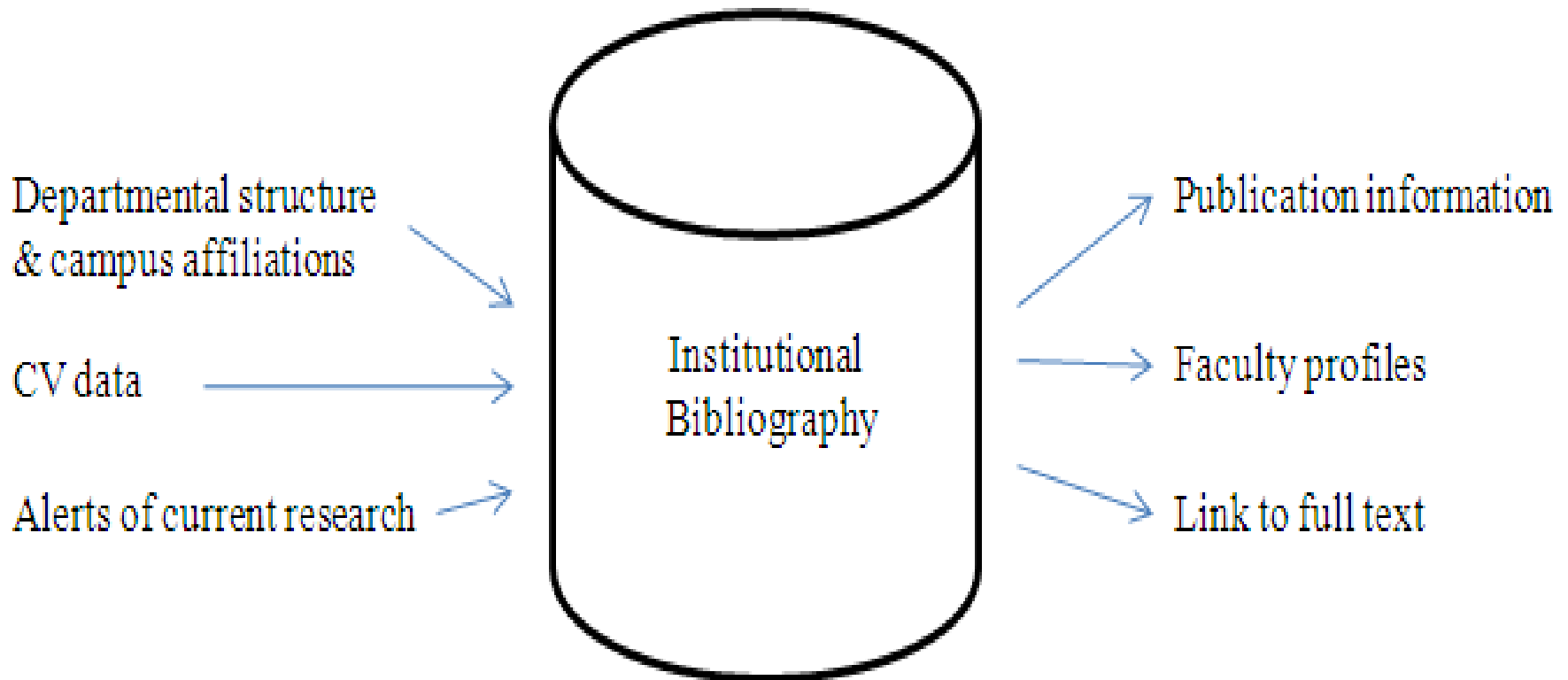


Journey to the Center of a CV

Anne Rauh and Jody Hoesly
University of Wisconsin – Madison
ASEE Annual Conference
Session 1541



Establishing the Borders





Ray Vanderby, Jr., PhD



Professor of Orthopedic Surgery

K4/738 Clinical Science Center
 600 Highland Avenue
 Madison, WI 53792-7375
 Office: (608) 263-9593
 FAX: (608) 263-5631

vanderby@ortho.wisc.edu

Education

- PhD, Engineering, Purdue University, West Lafayette, IN, 1975

Research Interests

Dr. Vanderby directs the work of an orthopedic research team, which includes [research staff members](#), [engineering students](#), and medical students. His research includes evaluation of normal and healing connective tissues, and their response to changes in their mechanical environment. He is also interested in the application of engineering for orthopedic applications. He is also a [Biomedical Engineering](#) faculty member.

Active Grants

- "Ligament Healing: Role of Neuropeptides"
- "Mechanical signal transduction mechanisms of chondrocytes"

Recent Publications

Research

Research Publications and Presentations

In Preparation

M.d.C. Lopez-Garcia, D.J. Beebe, W.C. Crone, "Young's Modulus of Collagen Displacement Rates," in preparation for the Journal of Biomechanical Engineering

Papers Submitted to Refereed Journals (not yet accepted)

F. Xu, K. Hart, C.E. Flanagan, J.C. Nacker, R. Moftakhar, B. Aagaard-Kienitz, D. Crone, K.S. Masters, "A Hybrid Coil/Polymer Device for Occlusion of Cerebral Aneurysms," *Medical Devices*, October 2008.

Papers Published in Refereed Journals

A. Creuziger, W.C. Crone, Grain Boundary Fracture in CuAlNi Shape Memory Alloy, *Engineering A*, 498, 404-411 (2008).

Creuziger, L.J. Bartol, K. Gall, W.C. Crone, "Crack Propagation from a Notch in a Brittle Material," *Journal of the Mechanics and Physics of Solids*, 56, 2896-2905 (2008).

Creuziger, W.C. Crone, "Observation and Prediction of Out of Plane Deformation of a Brittle Material," *Materialia*, 59(1), 95-98 (2008).

Biomedical Engineering

College of Engineering University of Wisconsin-Madison

[Home: Faculty](#)

Ray Vanderby, Jr.



**Ray Vanderby, Jr.
 Professor**

- [Address/E-mail](#)
- [Program Affiliations](#)
- [Courses](#)
- [Education](#)
- [Fields of Interest](#)
- [Publications](#)
- [Additional Experience](#)
- [Summary](#)

Contact Information

Room 5059 Tel: 608/263-9593
 1111 Highland Avenue Fax: 608/265-9144
 Madison, WI 53705 E-mail: vanderby@ortho.wisc.edu

Program Affiliations

- [Biomedical Engineering](#)
- [Engineering Physics](#)
- [Mechanical Engineering](#)
- [Biomedical Engineering Center for Translational Research](#)
- [Engineering Mechanics](#)
- [Materials Science Program](#)
- [Orthopedics and Rehabilitation](#)

The Vanderby Laboratory

[Faculty > Ray Vanderby](#)

Ray Vanderby

Professor, Orthopedics and Rehabilitation, Biomedical Engineering
vanderby@orthorehab.wisc.edu

[Vanderby Laboratory Home Page](#)

Organ System/Disease Focus

Skeletal system tissue healing

Aligned Research Focus

Tissue regeneration of ligament, tendon, and cartilage

Research Description

I am particularly interested in orthopedic tissues (bone, ligament, tendon, cartilage, etc.). My research focuses on wound healing or regenerating these tissues via tissue engineering. This includes equal parts of functional characterization (e.g. biomechanics), microstructural morphology and composition, and the relevant biological sciences (cell and molecular biology, histology, etc.).

Additionally, I am interested in ultrasonic wave propagation in these tissues for clinically relevant characterization of tissue properties and functional loadings, as well as tissue regeneration for knee reconstruction procedures. To study these orthopedic issues, in my lab we use and adapt engineering and biological methods including experimental, analytical and computational approaches.



Ray Vanderby

At the library, we ♥ our researchers.

People



26

Lakes



24

Drugan



50

Abbott



17

Witt



1

Fonck



70

Hegna



1

Szlufarska



213

Kulcinski



123

Moses



65

Kammer



29

Volpe



1

Chesler



97

Bier



59

Beebe



5

Thomadsen

Groups

College of Engineering (1955)
 Engineering Physics (1844)
 Nuclear Engineering (762)
 Biomedical Engineering (612)

Publications

Unknown (0031-9007) (126)
 Unknown (0094-2405) (81)
 Unknown (1550-7998) (80)
 Physical Review Letters (60)

Works – Recent additions

Granular segregation studies for the development of a radar-based three-dimensional sensing system

Journal article

Hill, K. M., Fan, Y., Zhang, J., Van Niekerk, C., Zastrow, E., more...

Granular Matter (2010)

[Find It](#) | [Save](#)

Adolescent health in medieval Serbia: signs of infectious diseases and risk of trauma

Journal article

Djurić, M., Janović, A., Milovanović, P., Djukić, K., Milenković, P., more...

HOMO - Journal of Comparative Human Biology (2010)

[Find It](#) | [Save](#)

Schubert polynomials and classes of Hessenberg varieties*

Journal article

Anderson, Dave, Tymoczko, Julianna

Journal of Algebra (2010)

[Find It](#) | [Save](#)

Publishers

IEEE (214)
 Elsevier (178)
 AMER CHEMICAL SOC (63)
 AMER INST PHYSICS (50)

Gregory Moses

Home [Works](#) [Groups](#)



Groups

College of Engineering
Engineering Physics
Nuclear Engineering

Research Focus

* fusion reactor design * technology enhanced learning * radiation hydrodynamics * computational engr. * nuclear reactor physics

Works – recent additions

Analysis of carbon-bearing materials for use as first wall armor in the high average power laser (hapl) chamber

Journal article

Heltemes, T. A., Moses, G. A.

Fusion Science and Technology (2009)

[Find It](#) | [Save](#)

Extension of Kershaw diffusion scheme to hexahedral meshes

Journal article

Fatenejad, Milad, Moses, Gregory A

Journal of Computational Physics (2008)

[Find It](#) | [Save](#)

Simulation of thermal response and ion deposition in the HAPL target chamber 1 mm tungsten armor layer using the improved BUCKY code

Journal article

Co-authors at UW-Madison



22

Kulcinski



7

Henderson



4

Corradini



2

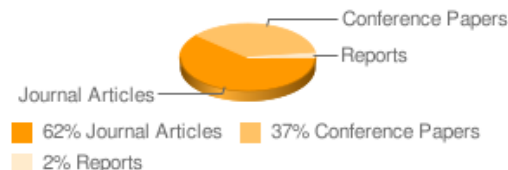
Wilson



1

Blanchard

Types of Work



Publications

- Fusion Technology (10)
- Unknown (0003-018X) (10)
- Nuclear Technology-Fusion (7)
- Nuclear Fusion (6)
- Computer Physics Communications (5)

Biomedical Engineering

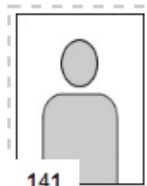
[Home](#) [Works](#) [People](#)

People



170

Vanderby



141

Mackie



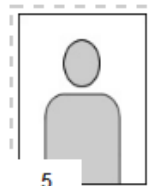
58

Crone



3

Masters



5

Thomadsen



208

Lakes



20

Henderson



26

Lakes



6

Block



1

Chesler

Description

www.engr.wisc.edu/bme/

Publications

Medical physics (35)
 Physics in Medicine and Biology (34)
 Journal of Materials Science (17)
 International Journal of Radiation
 Oncology Biology Physics (15)
 Journal of Biomechanics (15)
 Cellular Polymers (14)

Publishers

Elsevier (15)
 IEEE (9)
 American Society for Engineering
 Education (7)
 PERGAMON-ELSEVIER SCIENCE LTD
 (5)
 Society for Experimental Mechanics (4)

Belongs to

- College of Engineering

Recent Works

Linkage mapping of femoral material properties in a reciprocal intercross of HcB-8 and HcB-23 recombinant mouse strains

Journal article

Saless, N., Franco, G. E., Litscher, S., Kattappuram, R. S., Houlihan, M. J., more...
Bone (2010)

[Find It](#) | [Save](#)

Thermal and radiation resistance of stabilized LDPE

Journal article

Zaharescu, T., Jipa, S., Henderson, D. ., Kappel, W., Maris, D.A., more...
Radiation Physics and Chemistry (2010)

[Find It](#) | [Save](#)

Monte Carlo-based analytical model for small and variable fields delivered by TomoTherapy

Journal article

Sterpin, Edmond, Hundertmark, Brian T., Mackie, Thomas R., Lu, Weiguo, Olivera, Gustavo H., more...
Radiotherapy and Oncology (2010)

[Find It](#) | [Save](#)

Acclimating to the Environment

ADMIN - Setup (old citations on flash drive, tracking sheet, citation counts, etc.)

STUDENT - De-dup 2007 citations

STUDENT - Verify 2007 citations against CV

STUDENT - Search for other citations in Google Scholar

STUDENT - Ask librarian for database recommendations

STUDENT - Search recommended databases for citations

STUDENT - QC check: verify citations have loaded correctly in Zotero, fix as necessary

LIBRARIAN - QC check

LIBRARIAN - Search for missing citations and resolve ? issues

ADMIN - Upload to bibapp

LIAISON - Resolve ?'s with faculty, request items not findable, search for citations from CV to date, setup alerts

STUDENT - Manual entry of unfound citations - ????

LIAISON - Manage alerts and periodically update

- **Publication Field:**
Journals, societies, indexers
- **Map:**
Who, what ,when where,
why, how?
- **Vision:**
What if, how could, etc.?

Sharpening Tools & Drafting Travel Partners



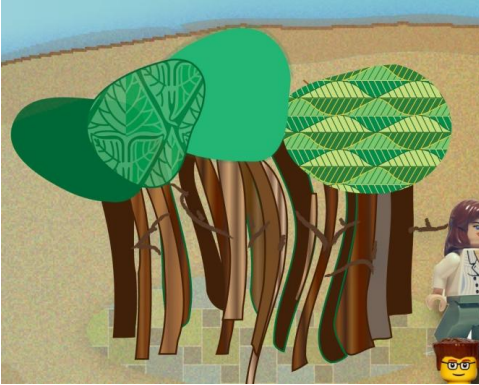
- Citation Managers
- Routing Packets
- Staff
- Students!

Climbing the CV Mountain



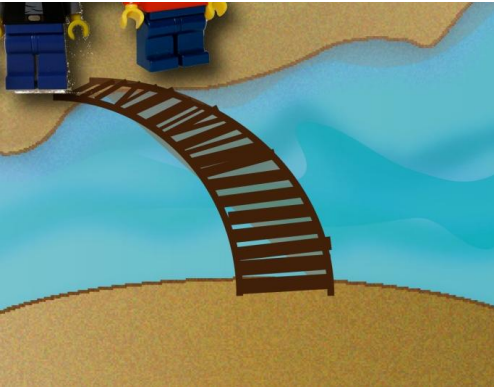
- Avoid the data avalanche
- Rappel the monster citation slopes
- Rope together
- Weather the storms of other projects
- Build in check points
- Know when to turn back

Into the Forest



- Configure the departmental structure
- Deliver CV data
- Keep data current
- Connect collaborators
- Establish authorities
- Utilize the data

Building Bridges



- Liaison librarians
- Collection development
- Researchers
- Health sciences library
- Institutional repository

