

Curriculum Vitae

Timothy J Trenary

Education

- 1998 PhD Mathematics, Colorado State University Fort Collins, CO
Dissertation directed by Dr. Aubrey Poore
A Banach-Hilbert Space Framework for the Study of Parametric Problems in Abstract Optimization
- 1993 MS Mathematics, Purdue University Lafayette, IN
- 1988 BS Mathematics, University of Illinois Champaign-Urbana, IL

Teaching Experience

- 2019-current **Professor of Mathematics** Regis University
Denver, CO
- 2011-2018 **Associate Professor of Mathematics** Regis University
- 2006-2011 **Assistant Professor of Mathematics** Regis University
- 1994-1999 **Graduate Teaching Assistant** Colorado State University
Fort Collins, CO
- 1993,1994 **Summer Adjunct Faculty** Southwestern Illinois College
Belleville, IL
- 1993-1994 **Adjunct Faculty** Front Range Community College
Fort Collins, CO
- 1991-1993 **Graduate Teaching Assistant** Purdue University
West Lafayette, IN

Professional Experience

- 1999-2006 **Staff Software Developer** I.B.M Printing Systems
Boulder, CO

Professional Memberships and Activities

Mathematical Association of America member since 1997

Reviewer for ICASSP (International Conference on Acoustics, Speech and Signal Processing), 2001-2009.

Reviewer for IEEE Transactions on Signal Processing 2003

Publications and Papers

Kleier, C., and T. Trenary. 2017. An exploratory study of facilitation in three species of *Raoulia*. *New Zealand Journal of Botany* 55(2): 215-224.

Kleier, C, T. Trenary, E.A. Graham, W. Stenzel, and P.W. Rundel. 2015. Size class structure, growth rates, and orientation of the central Andean cushion *Azorella compacta*. *PeerJ* 3:e843; DOI 10.7717/peerj.843.

J.Q. Trelewicz, and T.J. Trenary, "Multidimensional Rational Approximations With an Application to Linear Transforms", *IEEE Transactions on Signal Processing*, Vol 52, No 5, May 2004

T. Nowicki, J. Q. Trelewicz, M. Martens, T. Trenary, "Error diffusion method for resampling in the transform domain," *International Journal of Computational and Numerical Analysis and Applications*, vol. 2, no. 4, 2002, pp. 413-427

J. Q. Trelewicz, T. J. Trenary, "Fast image processing for wireless thin client visualization", invited paper in Sixth Multi-Conference on Systemics, Cybernetics and Informatics, (Orlando, FL, USA), 14 -18 July 2002.

T. Trenary, C. A. Micchelli, J. Q. Trelewicz, M. Martens, J. Mitchell, "Fast DCT-domain image shifting and merging", Proc. of 35th Asilomar Conference on Signals, Systems, and Computers 2001, (Pacific Grove, CA), 4-7 Nov 2001.

Patents

US Patent 7,903, 889 Issued 3/11/2011
"System and computer readable medium for the scaling down of data"
Co-inventors: Nowicki, T.J., Trelewicz, J.Q., Martens, M.

US Patent 7,099, 523 Issued 8/29/2006
"System and computer readable medium for the scaling down of data"
Co-inventors: Nowicki, T.J., Trelewicz, J.Q., Martens, M.

US Patent 7,474, 805 Issued 1/6/2009
“Efficient Scaling in Transform Domain”
Co-inventors: Nowicki, T.J., Trelewicz, J.Q., Martens, M., Mitchell, J.L.

US Patent 7,177, 441 Issued 2/13/2007
“A Method and System for Secret Communication”
Co-inventors: Condon, J.B., Rijavec, N., Mitchell, J.L.

US Patent 7,903, 889 Issued 11/16/2010
“Halftone Method and Apparatus which Provides a Screen Frequency of N/2 for a Printer with Resolution N Dots Per Inch Without Negative Print Effects”
Co-inventors: Dittrich, D.K., Qiao, Y., Mitchell, J.L.

US Patent 7,720, 310 Issued 5/18/2010
“Scaling Down of Data”
Co-inventors: Finlay, I.R., Rijavec, N., Mitchell, J.L.

US Patent 7,373,003 Issued 5/13/2008
“Method for the Scaling Down of Data”
Co-inventors: Finlay, I.R., Rijavec, N., Mitchell, J.L.

US Patent 7,489,827 Issued 2/10/2009
“Scaling of Multi-dimensional Data in a Hybrid Domain”
Co-inventors: Mitchell, J.L.

US Patent 6,839,468 Issued 1/4/2005
“Scaling of Multi-dimensional Data in a Hybrid Domain”
Co-inventors: Mitchell, J.L.

US Patent 6,675,185 Issued 1/6/2004
“Hybrid Domain Processing of Multi-dimensional Data”
Co-inventors: Martens, M., Mitchell, J.L.

US Patent 6,678,423 Issued 1/13/2004
“Shift and/or Merge of Transformed Data Along Two Axes”
Co-inventors: Micchelli, C.A., Martens, M., Mitchell, J.L.

US Patent 6,671,414 Issued 12/30/2003
“Shift and/or Merge of Transformed Data Along One Axis”
Co-inventors: Micchelli, C.A., Martens, M., Mitchell, J.L.

US Patent 7,190, 847 Issued 3/13/2007
“Method, System and Program for Fractionally Shifting Data Subject to a Previous Transformation”

Co-inventor: Mitchell, J.L.

US Patent 7,463, 777 Issued 12/9/2008

“Method for the Scaling Down of Data”

Co-inventors: Finlay, I.R., Rijavec, N., Mitchell, J.L.

US Patent 6,970, 179 Issued 11/29/2005

“Method and Apparatus for the Scaling Up of Data”

Co-inventors: Finlay, I.R., Rijavec, N., Mitchell, J.L.

US Patent 7,062, 098 Issued 6/13/2006

“Method and Apparatus for the Scaling Down of Data”

Co-inventors: Finlay, I.R., Rijavec, N., Mitchell, J.L.