA. (2003) A new screening method for osteoporosis: radiographic absorptiometry of the mandible. Proceedings of the 2003 International Symposium on Osteoporosis and Geriatrics.

Skipper, JA. (2003) Feasibility of radiographic absorptiometry of the mandible as an osteoporosis screening method. *Med Phys* 30(10), 2855.

Schrider, CD and Skipper, JA (submitted) Histogram-based template matching for object detection in images with varying contrast. IS&T/SPIE 19th Annual Symposium on Electronic Imaging Science and Technology.

Repperger, DW, Pinkus, AR and Skipper, JA (submitted) Object recognition investigation using information-theoretic measures/metrics. IS&T/SPIE 19th Annual Symposium on Electronic Imaging Science and Technology.

Repperger, DW, Pinkus, AR and Skipper, JA (submitted) Stochastic resonance investigation of object detection in images. IS&T/SPIE 19th Annual Symposium on Electronic Imaging Science and Technology.

Unpublished Conference Presentations

Skipper, JA and Hangartner, TN. (1997) Quantitative bone measurement. National Bioengineering Career Symposium.

Local Presentations

Skipper, JA. Optimizing x-ray spectra for dual-energy radiographic bone densitometry. WSU Biomedical Sciences Ph.D. seminar, Apr 1997.

Skipper, JA. Design of an x-ray system for radiographic bone densitometry. WSU Biomedical Sciences Ph.D. seminar, Feb 1998.

Skipper, JA. Measurement of x-ray tube spectra. WSU Biomedical Sciences Ph.D. seminar, Feb 1999.

Skipper, JA. Measuring good spectra with a bad detector. WSU Engineering Ph.D. seminar, Feb 2001.

Skipper, JA Improvement of energy resolution of NaI-photomultiplier detector using spectral deconvolution. WSU Biomedical Sciences Ph.D. seminar, May 2001.

CURRICULUM VITAE
JULIE A. SKIPPER

- Skipper, JA. and Hangartner, TN. Mass screening method for osteoporosis. WSU Technology Showcase, Apr 2002.
- Skipper, JA. Dual-energy radiographic absorptiometry (DRA) of the mandible: a new osteoporosis screening technique. WSU Engineering Ph.D. seminar, Mar 2003.
- Skipper, JA. Basic education for general x-ray machine operators, WSU, Dec 2003.
- Skipper, JA, Kamath, SJ. Mass screening method for osteoporosis. WSU Technology Showcase, Apr 2004.
- Skipper, JA. Osteoporosis in men., Miamisburg High Twelve Club, The Masonic Temple, Dayton, OH, Jun 2004.
- Skipper, JA, Osteoporosis in men. Mound High Twelve Club, The Linden House, Dayton, OH, Sep 2004

PROFESSIONAL ACTIVITIES

- Invited reviewer, Medical Physics
- Invited reviewer, Physics in Medicine and Biology
- Invited reviewer, International Journal of Modelling and Simulation
- Invited reviewer, Bone
- Invited review panelist, National Science Foundation, SBIR panel August 2005, topic: Authentication

SERVICE ACTIVITIES AND OUTREACH

WRIGHT STATE UNIVERSITY

University Committees

- | | | |
|---|--------|--------------|
| Course Materials Committee | member | 2005-present |
| Learning With Disability Program
Student Affairs Committee | member | 2005-present |

College of Engineering and Computer Science

- | | | |
|----------------------------------|--------|-----------|
| Scholarship Committee | member | 2003-2005 |
| WrightSTEPP Resolution Committee | member | 2003-2005 |

Department of Biomedical, Industrial and Human Factors Engineering

- | | | |
|--|--------|--------------|
| Biomedical Engineering Program
Committee | member | 2003-present |
| Continuous Curriculum Improvement
Committee | member | 2005-present |
| Recruitment Coordinator Search
Committee | member | 2006 |

WSU Biomedical Sciences Ph.D. Program

- | | | |
|----------------------------|--------|--------------|
| Nominating Committee | member | 2004-present |
| Reunion Planning Committee | member | 2005 |

Other

- | | | |
|---|--|------------------|
| West District Science Fair judge | | 2002, 2003, 2005 |
| Project Advisor, Centerville High School students | | 2004 |