Publication List for
Real-time Digital Signal Processing Topics

Books and Book Chapters

1. T. B. Welch, C. H. G. Wright, and M. G. Morrow, *Real-Time Digital Signal Processing: From MATLAB to C with TMS320C6x DSPs*, 3rd ed., CRC Press, 2017.

2. T. B. Welch, C. H. G. Wright, and M. G. Morrow, *Real-time digital signal processing: from MATLAB to C with TMS320C6x DSK*, China Machine Press (Chinese language version), 2011.

3. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Real-time digital signal processing," in *The Electrical Engineering Handbook*, 3rd ed., 6-volume set, (R. C. Dorf, ed.), vol. 1, ch. 19, CRC Press and IEEE Press, 2006.

Journal and Conference Articles

1. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Reinforcing Signal Processing Theory Using Real-Time Hardware," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 6329–6333, Mar. 2017. Invited special session paper.

2. T. B. Welch, C. H. G. Wright, T. N. Kimmey, A. V. Delgado, S. O'Rorke, M. Brimstein, A. G. Norris, D. Buckmiller, R. Schwartz, D. R. Welch, and R. J. Edwards, "Seeing in the dark and through walls: using IR cameras in outreach," in *Proceedings of the 2016 ASEE Annual Conference*, (New Orleans, LA (USA)), Jun. 2016. Paper AC2016-15631.

3. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Signal Processing Concepts Help Teach Optical Engineering," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 6275–6279, March 2016.

4. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Using Student Knowledge of Linear Systems Theory to Facilitate the Learning of Optical Engineering," *ASEE Comput. Educ. J.*, pp. 57–63, January-March 2016.

5. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Real-Time DSP Using See-Through," *ASEE Comput. Educ. J.*, pp. 31–40, April-June 2015.

6. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Leveraging Student Knowledge of DSP for Optical Engineering," in *Proceedings of the 2015 IEEE Signal Processing Workshop*, (Snowbird, UT (USA)), pp. 148–153, Aug. 2015.

7. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Using Student Knowledge of Linear Systems Theory to Facilitate the Learning of Optical Engineering," in *Proceedings of the 2015 ASEE Annual Conference*, (Seattle, WA (USA)), Jun. 2015. Paper AC2014-12311.

8. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "Real-Time DSP Using See-Through," in *Proceedings of the 2014 ASEE Annual Conference*, (Indianapolis, IN (USA)), Jun. 2014. Paper AC2014-9875.

9. A. Rothenbuhler, C. H. G. Wright, T. B. Welch, and M. G. Morrow, "DSP See-Through: Going Beyond Talk-Through," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2247–2251, May 2014.

10. C. H. G. Wright, M. G. Morrow, and T. B. Welch, "Comparison of DSP Boards for Classroom Use," in *Proceedings of the 15th IEEE Digital Signal Processing Workshop*, (Napa, CA (USA)), Aug. 2013.

11. M. G. Morrow, T. B. Welch, and C. H. G. Wright, "An Inexpensive Approach for Teaching Adaptive Filters Using Real-Time DSP on a New Hardware Platform," in *Proceedings of the 2013 ASEE Annual Conference*, (Atlanta, GA (USA)), Jun. 2013. Paper AC2013-7330.

12. M. G. Morrow, C. H. G. Wright, and T. B. Welch, "Real-Time DSP for Adaptive Filters: A Teaching Opportunity," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, May 2013.

13. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "Real World Ultrasonic Signals and their Application in Teaching Signal Processing," in *Proceedings of the 2012 ASEE Annual Conference*, (San Antonio, TX (USA)), Jun. 2012. Paper AC2012-3630.

14. T. B. Welch, M. G. Morrow, and C. H. G. Wright, "Connexions and the SPEN Fellows Program," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2785–2788, March 2012.

15. M. G. Morrow, C. H. G. Wright, and T. B. Welch, "Old tricks for a new dog: An innovative software tool for teaching real-time DSP on a new hardware platform," in *Proceedings of the ASEE Annual Conference*, June 2011. Paper AC2011-1002.

16. M. G. Morrow, C. H. G. Wright, and T. B. Welch, "WinDSK8: the continuing saga of winDSK," in *Proceedings of the 14th IEEE Digital Signal Processing Workshop*, Jan. 2011.

17. M. G. Morrow, C. H. G. Wright, and T. B. Welch, "winDSK8: A user interface for the OMAP-L138 DSP board," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2884–2887, May 2011.

18. M. G. Morrow, C. H. G. Wright, and T. B. Welch, "Old tricks for a new dog: An innovative software tool for teaching real-time DSP on a new hardware platform," *ASEE Comput. Educ. J.*, 2011. in press.

19. M. G. Morrow, C. H. G. Wright, and T. B. Welch, "WinDSK8: the continuing saga of winDSK," in *Proceedings of the 14th IEEE Digital Signal Processing Workshop*, (Sedona, AZ (USA)), Jan. 2011. (Accepted for publication).

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21. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "Software defined radio: inexpensive hardware and software tools," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2934–2937, Mar. 2010.

22. M. G. Morrow, C. H. G. Wright, and T. B. Welch, "EvalWare: Web resources and recommendations for DSP hardware design," *IEEE Signal Processing*, vol. 26, no. 6, pp. 200–204, November 2009. (Invited review article.)

23. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "The DSP of an unstable financial account," in *Proceedings of the 2009 ASEE Annual Conference*, (Austin, TX (USA)), Jun. 2009.

24. T. B. Welch, T. Kent, C. H. G. Wright, and M. G. Morrow, "Teaching with software defined radios," in *Proceedings of the 2009 ASEE Annual Conference*, (Austin, TX (USA)), Jun. 2009.

25. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "The DSP of money," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2309–2313, April 2009.

26. T. B. Welch, T. Kent, C. H. G. Wright, and M. G. Morrow, "An affordable software defined radio," in *Proceedings of the 13th IEEE Digital Signal Processing Workshop*, (Marco Island, FL (USA)), pp. 791–796, Jan. 2009.

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28. J. W. Pierre, F. K. Tuffner, R. F. Kubichek, and C. H. G. Wright, "Real-time DSP in a freshman ECE course," in *Proceedings of the 13th IEEE Digital Signal Processing Workshop*, (Marco Island, FL (USA)), pp. 430–434, Jan. 2009.

29. C. H. G. Wright, M. G. Morrow, M. C. Allie, and T. B. Welch, "Using real-time DSP to enhance student retention and engineering outreach efforts," in *Proceedings of the 2008 ASEE Annual Conference*, (Pittsburgh, PA (USA)), Jun. 2008.

30. C. H. G. Wright, M. G. Morrow, M. C. Allie, and T. B. Welch, "Using real-time DSP to enhance student retention and engineering outreach efforts," *ASEE Comput. Educ. J.*, pp. 64–73, October-December 2008.

31. C. H. G. Wright, T. B. Welch, M. G. Morrow, and G. Vineyard, "CommFSK: A Hardware Approach to Teaching FSK," *ASEE Comput. Educ. J.*, pp. 38–45, April-June 2008.

32. C. H. G. Wright, M. G. Morrow, Mark C. Allie, and T. B. Welch, "Enhancing Engineering Education and Outreach Using Real-time DSP," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, April 2008. Paper 3583.

33. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "A Hardware Approach to Teaching FSK," in *Proceedings of the 2007 ASEE Annual Conference*, (Honolulu, HI (USA)), Jun. 2007.

34. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "Teaching Rate Conversion Using Hardware-Based DSP," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, vol. III, pp. 717–720,

35. C. H. G. Wright, David M. Mares, S. F. Barrett, and T. B. Welch, "Digital Signal Processing and Bioinstrumentation using LabVIEW, the new ELVIS Benchtop Platform, and BIOPAC," *ASEE Comput. Educ. J.*, vol. XVII, no. 2, pp. 104–112, April-June 2007.

36. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "Caller ID: a project to reinforce an understanding of DSP-based demodulation," *ASEE Comput. Educ. J.*, vol. XVI, no. 4, pp. 2–7, October-December 2006.

37. C. H. G. Wright, T. B. Welch, and M. G. Morrow, "CommFSK: A Hardware Approach to Teaching FSK," in *Proceedings of the 12th IEEE Digital Signal Processing Workshop*, (Jackson, WY (USA)), pp. 460–465, Sep. 2006.

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41. M. G. Morrow, T. B. Welch, and C. H. G. Wright, "A Host Port Interface Board To Enhance the TMS320C6713 DSK," in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, vol. II, pp. 969–972, May 2006.

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46. G. W. P. York, T. B. Welch, and C. H. G. Wright, "Teaching real-time ultrasonic imaging with a 4-channel sonar array, TI C6711 DSK and MATLAB," *ISA Biomedical Sciences Instrumentation*, vol. 41, pp. 370–375, April 2005.

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48. T. B. Welch, M. G. Morrow, and C. H. G. Wright, "Reach out and DSP someone!," in *Proceedings of the 2004 ASEE Annual Conference*, June 2004. Paper 3620-06.

49. T. B. Welch, M. G. Morrow, C. H. G. Wright, and R. W. Ives, "commDSK: a tool for teaching modem design and analysis," *ASEE Comput. Educ. J.*, vol. XIV, pp. 82–89, Apr. 2004.

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51. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "Experiences in offering a DSP-based communication laboratory," in *Proceedings of the 11th IEEE Digital Signal Processing Workshop and the 3rd IEEE Signal Processing Education Workshop*, Aug. 2004.

52. T. B. Welch, C. H. G. Wright, and M. G. Morrow, "Real-time DSP for educators." Workshop 0220, June 2003. Invited workshop for 2003 ASEE Annual Conference.

53. T. B. Welch, M. G. Morrow, C. H. G. Wright, and R. W. Ives, "commDSK: a tool for teaching modem design and analysis," in *Proceedings of the 2003 ASEE Annual Conference*, June 2003. Session 2420.

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