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Assistant Professor Van Emden Henson

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Monterey,Califonria, Naval Postgraduate School

Assistant Professor Van Emden Henson

Me, doing what I like best.

Index to Van Henson's Home Page

Here's what's on my home page:

You are visitor number ? since February 13, 1996.

How to reach me:

Here's the usual list of ways to get hold of me:

- Email Address:

  vhenson@nps.navy.mil

- Office:

  357 Glasgow Hall

- Office Phone:

  (408) 656-2198

- Fax:

  (408) 656-2355

I can be found in my office most of the day (and often half of the night). When not in the office, there's a good chance I'm on Storm, this sailboat:

or meeting with members of the Naval Postgraduate School Sailing Association.

Return to Index

Research Interests and Projects:

My research interests include numerical analysis, particularly multigrid methods and iterative methods for linear and nonlinear systems of equations. Other topics of great interest to me include image reconstruction and tomography, Fourier analysis, (especially discrete Fourier transforms, theory and applications), and parallel processing.

Research for Summer 1996

I'm spending Summer quarter conducting research into algebraic multigrid for large-scale simulations on unstructured grids. This work, funded by the Department of Energy, is part of the DOE's Accelerated Strategic Computing Initiative, in which nuclear testing is being replaced by computer simulation.

Return to Index

Teaching:

- I taught two courses Spring Quarter '96. From the following links you may obtain course descriptions, syllabi, projects and assignments, study guides, and old exams. The classes were:
  - MA4323 - Methods in Applied Mathematics
  - MA3046 - Matrix Analysis.

Other recent teaching assignments of interest

- MA2049 - Vector Analysis, Summer 1995
- MA4248 - Matrix Computations, Fall 1995
- MA3232 - Numerical Analysis, Winter Quarter 1995

Return to Index

Papers

- Wavelets and Multigrid (79K postscript)
by William L. Briggs and Van Emden Henson. *SIAM Journal of Scientific Computing*, Vol 14, No 2, pp 506-510, March, 1993.

- A Multilevel Cost-Space Approach to Solving the Balanced Long Transportation Problem (181K postscript)
by Kevin J. Cavanaugh and Van Emden Henson, *Proceedings of the 6th Copper Mountain Conference on Multigrid Methods*, NASA Conference Publications CP-3224, pp 61-76.

- Multigrid Methods for a Semilinear PDE in the Theory of Pseudoplastic Fluids (143K postscript)
by Van Emden Henson and Aihua Shaker, *Proceedings of the 6th Copper Mountain Conference on Multigrid Methods*, NASA Conference Publications CP-3224, pp. 231-242.

- Multilevel Image Reconstruction with Natural Pixels (3.9M postscript)
by Van Emden Henson, Mark Limber, Steven F. McCormick, and Bruce T. Robinson. *Siam Journal of Scientific and Statistical Computing*, Vol. 17, No. 1, pp. 193-216, 1996.

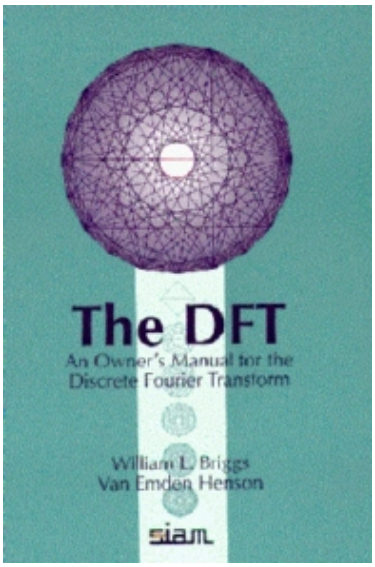
- Spotlight Computed Tomography with Natural Pixels (128K postscript)
by Van Emden Henson, Mark Limber, Steven F. McCormick, and Bruce T. Robinson, *Proceedings of the fifth SIAM conference on Linear Algebra*, SIAM Publications, pp. 97-101, 1994.

- A table of analytical discrete Fourier transforms(523K postscript)
by William L. Briggs and Van Emden Henson. *Applied Numerical Mathematics*, vol. 20 pp. 1-10, 1996.

- Theory and numerics for a semilinear elliptic PDE, with an application in the theory of pseudoplastic fluids(656K postscript)
by Van Emden Henson and Aihua Shaker, to appear in *Applicable Analysis*.

Return to Index

Book



Bill Briggs and I have written a book about discrete Fourier transforms. The book has its own home page, the Home Page of The DFT: an owner's manual for the discrete Fourier transform. From the book's Home Page you can peruse a few excerpts, get lists of errata, read (or post) critical commentary (along with author's responses, if appropriate), get (or post) solutions to the exercises, and get ordering information.

Return to Index

Math Browser

Math Browser is a collection of links to interesting and useful internet locations involved in numerical analysis, multigrid, wavelets, parallel processing, and the like. It is unashamedly lifted from Uli Rüde's WWW Travel Agent, and credit for this page belongs to Uli.

Return to Index

Most recent thought

Sometimes life can be really scary, and you don't even know it. Here's what I mean.

Return to Index

If you wish, please drop an e-mail to vhenson@nps.navy.mil

Van Henson