

## Addendum V

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# ***A Few Papers from the Literature of Quantization Theory***

- SHEPPARD, W. F. (1898). On the Calculation of the Most Probable Values of Frequency-Constants, for Data Arranged According to Equidistant Divisions of Scale, *Proc. London Math. Soc.* **29**: 353–380, 1898.  
<http://www.mit.bme.hu/books/quantization/papers/Sheppard.pdf>
- BENNETT, W. R. (1948). Spectra of Quantized Signals, *Bell System Technical Journal* **27**(4): 446–472, Jul, 1948.  
<http://www.mit.bme.hu/books/quantization/papers/Bennett.pdf>
- WIDROW, B. (1956). A study of rough amplitude quantization by means of Nyquist sampling theory, *IRE Trans. Circuit Theory* **3**(4): 266–276, Dec, 1956.  
<http://www.mit.bme.hu/books/quantization/papers/Widrow-home/transCT.html>
- WIDROW, B. (1957). Propagation of statistics in systems, *IRE 1957 Wescon Convention Record, Pt. 2, San Francisco, August 1957*, pp. 114–21.  
<http://www.mit.bme.hu/books/quantization/papers/Widrow-home/wescon.html>
- WIDROW, B. (1961). Statistical analysis of amplitude-quantized sampled-data systems, *Trans. AIEE, Part II.: Applications and Industry* **79**(52): 555–68, Jan'61 Section, 1961.  
<http://www.mit.bme.hu/books/quantization/papers/Widrow-home/aiee.html>
- Inose, H., Yasuda, Y. and Murakami, J. (1962). A telemetering system by code modulation and  $\Delta$ - $\Sigma$  modulation, *IRE Trans. on Space Electronics & Telemetry* **SET-8**(3): 204–9.  
<http://www.mit.bme.hu/books/quantization/papers/Inose.pdf>

- Roberts, G. L. (1962). Picture coding using pseudo-random noise, *IRE Trans. on Information Theory* **IT-8**(2): 145–54.  
IEEE Xplore: <http://ieeexplore.ieee.org/iel5/18/22787/01057702.pdf>
- Schuchman, L. (1964). Dither signals and their effect on quantization noise, *IEEE Trans. on Communication Theory* **12**: 162–65.  
IEEE Xplore: <http://ieeexplore.ieee.org/iel5/8159/23676/01088973.pdf>
- WELCH, P. D. (1969). A Fixed-Point Fast Fourier Transform Error Analysis, *IEEE Trans. on Audio and Electroacoustics* **17**(2): 151–57, June, 1969.  
IEEE Xplore: <http://ieeexplore.ieee.org/iel6/8337/26068/01162035.pdf>
- WEINSTEIN, C. J. (1969). Roundoff noise in floating point fast Fourier transform computation, *IEEE Trans. on Audio and Electroacoustics* **17**(3): 209–15.  
IEEE Xplore: <http://ieeexplore.ieee.org/iel6/8337/26069/01162049.pdf>
- SRIPAD, A. B. AND SNYDER, D. L. (1977). A necessary and sufficient condition for quantization errors to be uniform and white, *IEEE Trans. on Acoustics, Speech and Signal Processing* **25**(5): 442–448, Oct, 1977.  
IEEE Xplore: <http://ieeexplore.ieee.org/iel6/29/26127/01162977.pdf>
- KOLLÁR, I. (1986). The noise model of quantization, *Proc. 1<sup>st</sup> IMEKO TC4 Symposium on Noise in Electrical Measurements, Como (Italy), June 19–21, 1986*, OMIKK-Technoinform, Budapest, 1987, pp. 125–129.  
<http://www.mit.bme.hu/books/quantization/papers/imeko86.pdf>
- SHERWOOD, D. T. (1986). Some Theorems on Quantization and an Example Using Dither, *Conference Record of the 19<sup>th</sup> Asilomar Conference on Circuits, Systems & Computers, Pacific Grove, CA, Nov. 6–8, 1986*, 86CH2331-7, pp. 207–12.  
IEEE Xplore: <http://ieeexplore.ieee.org/iel4/5502/14788/00671451.pdf>
- JENSEN, R. V. (1987). Classical Chaos, *American Scientist* **75**(2): 168–81.
- GRAY, R. M. (1990). Quantization noise spectra, *IEEE Trans. on Information Theory* **36**(6): 1220–44.  
IEEE Xplore: [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=59924](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=59924)
- Goldberg, D. (1991). What every computer scientist should know about floating-point arithmetic, *ACM Computing Surveys* **23**(1): 5–48.  
<http://docs-pdf.sun.com/800-7895/800-7895.pdf>
- KOLLÁR, I. (1994). Bias of mean value and mean square value measurements based on quantized data, *IEEE Trans. on Instrumentation and Measurement* **43**(5): 733–9, Oct, 1994.  
<http://www.mit.bme.hu/books/quantization/papers/IM-mean-value.pdf>

- WIDROW, B., KOLLÁR, I. AND LIU, M.-C. (1995). Statistical theory of quantization, *IEEE Trans. on Instrumentation and Measurement* **45**(6): 353–61, 1995.  
<http://www.mit.bme.hu/books/quantization/papers/quant-survey.pdf>
- WANNAMAKER, R. A., LIPSHITZ, S. P., VANDERKOOY, J. AND WRIGHT, J. NELSON (2000). A Theory of Non-Subtractive Dither, *IEEE Trans. on Signal Processing* **48**(2): 499–516, 2000.  
<http://www.mit.bme.hu/books/quantization/papers/Wannamaker-home/ieee.html>
- KOLLÁR, I. (2006). Digital Non-Subtractive Dither: Necessary and Sufficient Condition for Unbiasedness, with Implementation Issues, *Proceedings of the 23rd IEEE Instrumentation and Measurement Technology Conference, Sorrento, Italy, 24-27 April 2006*, pp. 140–145.  
<http://www.mit.bme.hu/books/quantization/papers/imtc-PID208760.pdf>