

ENEE 698E Fall 2004 Graduate Seminar: Microelectronics Time Schedule

Tu 17:00-17:50; AVW 2328 (Seminar Room)

Tuesday	Tuesday
<p>08/31/04</p> <p>Organize; Set dates for student presentations</p>	<p>09/07/03</p> <p>Finalize dates, topics, for student presentations</p> <p>Topic 1: Integration of BCB polymers and silicon micromachined structures using anisotropic wet etching Presenter: Nima Ghalichechian (1st) Commentator: Brian Morgan (1st)</p> <p>Topic 2: Integrating nonelectronic components into electronic microsystems Presenter: Nathaniel Houston (1st) Commentator: Somashekar Bangalore Prakash (1st)</p> <p>Topic 3: Development of a deep silicon phase Fresnel lens using gray-scale technology Presenter: Brian Morgan (1st) Commentator: Nima Ghalichechian (1st)</p>
<p>09/14/04</p> <p>Topic 1: CMOS capacitive cell sensor for cell sensing applications Presenter: Somashekar Bangalore Prakash (1st) Commentator: Nima Ghalichechian (2nd)</p> <p>Topic 2: Low power CMOS potentiostat for amperometric chemical sensing Presenter: Somashekar Bangalore Prakash (2nd) Commentator: Soumya Krishnamoorthy</p> <p>Topic 3: Applications of MEMS in surgery Presenter: Konrad Aschenbach Commentator: Mark Plett (1st)</p> <p>Topic 4: Quantum well lasers-gain, spectra, dynamics Presenter: Mark Plett (1st) Commentator: Jie Qin (1st)</p>	<p>09/21/04</p> <p>Topic 1: SUA and optical signal processing array Presenter: Bryan Haas Commentator: Nathan Moody</p> <p>Topic 2: Quantum dot laser structures Presenter: Mark Plett (2nd) Commentator: Reza Salem</p> <p>Topic 3: Using self assembly for the fabrication of nano-scale electronic and photonic devices Presenter: Sergiy Tkachuk Commentator: Konrad Aschenbach</p> <p>Topic 4: Light sources for shrinking geometries Presenter: Nathan Moody Commentator: Bryan Hass</p>
<p>09/28/04</p> <p>Final paper choice</p> <p>Topic 1: Leak power issues in CMOS VLSI design: part-1 (multi-threshold CMOS) Presenter: Vishal Khandelwal (1st) Commentator: Abhishek Kashyap (1st)</p> <p>Topic 2: Single electron transistor and its applications Presenter: Jie Qin (1st) Commentator: Hua Sheng(1st)</p> <p>Topic 3: Electronic structure of carbon nanotubes and highly robust electrical interconnects based on CNT arrays Presenter: Soumya Krishnamoorthy Commentator: Robert Nagele</p> <p>Topic 4: Vibration-to-electric energy conversion Presenter: Nima Ghalichechian (2nd) Commentator: Nathan Houston (1st)</p>	<p>10/05/04</p> <p>Topic 1: Direct laser fabrication of blazed diffraction coupling gratings on single mode polymer waveguides Presenter: Glenn Hutchinson (1st) Commentator: Mark Plett (2nd)</p> <p>Topic 2: SiGe RF wide-band amplifier Presenter: Po-Hsin Chen (1st) Commentator: Sebastian Puthenpurayil</p> <p>Topic 3: Porous silicon chemical sensors Presenter: Olawole Akinsanmi (1st) Commentator: Nicole Nelson</p> <p>Topic 4: MRAM technology Presenter: Sylvia Florez (1st) Commentator: Marcia Golub</p>

<p style="text-align: center;">10/12/04</p> <p>Topic 1: Leak power issues in CMOS VLSI design: Part-2 (body biasing and other techniques) Presenter: Vishal Khandelwal (2nd) Commentator: Abhishek Kashyap (2nd) Topic 2: Single electron transistor structures and fabrications Presenter: Jie Qin (2nd) Commentator: Hua Sheng (2nd) Topic 3: Circuit partitioning – Part 1 Presenter: Georgios Theodorakopoulos (1st) Commentator: Abhishek Motayed (1st) Topic 4: DCTS investigation of trap levels in amorphous silicon Presenter: Ejiofor Odo (1st) Commentator: Olawole Akinsanmi</p>	<p style="text-align: center;">10/19/04</p> <p>Topic 1: (reschedule to 11/23/04) Presenter: Glenn Hutchinson (2nd) Commentator: Brian Morgan (2nd) Topic 2: Electrostatic MEMS comb-drive and suggested modifications for better resolutions Presenter: Brian Morgan (2nd) Commentator: Aamer Jaleel (1st) Topic 3: Field emission property of a carbon nanotube Presenter: Binhui Hu Commentator: Kai Tian Topic 4: Wide band gap semiconductor Presenter: Abhishek Motayed (1st) Commentator: Georgios Theodorakopoulos (1st)</p>
<p style="text-align: center;">10/26/04</p> <p>Topic 1: RF CMOS Receiver Presenter: Sebastian Puthenpurayil Commentator: : Somashe Bangalore Prakash (2nd) Topic 2: Noise reduction technique using differential signaling Presenter: Hongxia Wang Commentator: Cagdas Dirik Topic 3: Wireless sensor networks and MEMS technology Presenter: Chia-Jui Hsu Commentator: Po-Hsin Chen (1st) Topic 4: Low power reduced swing global clocking Presenter: Cagdas Dirik Commentator: Hongxia Wang Topic 5: Analysis and Design of a low power Delta Sigma ADC Presenter: Daniel Meyer Commentator: Sylvia Florez</p>	<p style="text-align: center;">11/02/04</p> <p>Topic 1: EUV Lithography and its mask Presenter: Hua Sheng (1st) Commentator: Jie Qin (2nd) Topic 2: Pre-computation based sequential logic optimization for low power Presenter: Abhishek Kashyap (1st) Commentator: Vishal Khandelwal (1st) Topic 3: Pipelined ADC speed analysis Presenter: Kai Tian Commentator: Binhui Hu Topic 4: Wide band gap semiconductor Presenter: Abhishek Motayed (2nd) Commentator: Georgios Theodorakopoulos (2nd) Topic 5: Circuits for superscalar processors Presenter: Aamer Jaleel (1st) Commentator: Qin Wang</p>
<p style="text-align: center;">11/09/04</p> <p>Topic 1: A nano-power tuneable edge-detection circuit Presenter: Afshin Sepehri Commentator: Arash Komae Topic 2: Reversed Nested Miller compensation 3-stage amplifier Presenter: Po-Hsin Chen (2nd) Commentator: Glenn Hutchinson (1st) Topic 3: Polyphase switched-capacitor filters Presenter: Arash Komae Commentator: Afshin Sepehri Topic 4: Performance of MCT detector using material chip technology Presenter: Qin Wang Commentator: Aamer Jaleel (2nd) Topic 5: Circuits for superscalar processors Presenter: Aamer Jaleel (2nd) Commentator: Xinhui Zhou (1st)</p>	<p style="text-align: center;">11/16/04</p> <p>Topic 1: Nonlinear optical detection Presenter: Reza Salem Commentator: Sergiy Tkachuk Topic 2: Implicit FSM decomposition applied to low-power design Presenter: Abhishek Kashyap (2nd) Commentator: Vishal Khandelwal (2nd) Topic 3: VCSELS Vertically cavity surface emitting laser Presenter: Marcia A Golub Commentator: Slyvia Florez (1st) Topic 4: VLSI implementation of auditory wavelet transform Presenter: Xiahui Zhou (1st) Commentator: Po-Hsin Chen (2nd)</p>

<p style="text-align: center;">11/23/04</p> <p>Topic 1: EUV Lithography and its mask Presenter: Hua Sheng (2nd) Commentator: Chia-Jui Hsu</p> <p>Topic 2: Design inductors in RF MEMS Presenter: Olawole Lanre Akinsanmi (2nd) Commentator: Nathan Houston(2nd)</p> <p>Topic 3: VLSI implementation of auditory wavelet transform Presenter: Xiahui Zhou (2nd) Commentator: Glenn Hutchinson (2nd)</p> <p>Topic 4: Pattern recognition and multimode interference (MMI) devices Presenter: Glenn Hutchinson (2nd) Commentator: Brian Morgan (2nd)</p>	<p style="text-align: center;">11/30/04</p> <p>Topic 1: CMOS breakdown in RF Presenter: Robert Nagele Commentator: Ejiofor Odo (1st)</p> <p>Topic 2: Information capacity of OTA Presenter: Nicole Nelson Commentator: Ejiofor Odo (2nd)</p> <p>Topic 3: Circuit Partitioning - Part 2 Presenter: Georgios Theodorakopoulos (2nd) Commentator: Abhishek Motayed (2nd)</p> <p>Topic 4: DNA Sensor Arrays Presenter: Sylvia Florez (2nd) Commentator: Daniel Meyer</p>
<p style="text-align: center;">12/07/04</p> <p>Topic 1: Analysis of oscillator phase behavior: a comparison of two currents techniques Presenter: Ejiofor Odo (2nd) Commentator: Olawole Lanre Akinsanmi</p> <p>Topic 2: Impedance boosting for SiGe amplifiers Presenter: Sanaz Adl Commentator: Shabna Shafiee</p> <p>Topic 3: Active-feedback Current Src Presenter: Shabna Shafiee Commentator: Sanaz Adl</p> <p>Topic 4: ICs getting cooler with microfluidic MEMS Presenter: Nathan Houston (2nd) Commentator: Xinhui Zhou (2nd)</p>	