

## ENEE 303 Analog and Digital Electronics – Base Paper Choices

| Name   | Handout//<br>Section/<br>Email | First talk<br>date | Second talk<br>date                                      | Commentator<br>dates                                     |
|--|--------------------------------|--------------------|--|--|
| Paper  |                                |                    |  |  |
| Akande, Omoniyi A  | X                              | W 03/28/12 #4      | W 04/18/12 #1  | W 04/11/12 #1<br><del>M 04/16/12 #3</del><br>RWN (03/06) |
| C. T. Chuang, K. Chin, P. F. Lu, and H. J. Shin, "High-speed Low-Power Darlington ECL Circuit," IEEE Journal of Solid-State Circuits, Vol. 28, No. 12, December 1993, pp. 1374 - 1376.   |                                |                    |  |  |
| Ali, Kaisar A  |                                | M 04/02/12 #3      | M 04/23/12 #1  | M 04/23/12 #4  |
| Vlastimir D. Pavlovic and Srdjan d. Djordjevic, "A novel structure of the fully differential CMOS amplifier with symmetric active load," International Journal of Electronics, Vol. 96, No. 4, April 2009, pp. 331 - 348.  |                                |                    |  |  |
| Amar, Juan Garcia  | X                              | W 03/28/12 #7      | W 04/18/12 #2  | W 04/11/12 #4<br>RWN                                     |
| L. Ravezzi and H. Partovi, "CMOS clock buffer with reduced supply noise sensitivity," Electronics Letter, Vol. 47, No. 17, August 18, 2011, pp. 955 - 958.   |                                |                    |  |  |
| Belaski,<br>Christopher David  | X                              | W 04/04/12 #4      | M 04/30/12 #4  | W 04/25/12 #1  |
| C. Rao, X. Yuan, S. Zhang, L. Meng, and C. Peng, "CMOS artificial subretinal chip for natural light illumination," Electronics Letters, Vol. 42, No. 15, July 20, 2006, pp. ??.  |                                |                    |  |  |
| Chum, Saurabh  | X                              | M 04/02/12 #7      | W 05/02/12 #4  | M 04/16/12 #1  |
| Wei Li, "A Transistor-Only High-Pass Filter with Adjustable Q Factor," IEEE Transactions on Circuits and Systems - I, Vol. 40, No. 2, February 1993, pp. 136 - 140.<br>[replaced by the above 03/30/12]B. L. Hart and R. W. J. Barker, "Modified current Mirror with a 'Voltage-Following' Capability," Electronics Letters, Vol. 18, No. 22, October 28, 1982, pp. 970 - 972. |                                |                    |  |  |
| Climer, Alec<br>Benjamin   | X                              | W 03/28/12 #1      | M 04/16/12 #1  | W 04/11/12 #2  |
| J.-F. Chang and Y.-S Lin, "3.2-9.7 GHz ultra-wideband low-noise amplifier with excellent stop-band rejection," Electronics Letters, Vol. 48, No. 1, January 5, 2012, pp. ??.   |                                |                    |  |  |
| Durand, Ismael<br>Gilles Lion  |                                | M 03/26/12 #3      | M 04/16/12 #3<br><del>W 05/02/12 #5</del><br>RWN (03/06) | M 04/16/12 #2  |
| Jonathan W. Kimball, Philip T. Krein, and Kevin R. Cahill, "Modeling of Capacitor Impedance in Switching Converters," IEEE Power Electronics Letters, Vol. 3, No. 4, December 2005, pp. 136 - 140.   |                                |                    |  |  |
| Flom, Benjamin<br>David  | X                              | M 03/26/12 #1      | M 04/16/12 #4<br>RWN                                     | W 05/02/12 #2  |
| Ming Gu, and Shantanu Chakrabartty, "Synthesis of Bias-Scalable CMOS Analog Computational Circuits Using Margin Propagation," IEEE Transactions on Circuits and Systems - I, Vol. 59, No. 2, February 2012, pp. 243 - 254.   |                                |                    |  |  |
| Heys, Andrew S   | X                              | M 04/02/12 #5      | M 04/30/12 #2  | M 04/30/12 #3  |
| Keiko Muro, Takashi Nabshima, Teukazu Sato, Kimihiro Nishijima and Shinichi Yoshida, "H-Bridge Buck-Boost Converter with Dual Feedforward Control," PEDS 2009, pp. 1002 - 1007.  |                                |                    |  |  |

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| Hossain, Sazzad  | X | W 03/28/12 #5        | W 05/02/12 #4        | W 04/25/12 #2  |
| Munir A. Al-Absi, "A novel highly accurate current mirror," International Journal of Electronics, Vol. 96, No., 8, August 2009, pp. 781 - 786.   |   |                      |                      |  |
| Hua, Dong-Nghi Vo  | X | W 03/28/12 #3        | W 04/25/12 #4        | W 04/28/12 #3  |
| S. Pookalyaudom, A. Thanachayanont and R. Sitdhikorn, "Current amplitude control circuits suitable for current-mode oscillators," Electronics Letters, Vol. 33, No. 1, January 2, 1997, pp. 2 - 3.           |   |                      |                      |  |
| Ju, Zhihua<br>Drop 03/06   |   | M 03/26/12 #4<br>RWN | M 04/16/12 #3<br>RWN | W 04/11/12 #4<br>RWN                                     |
| Kaberle, Benjamin<br>James   | X | W 04/04/12 #2        | W 05/02/12 #3        | W 05/02/12 #1  |
| Richard R. Spencer and James B. Angell, "A Voltage-Controlled Duty-Cycle Oscillator," IEEE Journal of Solid-State Circuits, Vol. 25, No. 1, February 1990, pp. 274 - 1376.                                   |   |                      |                      |  |
| Kana Tano, Armand  |   | M 03/26/12 #5<br>RWN | M 04/16/12 #2<br>RWN | M 04/16/12 #3<br><del>W 05/02/12 #5</del><br>RWN (06/03) |
| A. Tauro, M. DiCiano, and C. Marzocca, "An Improved Low Voltage CMOS Current Source Exploiting Positive Shunt Feedback," ???   |   |                      |                      |  |
| Keenan, Nicholas<br>John   | X | W 04/04/12 #5        | W 04/11/12 #4<br>RWN | M 04/16/12 #4<br>RWN                                     |
| Bryan Hart, "Designing the Widlar current mirror," International Journal of Electrical Engineering Education, Vol. 40, No. 4, pp. 285 - 298. (year??)  |   |                      |                      |  |
| Loudermilk, Alec<br>Thomas   | X | W 04/04/12 #3        | M 04/30/12 #1        | M 04/30/12 #4  |
| M. M. Reja, I. M. Filanovsky and K. Moez, "Wide tunable CMOS active inductor," Electronics Letters, Vol 44, No. 25, December 4, 2008, pp. 1461 - 1463.   |   |                      |                      |  |
| MacRae, Alexander<br>Daniel  | X | W 03/26/12 #6<br>RWN | W 04/11/12 #3<br>RWN | M 04/16/12 #4<br>RWN                                     |
| A. Payne and A. Thanachayanont, "Translinear circuit for phase detection," Electronics Letters, Vol. 33, No. 18, August 28, 1997, pp. 1507 - 1509.   |   |                      |                      |  |
| Memudu, Nasir<br>Temidayo  | X | W 03/28/12 #6        | W 04/18/12 #4        | W 04/18/12 #3  |
| [rcd 04/04/12] M.-H. Cheng and Z.-W. Wu, "Low-Power low-voltage reference using peaking current mirror circuit," Electronics Letters, Vol. 41, No. 10, May 12, 2005, pp. ??                                  |   |                      |                      |  |
| Mistry, Jay<br>Jagdish   | X | M 04/02/12 #2        | W 04/25/12 #1        | M 04/30/12 #1  |
| G. Stochino, "Class AB wide dynamic range bipolar differential voltage-to-current converter with constant transconductance," Electronics Letters, Vol. 34, No. 2, January 22, 1998, pp. 173 - 174,           |   |                      |                      |  |
| Nna, Chika S   | X | M 04/02/12 #6        | M 04/23/12 #4        | M 04/23/12 #1  |
| [rcd. 04/09/12] Suyeon Han, Minsu Kim, Hyungchul Kim and Youngoo Yang, "A CMOS Power Amplifier for UHF RFID Reader Systems," ref data???   |   |                      |                      |  |
| Press, Benjamin<br>Charles   |   | M 03/26/12 #2        | W 04/11/12 #2<br>RWN | W 04/11/12 #3<br>RWN                                     |
| Christian Schneider and Howard Card, "Analog CMOS Synaptic Learning Circuits Adapted from Invertebrate Biology," IEEE Transactions on Circuits and Systems, Vol. 38, No. 12, December 1991, pp. 1430 - 1438. |   |                      |                      |  |
| Rizvi, Asad H  | X | W 04/04/12 #8        | W 04/18/12 #3        | W 04/18/12 #4  |

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| Stanley K. Webster, "An All-Transistor Hearing Aid," Transactions of the I.R.E. on Audio, 1954, pp. 65 - 70<br>[changed to the above 05/06/12]<br>Kevin D. Clark and David J. Comer, "tuned negative capacitance circuitry for CMOS amplifier bandwidth extension," International Journal of Electronics, Vol. 96, No. 1, January 2009, pp. 1 - 9.   |            |                      |                      |                      |
| Rose, Brian James  | X          | M 04/02/12 #4        | M 04/30/12 #3        | M 04/30/12 #2        |
| Goran Krilic, "An Optically Biased, Single-ended, Three Transistor, Fully Static RAM Cell," IEEE Circuits & Devices Magazine, Vol. ??, No. ?? September/October 2004, pp. 18 - 24.<br>[02/20/12, changed from:]<br>Hugo Marques, Beatrix Borges, and Carlos Ferreira, "New Modular Two Stage Switching Converter for High Power Stereo Audio Amplifier," Proceedings of the IEEE Conference on ???, 2008, pp. 845 - 849. |            |                      |                      |                      |
| Shah, Niraj  | X 04/11/12 | M 03/26/12 #7<br>RWN | W 04/11/12 #1<br>RWN | W 04/18/12 #2<br>RWN |
| Yogesh K. Ramadass, and Anantha P. Chandrakasan, "An Efficient Piezoelectric Energy Harvesting Interface Circuit Using a Bias-Flip Rectifier and Shared Inductor," IEEE Journal of Solid-State Circuits, Vol. 45, No. 1, January 2010, pp. 189 - 204.  |            |                      |                      |                      |
| Shah, Ronak B  | X          | M 04/02/12 #1        | W 04/25/12 #3        | W 04/25/12 #4        |
| G. Blakiewicz, "Output-Capacitorless low-drop regulator using a cascaded flipped voltage follower," IET Circuits, Devices and Systems, doi: 10.1049/iet-cds.2010.0431  |            |                      |                      |                      |
| Siu, Pui Yin   | X          | W 04/04/12 #6        | M 04/23/12 #3        | M 04/23/12/#2        |
| Raguvaran E., Deepak Rrasath N., Alexander J, Prithiviraf N, and Santhanalakshmi M., "A Very-High Impedance Current Mirror for Bio-medical Applications,"<br>[reference source??]<br>[replaced by above 03/28/12] Noug smith, Mike Koen, and Arthur f. Witulski, "Evolution of High-Speed Operational Amplifier Architectures," IEEE Journal of Solid-State Circuits, Vol. 29, no. 10, October 1994, pp. 1166 - 1179.    |            |                      |                      |                      |
| Stowe, Nicholas<br>Lloyd   | X          | W 04/04/12 #1        | W 05/02/12 #2        | W 05/02/12 #3        |
| Jyh-Ming Wang, Sung-chuan, and Wu-Shiung Feng, "New Efficient Designs for XOR and XNOR Functions on the Transistor Level," IEEE Journal of Solid-state Circuits, Vol. 29, No. 7, July 1994, pp. 780 - 786.   |            |                      |                      |                      |
| Wahla, Abdul R   | X          | W 04/04/12 #7        | M 04/23/12 #2        | M 04/23/12 #3        |
| Ezzat G. Bakhom, "On the role of transistors in Opamp feedback paths," International Journal of Electronics, vol. 96, No. 1, January 2009, pp. 43 -49.   |            |                      |                      |                      |
| Wentlent, Joel<br>Benjamin   |            | W 03/28/12 #2        | W 04/25/12 #2        | W 05/02/12 #4        |
| Annajirao Garimella, Lalitha Mohana Kallyani-Garimella, Jaime Ramirez-Angulo, Antonio J. Lopez-Martin, "Versatile multi-decade CMOS voltage-controlled oscillator with accurate amplitude and pulse width control," Analog Integrated Circuit Signal Processing, Vol. 60, 2008, pp. 83 - 92.   |            |                      |                      |                      |
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Number of students = 29 (02/06/12)