



IEEE

GRID.pdf

July 2004

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Chapter Meetings and Events

June 29 – SCV CE – *Kick-off meeting of the new Consumer Electronics Chapter – "Convergence of CE and the Computer Industry: A Tsunami of Digital Revolution"* - Mr. Arup Gupta, CTO Consumer Electronics Group, Intel (at HP's Oak Room in Cupertino). [\[more\]](#)

June 30 – SCV EMS – *"The Dream – and Focusing to Make it Real" & "Making It - How To Go Into Business For Yourself"* - bootstrapping a new company in Silicon Valley, and making it with your own business startup. [\[more\]](#)

July 6 – SCV LEOS – *"Liquid Lens Technology"* - The electrowetting phenomenon is used to modify the interface between two non-miscible transparent liquids, thus forming a variable lens with voltage control. [\[more\]](#)

July 9 – SCV CNSV – *"IEEE Entrepreneur's SIG Meeting"* - [\[more\]](#)

Aug 18 – SF-PES – *Summer Banquet: "Electric Power: Demand Response Issues in California"* - elasticity/volatility, over-building, financial incentives, metering issues [\[more\]](#)

Tutorials, Short Courses in the Bay Area

July 13 – San Jose – *Professional Dev't Courses with IEMT'04*
Flip-Chip, Nano, Lead-Free, RF/MMIC, ... [\[more\]](#)

August 9 & August 13 – Santa Clara
Tutorials/Workshops at this year's EMC'04 ... [\[more\]](#)

Partial List

NARTE EMC Exam: Monday: Exam Prep Workshop –
Friday: NARTE EMC Engineer Exam

PCB Design: Double-Sided and Multilayer: for the novice to intermediate product designer – PCBs that meet EMC requirements.

Basic EMC Measurements: an introduction to basic EMC measurements and instrumentation – EMC design methodologies.

Fundamentals of EMC Design: designing circuits and systems with built-in compatibility – medical, military, communications, IT.

Introduction to Numerical EMC Modeling: numerical EMC modeling techniques - strengths and weakness – which are appropriate.

IEEE 802.11 Wireless: current state internationally - obstacles and regulatory requirements – relationship and convergence.

Aerospace EMC at the Centennial of Flight: the needs of the aerospace industry – new electromagnetic effects and challenges.

Fundamentals of Signal Integrity: propagation, impedance, termination – Multi-conductor buses, SI measurements.

Plus a Dozen More

Early-Bird registration through July 9th

Upcoming Conferences in the Bay Area

July 14-16 – San Jose – IEMT'04

IEEE Int'l **Electronics Manufacturing Technology (IEMT) Symposium** [\[more\]](#)

IEMT Professional Dev't Courses [\[more\]](#)

Early-Bird registration through July 2nd

August 9-13 – Santa Clara – EMC'04

IEEE Int'l **Symposium on Electromagnetic Compatibility (EMC'04)** [\[more\]](#)

EMC'04 Workshops (Monday and Friday) [\[more\]](#)

Early-Bird registration through July 9th

August 13-15 – Santa Clara – PSES'04

IEEE First Annual **Symposium on Product Safety Engineering (PSES'04)** [\[more\]](#)

August 16-19 on the Stanford University Campus:

IEEE Computational Systems Bioinformatics Conference Tutorials: Monday, August 16 [\[more\]](#)

August 23-27 – San Francisco – ICF'04

Int'l Conference on Ferrites [\[more\]](#)

Early-Bird registration through July 23rd

August 25-27 – Stanford Univ – Palo Alto

Symp. on **High-Performance Interconnects** [\[more\]](#)

Two days of technical sessions and a day of tutorials

Sept 1-5 – San Francisco – EMBC'04

IEEE Int'l **Conference on Engineering in Medicine and Biology** [\[more\]](#)

Early-Bird registration through July 1st

Sept 21-23 – Anaheim – WESCON'04

Wescon, NANOWorld, Enterprise Integration EXPO, exhibits [\[more\]](#)

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Conference Calendar [pages 16-17](#)

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IEEE **GRID** is the monthly newsmagazine of the San Francisco Bay Area Council of the Institute of Electrical and Electronics Engineers, Inc. As a medium for both news and opinion, the editorial objectives of IEEE **GRID** are to inform readers in a timely and objective manner of newsworthy IEEE activities taking place in and around the Bay Area; to publish the official calendar of events; to report on IEEE activities of a national and international scope; and to serve as a forum for comment on areas of concern to the engineering community by publishing contributed articles, invited editorials and letters to the editor.

IEEE **GRID** is published as the **GRID** Online Edition residing at www.e-GRID.net, and in a handy printable **GRID.pdf** edition, and also as the **e-GRID** sent by email twice each month to more than 24,000 Bay Area members.



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From the editor . . .

Yes, we get cards and letters – well, mainly emails. Here's one that came in last week:

Dear Paul,

I want to drop you a quick note to say how wonderful the new **e-GRID** [notification email] looks! I really like the easy-to-read formatting, use of color, and previews linking to the actual articles, and I am confident that under your continued leadership, the **GRID** will be an even better communications forum for the Bay Area's IEEE members.

Thank you very much. I hope you are enjoying the start of the summer!

Best,

Clara Shih

Chair, Stanford IEEE

Well, the HTML-formatted e-GRID notification emails you've been receiving are something I've been perfecting for a couple of years now. I'm sure most of you get HTML-formatted subscription e-Bulletins from various businesses or other organizations, with their use of color, multiple columns of summary information, and hyperlinks to web pages for more details. These provide "rich content" and can quickly give previews of our upcoming meetings.

Over a dozen Bay Area Members asked me to send them text-only versions, either because of email program incompatibilities, a fear of viruses or malware – or because text is better for mobile devices (PDAs, phones) and for the visually impaired (and can more easily be converted to audio) – so we now also have the option for a brief text-only notification email, pointing to the web-based version of the HTML-formatted one. This works out fine for them – though it isn't as "rich" in its ability to give you a grasp of the upcoming events, or be passed around to others in your workgroup.

Send me your opinions on what we're doing!

Paul Wesling editor@e-grid.net

NOTE: This PDF version of the IEEE **GRID** – the **GRID.pdf** – is a monthly publication and is issued a few days before the first of the month. It is not updated after that. Please refer to the Online edition and Interactive Calendar for the latest information: www.e-GRID.net

**August 13-15, 2004
Santa Clara
Convention Center**



THE FIRST ANNUAL 2004 IEEE Symposium on Product Safety Engineering

Sponsored by IEEE Product Safety Engineering Society (PSES)

Conference Information

This symposium addresses safety engineering for equipment and devices, allowing engineers, students and others with an interest in electrical product safety to discuss and disseminate technical information and to enhance their professional skills.

- Talk to and discuss problems with vendors displaying the latest Regulatory Compliance products.
- Attend Technical Sessions, Workshops, Tutorials and Demonstrations specifically targeted to the electrical safety engineering professional.
- Registered PSES participants can also attend the TC-8 Workshop hosted by the EMC Society on Friday August 13, at no additional cost.
- Social event Friday evening, August 13.
- The PSES Symposium will immediately follow the IEEE Electromagnetic Compatibility Society's (EMC) annual symposium, at the same location.

Technical Program

Half-day Workshops

- EMC Effects on Functional Safety
- New Concept for Protection against Electric Shock
- Hazard-Based Safety Engineering (HBSE): Applying Engineering Fundamentals to the Design and Analysis of Products to Maximize User Safety
- One-day IEC Standards Workshop

Talks and Tutorials

- Product Safety in China, Singapore, Brazil, Argentina
- Product Safety Incident Investigations and Forensics
- Cemented Joints in Solid Insulation
- Designing for Safety -- How to Communicate with the Engineering Team
- Designing for Safety -- Heat Release Rates of Household Items
- Medical Product Design & Medical Standards
- CPSC: Who We Are and What We Do
- Outsourcing Product Design and Manufacturing
- Thermal Safety of Laptop Computers
- War stories by staff and attendees

Plus More

See the speaker and topic listing on the website

While product safety has been addressed in various committees over the years, there has never been a professional society or symposium solely devoted to product safety engineering, as a discipline, until now. Attend the first annual Product Safety Engineering Symposium and be a part of this important new direction.

Early-Bird Discount

Register before **July 1** to receive discounted rates. Additional discount also allowed for registrants of EMC'04.

Exhibit information

Judy Johnson, judithej@shentel.net

To Register, and for more information

Go to:

www.e-grid.net/conf/pses.html

or call Diana Krynski at 800 810 4333.

Sponsor:



In cooperation with:





12th Annual IEEE Symposium on High-Performance Interconnects

August 25-27, 2004
On the Stanford Campus in Palo Alto

Silicon Valley's leading conference focused on high-performance interconnects

HOT INTERCONNECTS 12 brings together designers and architects of high-performance chips, software, and systems at the University and global business levels. Presentations focus on up-to-the-minute developments demonstrating leading-edge designs by engineers and researchers throughout the world. Two days of technical sessions and a day of tutorials will keep you on top of the latest developments within industry and academic laboratories.

HOT INTERCONNECTS sessions (Aug 25, 26):

- Architectures
- Routers and Switches
- System-Level Interconnects
- Packet Classification and Lookup
- Multiprocessor Interconnects
- Security and Network Processors

Find out more on our website!

TUTORIALS Friday August 27 **FREE PARKING!**

(Tutorial-only registrations OK)

Using the Open Network Laboratory (full day)
Prof. Jonathan Turner

Resilient Network Infrastructures for Global Grid Computing (half day) Dr. Luca Valcarenghi

Internet Infrastructure Security (half-day)
Dr. G. Manimaran

High-Speed Networking: High-Bandwidth Low-Latency Communication (full day) Dr. J. Sterbenz

Free symposium parking at Stanford University

- See driving and parking directions on our website
- On-site registration available



Sponsored by the IEEE Computer Society Technical Committee on Microprocessors and Microcomputers

For **full information and registration**, visit the **HOT INTERCONNECTS** website:

www.e-grid.net/conf/hoti.html

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26th Annual International Conference of the
**IEEE Engineering in Medicine
and Biology Society**

September 1-5, 2004
Westin St. Francis Hotel
Union Square – San Francisco



The IEEE Engineering in Medicine and Biology Society will hold its annual international conference at the historic St. Francis Hotel on Union Square in the center of San Francisco in 2004. The conference offers an opportunity for professional interaction in all areas relevant to biomedical engineering. In addition to the technical programs, professional tours will be available, affording attendees the opportunity to visit local research facilities in both educational and industrial settings.



EMBC 2004 sessions address the following themes:

- Biosignal Processing and Biosystem Modeling
 - Biomedical Imaging and Image Processing
 - Sensors and Instrumentation
 - Micro and Nano Biotechnology
 - Biorobotics and Biomechanics
 - Bioinformatics and Computational Biology
 - Healthcare Information Technology
 - Clinical Engineering
 - Drug Delivery and Gene Therapy
 - Cardiovascular and Pulmonary Systems
 - Neural and Rehabilitation Engineering
 - Molecular, Cellular, and Tissue Engineering
 - Biomechanics
 - Industrial Applications
 - Education
- ... plus 15 Mini-Symposia

Important Date:

Reduced Rates through July 1, 2004
Student/Retired rate available

For full information and registration, visit the **EMBC 2004** website:

www.e-grid.net/conf/emb.html

KEYNOTE SPEAKERS

Paul C. Lauterbur, Nobel Laureate
2003 Nobel Prize in Medicine

Dr. Lauterbur is recognized as the father of MRI, and will share with us his experience of inventing the imaging principles for MRI as well as his view on interdisciplinary research.

Peter G. Katona, Sc.D.

President & CEO, The Whitaker Foundation

Dr. Katona will discuss the Whitaker Foundation's support of Biomedical Engineering and its impact on the development of the field.

WORKSHOPS and TUTORIALS **Wednesday, 9/1**

(Workshop-only registrations OK)

- Ethics in Biomedical Research
 - Cardiorespiratory Variability: Models, Mechanisms
 - Individual and Population Biomedical Models
 - Computational Biology and Bioinformatics
 - Level-Set Methods for Medical Imaging App'ns
 - Medical Infrared Imaging
 - Magnetic Resonance Imaging
 - Biomedical Robotics and Biomechanics
 - Medical Image Analysis
 - Microanalytical Devices for Bioprocessing
 - Who/What Top Employers Hire
 - Healthcare Wireless - Mobile Solutions in Hospitals
 - Pulse Oximetry
 - Project Management in a Regulated Industry
 - Clinical Engineering Practices Review
- ... and more! Check website for scheduling details

Free admission to the Exhibits!

Exhibit Hours (Preregister, or register on-site)

Wednesday, Sept. 1	Noon-6 p.m.
Thursday, Sept. 2	8 a.m.-6 p.m.
Friday, Sept. 3	8 a.m.-6 p.m.
Saturday, Sept. 4	8 a.m.-5 p.m.

Transportation: Park at the Union Street or Ellis O'Farrell garage, or ride BART or MUNI to the Powell Street station.

Ninth International Conference on Ferrites (ICF 9)



August 22-27, 2004

Cathedral Hill Hotel, San Francisco

Hosted by The American Ceramic Society

Technical Co-Sponsor: IEEE Magnetics Society

Conference Information

The 2004 International Conference on Ferrites (ICF) is the ninth in a series of conferences that provide a forum for the presentation and discussion of the latest scientific and technological developments in ferrites (magnetic ceramics) and related materials.

The conference will cover all areas of basic science and technology for ferrites and related materials. Special emphasis will be placed on advanced findings and emerging technologies that are expected to open new horizons for ferrites in the twenty-first century. More than 250 presentations on the results of academic, technical, and industrial studies will be given.

Technical Program

Science

- Physics of ferrites and related materials
- Chemistry of ferrites and related materials
- Crystal growth, sintering and microstructure
- Thin films, multilayers, and fine particles
- Other basic science

Processing and Applications

- Raw materials and manufacturing processes/facilities
- Soft magnetic materials and cores
- Hard magnetic materials and magnets
- Magnetic recording media, heads and systems
- Magneto-optics and applications
- High frequency and microwave ferrites
- Bio-magnetics and medical applications
- Power magnetics
- Transducers and sensors

Special Topics

- Nano-structured ferrites and related materials
- Magnetic & magnetorheological fluids, novel devices
- Multilayer chip inductors
- Other novel emerging technologies

Special Symposia

- Novel Applications and Materials for Electromagnetic Interference (EMI) Devices
- Application and Technology of Soft Ferrites
- Industrial Challenges for Soft Ferrite Producers
- Half Metallic Oxide Junctions and Highly Spin-Polarized Currents

Technical Tours

A tour of the Advanced Light Source at Lawrence Berkeley National Laboratory is planned for Wednesday, Aug. 25, 9:00 a.m. to noon. The cost of the tour is \$25 and includes transportation. Buses will leave from the hotel at 7:30 a.m.

Social Program

Exhibits & Welcome Reception Sunday, Aug. 22, 6-8 p.m.
Conference Banquet Tuesday, Aug. 24, 7-9 p.m.
Wine Country Tour Friday, Aug. 27, 8 a.m.-5p.m.

Exhibits and Sponsorships

This conference also offers the opportunity to interface with those potential customers who otherwise may be difficult to reach:

- Manufacturers of processing equipment
- Manufacturers of characterization equipment
- Designers and users of ferrite components
- Suppliers of ferrite materials

Exhibit Hours

Free admission to the Exhibits! (Register on-site)

Sunday, Aug. 22	6-8 p.m.
Monday, Aug. 23	10 a.m.-4 p.m.
Tuesday, Aug. 24	10 a.m.-4 p.m.
Wednesday, Aug. 25	10 a.m.-4 p.m.

Early-Bird Discount

Register before **July 23, 2004** to receive discounted rates.

To Register, or for more information

Go to:

www.e-grid.net/conf/icf.html

or call 614-794-5890 to register by phone.

Can't attend? Order the ICF-9 Proceedings.



**September 21-23
Anaheim Convention Center**

Welcome to the exciting new world of Wescon, combining exhibits with industry forums on OEM electronics, nanotechnology, supply chain management and net-centric defense industry manufacturing.

Wescon is the re-engineered industry event for the total design and supply chain. The Wescon/2004 Exhibit and Conference Program broadens its focus to the needs of the total supply chain for the electronics design, manufacturing and distribution process. IEEE, AFEI, NANOWorld and Wescon come together at a joint plenary session presenting new visions of where technology is taking us, today and tomorrow.

Wescon brings engineers and scientists together in an environment that advances their education and careers by opening doors to a wealth of intellectual property, a wide range of technology tools and components, and access to immediate solutions for commercial applications.

Some of the highlights:

EDA Tools & Engineering Software

Board Design and Layout Tools - Libraries and Design Management Tools - Supply Chain Management Tools - Design for Manufacturability Tools - Component/Interconnect Modeling

Test & Measurement Equipment

Stand-Alone Test Instruments - PC-based Instruments/Cards - Wired Telecom/Datacom Test - Fiber-Optic/Electro-Optic Test - RF/Microwave/Wireless Communications Test - EMC Test - Environmental Test - Software - Test Accessories and Services

Component Technology

Connectors and Interconnects – Semiconductors and ICs - Active and Passive Components - Power Components - Electro-Mechanical Components - Mechanical Packaging

The **Autonomous Vehicle Technology Showcase** is a new and exciting event focused on advanced technologies and their impact today and tomorrow, with 7 contenders from the recent DARPA Grand Challenge – includes an introductory workshop and sidebar briefings on the exhibit floor, covering mobility, processing, sensors, radar/ladar, data storage, GPS, mapping, algorithms, emergency stopping, and more.

Wescon – owned by engineers and run by engineers to benefit engineers.



Held at WESCON in Anaheim, NANOWorld is the first nanotechnology conference and exposition devoted to commercial applications, practical solutions, and cutting edge products of the core technology that is driving the industry today and will dominate it tomorrow.

"By 2015, there will be new positions for more than 30,000 Engineers, Business Managers, Supply Chain Management and Educators to move nanotechnology out of the labs and into commercial and government applications. We will no longer be a cottage industry. Attending NANOWorld 2004 is the first step towards getting the insight and training you will need for the nanotech world of the future."

... Dr. Anthony F. Laviano, NANOWorld Managing Director,
*Member of the National Academy of Sciences,
National Research Council for Nanotechnology*

Day 1: Nanomaterials and nanofabrication

Day 2: Nanocomponents

Day 3: Systems integration, use and applications

NANOWorld – the first event to go beyond theory into training and educating engineers in the commercial application of nanotechnology. It is the event that will make Nanotechnology a reality for you to explore.



Enterprise Integration EXPO 2004

co-located with Wescon

The Association for Enterprise Integration (AFEI), and **EI EXPO'04**, are focused on programs that address Network Centric Operations for government and industry – information-age business, network centric warfare, electronic government – building exceptional organizations through superior information capabilities based on building blocks of people, process and technology.

Registration for **NANOWorld** or **EI EXPO** gets you **free admission** to all WESCON exhibits and pavilions!

For more **Wescon**, **NANOWorld** and **EI EXPO** details, please visit: www.e-grid.net/conf/wescon.html

When registering, use priority code **94566**

CSB2004 is sure to be one of the key bioinformatics events in 2004, providing a broad spectrum of peer-reviewed, bioinformatics-related topics covering the breadth and depth of this dynamically evolving field. Our topic submission procedures, keynote speakers, paper and poster presentations, tutorials and social events have all been designed to cater to bioinformatics' eclectic mix of disciplines. **CSB2004** also has the lowest registration fees of any conference of its kind in the US, making it possible for everyone to attend. However, attendance is limited so please register early.

KEYNOTE SPEAKERS:

Philip Green, Ph.D.

Professor, Genome Sciences & Adjunct Professor, Computer Science and Engineering, University of Washington, Seattle

Benoit Mandelbrot, Ph.D.

Sterling Professor of Mathematical Sciences, Yale University, IBM Fellow Emeritus, IBM TJ Watson Research Center

Gene Myers, Ph.D.

Professor, Computer Science, University of California, Berkeley

Ron Shamir, Ph.D.

Professor, Computer Science Genetics Branch, Raymond and Beverly Sackler Chair in Bioinformatics, Tel Aviv University

INVITED SPEAKERS:

Hamid Bolouri, Ph.D.

Professor, Institute for Systems Biology

Michael Eisen, Ph.D.

Assistant Adjunct Professor of Genetics & Development, University of California, Berkeley, & Scientist, Life Sciences Division, Lawrence Berkeley Lab

Jim Kent, Ph.D.

Research Scientist, Baskin School of Engineering, University of California, Santa Cruz

Paul S. Meltzer, M.D., Ph.D.

Acting Chief and Senior Investigator, Genetics Branch, Head, Molecular Cytogenetics Section, National Human Genome Research Institute

Sandy Shaw

Vice President, Fractal Technology, Health Discovery Corp

Stephen Wong, Ph.D., PE

Director, HCNR Center for Bioinformatics, & Associate Professor, Department of Radiology, Harvard Medical School and Brigham & Women's Hospital

Bioinformatics - scientific and engineering disciplines bringing new biological discoveries to fields as varied as human health, agriculture, the environment, energy and biotechnology. Find out more at **CSB2004**

Who should attend:

Bioinformaticists, Biologists, Computer Scientists, IT Professionals, and Engineers who want to quickly learn about the evolving field of bioinformatics.

Location:

Held on the Stanford University campus, **CSB2004** is easily accessible to professionals living in the SF Bay Area and Silicon Valley.

See our website for driving and parking directions.

Sponsored by the IEEE Computer Society with corporate support of the Hewlett-Packard Company

***"I think the next century will be the century of complexity."
...Stephen Hawking***

For more Conference details including session titles, technical presentations, and on-line registration, please visit:

www.e-grid.net/conf/csb.html

Tutorials Offered on Monday, August 16

(as low as \$100 - includes one AM and one PM)

MORNING SESSIONS

Introduction to Evolutionary and Functional Genomic Analysis
Tandem Mass Spectrometry in Proteomics
Use the Genome Browsers to Get the Most Out of Public Genomes
Computational Genetics: Haplotype Inference and Applications in Human Disease Gene Mapping
Intro. to Dynamic Programming & Its Applications to Bioinformatics

AFTERNOON SESSIONS

Bioinformatics: The Machine Learning Approach
Using dChip for Microarray and SNP Chip Data Analysis
Discovering Regulatory Networks from Gene Expression and Promoter Sequence
Computational Methods in Phylogenetics
From Sequence to Structure: Protein Structure Prediction

Listing of topics and instructors at

www.e-grid.net/conf/csb.html



World's EMC Experts Converge in Santa Clara this August

IEEE INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY

**August 9-13, 2004 – Santa Clara, CA
Santa Clara Convention Center**

Join over 1,000 of the world's leading Electromagnetic Compatibility (EMC) engineers at the 2004 Symposium here in the Santa Clara Valley. For five full days, over August 9 to 13, EMC engineers will attend workshops and special sessions, hear technical papers presented by leaders in the industry, and view numerous experiments and demonstrations which are designed to put into practice the theory and applications learned in the technical sessions. In addition, over 200 exhibitors of EMC-related products and services will be on hand to present the latest technological advances in this industry. Engineers representing the diverse fields of telecom, automotive, and medical EMC will attend. The heart of Silicon Valley will also draw engineers working with printed circuit boards and integrated circuits. EMC design and test challenges are present across a wide range of industries.

The local Santa Clara Valley Chapter of the IEEE EMC Society organizes this symposium. Its steering committee members are from leading technology companies such as Cisco Systems, Hewlett Packard, Apple Computer, Lockheed Martin, and Underwriters Laboratories, among others. Chairman John Howard, a noted EMC Consultant, commented, "Not only will this year's symposium provide a great opportunity for engineers to attend cutting edge technical sessions, but it will also encourage the unique networking with fellow engineers that can only enhance one's career. No where else does this level of EMC technical expertise converge in one place at one time."



SYMPOSIUM AT A GLANCE - Sessions

- | | |
|----------------------------------|----------------------------------|
| PCB Analysis and Design | Measurement Techniques |
| Shielding - Signal Integrity | Computer Modeling |
| Coupling - Lightning Protection | Model Parameter Determination |
| Filters and Conducted Emissions | CAD Modeling and Extraction |
| Automotive EMC - System EMC | Modeling & Simulation Validation |
| Gasketing and Grounding | Modeling for Signal Integrity |
| Cables and Connectors | |
| Test Facilities, Instrumentation | FCC and Digital Devices |
| Reverberation Chambers | Standards and Regulations |
| Immunity Testing | |
| Radio Systems Interference | Plus Experiment Demonstrations, |
| Wireless Testing SAR | Committee & Standards Meetings |

Introductory Level Workshops Offered

- 20 workshops, plus a NARTE exam prep session and the NARTE EMC Engineer exams
- Included with full conference registration, or register for only the "workshop" day you want

Listing of topics at www.e-grid.net/conf/emc.html

Reduced registration fees through July 9th

For more information on the **Symposium**, a complete listing of **exhibitors**, and **registration forms**, please visit:

www.e-grid.net/conf/emc.html

Note: attendees can select from **full-day** or **full-week** registration options.

Limited **exhibit space** is still available; local exhibitors are welcome. Interested exhibitors should contact Sue Kingston at s.kingston@ieee.org for more information.

Current Exhibitors for the 2004 EMC International Symposium

Use the registration form to receive a free day pass to the EMC'04 exhibits



Exhibit Hours:

Tues & Wed August 10, 11 - 9:00am - 5:30pm

Thursday August 12th - 9:00am - 3:00pm

www.e-grid.net/conf/emc.html

(Print out and bring)

Exhibitors - - - - - Booth numbers

3M Electronic Products Div.	701	ETH Zurich '05 Symposium	1711	Panashield, Inc.	811
3M Electronics Markets Mtls Div.	702	ETS- Lindgren	301	Panel Components Corporation	721
A. H. Systems	418	Fair- Rite Products	515	Pearson Electronics Inc	617
Acemark/Cherry Clough Consulting	705	Ferrishield Inc	723	PPM Ltd	608
Advanced Test Equipment Rentals	619	Ferrocube USA	507	REO - USA	910
Agilent Technologie	824	Fischer Custom Comm'ns	316 415	RF Installations, Inc.	718
AK Stamping Co.	710	Flomerics	911	RFI Corporation	922
American Assoc for Lab Accreditation	845	Fotofab	943	Rogers Corp.	910
American TCB	944	G- Mag/ ETronic	609	Rohde & Schwarz	201
AMIC (Advanced Mtls & Integration)	1045	Garwood Laboratories, Inc.	1047	Savcor Coatings	603
Amphenol Canada Corp.	939	Global Trading	937	Schaffner EMC	315
Amplifier Research	401	Haefely EMC	501	Schlegel Systems, Inc.	916
Andro Computationals Solutions	843	HV Technologies	423	Shieldex Trading	T-6
ANSI- ASC	C63	IBM	846	Schurter	820
Antenna Research Assoc. (ARA)	516	IEEE 2005 EMC Symposium	break area	Seven Mountains Scientific Inc	839
Applied Simulation Technology	506	IEEE EMC Society	1707	Siemic, Inc.	935
Arc Technologies, Inc.	419	IEEE PSES Society	1710	Sigrity Inc.	1048
Arnellabs	803	Instruments for Industry	831	Simlab Software GMBH	1144
Avalon Equipment	505	Intermark (USA) Inc.	932	Solar Electronics	1036
Bay Area Compliance Lab	219	International Certification Services	422	Southwest Research Institute	815
Braden Shielding Systems	924	Isodyne, Inc.	818	Specialty Silicon Products Inc	840
California Instruments	320	Item Publications	1702	Spectrum Control, Inc.	1033
Canon	1139	JDS Uniphase- OCLI Products	T-8	Spira Manufacturing	912
Captor Corporation	621	Johanson Dielectrics, Inc.	720	Steward, Inc.	847
CKC Laboratories, Inc.	915	Kluwer Academic Publishers	1035	Sunol Sciences Corp.	724 823
CMC Electronics/Cincinnati	808	Laird Technologies	502	Taiyo Yuden USA, Inc.	810
Coilcraft	1040	Leader Tech, Inc.	1133	TDK RF Solutions	834 933
Communications & Power Industries	936	Liberty Labs, Inc.	945	Tech- Etch, Inc.	612
Compliance Certification Services	1152	Magnetics, Div. of Spang	322	Technology International	510
Conec Corp.	610	MAJR Products Corp.	224	Tecknit, Inc.	509
Conformity Magazine	523	MET Laboratories	920	TennMax Inc.	321
Coteau Vert/NTT Advanced Tech	1143	Michigan Scientific Corp.	323	TennRich Electronics	709
Credence Technologies	716	Micom Labs	817	Test Equipment Corporation	711
CSA	1044	Microwave Journal	T-11	Test & Measurement World	T-7
Cuming Microwave	804	MPE Ltd.	708	Thermo KeyTek	921
D. L. S. Electronic Systems	1243	Murata Electronics N. A., Inc.	616	Thermshield LLC	504
Dayton T Brown Inc	1034	Narte Inc	522	TIMCO Engineering Inc.	620
Detectus	717	National Instruments	917	Traxstar Technologies	719
Dexter Magnetic Technologies, Inc.	601	National Technical Systems	606	TUV America, Inc.	216
Dynamic Sciences International	602	Naval Surface Warfare Ctr, Dahlgren	801	Tyco Electronics Corp.	909
Educated Design & Development	615	NAWCAD	835	Underwriters Laboratories	1705
EE - Evaluation Engineering	802	Nebraska Ctr -Excellence in Electronics	838	US Navy	837
Electro Magnetic Test, Inc.	T-4	NEC/ Tokin America	712	Vanguard Products Corp.	816
Electro- Magnetic Applications, Inc.	424	NIST	421	Vishay Intertechnology, Inc.	622
Elite Electronic Engineering, Inc.	1147	Noise Laboratory Co. Ltd.	215	W. L. Gore & Associates	715
Elliott Laboratories	508	Northwest EMC	319	Webcom Communications	T-5
EM Software & Systems	1039	NTS	606	WEMS Electronics	520
EMC Compliance Mgmt. Group	822	Ophir RF, Inc.	940	Wurth Elektronik USA	1043
EMCIA (Nutwood UK Ltd)	706	Optical Filters Ltd	324	Wyle Laboratories	844
emi- tec GMBH	948	Orion Industries, Inc.	519	X2Y Attenuators, LLC	848
EMS-Plus	T-9	Pacific Aerospace Electronics	503	Xemi	T-3
EMSCAN Corp.	1136	PADS Japan Co., Ltd.	1138 1237	York EMC Services Ltd.	704

TUESDAY JUNE 29

Convergence of CE and the Computer Industry: A Tsunami of Digital Revolution

Kick-off meeting of the new Consumer Electronics Chapter

Speaker: Arup Gupta, CTO Consumer Electronics Group, Intel

Location: HP-Cupertino Oak Room, Bldg 48. Just North of Hwy 280 (Wolfe Rd Exit) at the corner of Pruneridge Ave. and Wolfe Rd. Turn right on Pruneridge Ave and left into HP site. Follow signs to Building 48 Lobby / Oak Room.

RSVP: for further details (time of talk, etc), please send email to: Abhi Dugar at abhi.dugar@esstech.com



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First Annual IEEE Symposium on Product Safety Engineering in Santa Clara – August 13-15

While product safety has been addressed in various committees over the years, there has never been a professional society or symposium solely devoted to product safety engineering, as a discipline, until now. Attend the **first annual Product Safety Engineering Symposium** and be a part of this important new direction. It's here – locally – in Santa Clara.

This symposium addresses safety engineering for equipment and devices. It allows engineers, students and others with an interest in electrical product safety to discuss and disseminate technical information and to enhance their professional skills.

- Talk and discuss problems with vendors displaying the latest Regulatory Compliance products.
- Attend Technical Sessions, Workshops, Tutorials and Demonstrations specifically targeted to the electrical safety engineering professional.

More information:

www.e-grid.net/conf/pses.html



Product Safety Engineering Society



**Int'l Conference
on Ferrites**
August 22-27
San Francisco

Sessions, Exhibits, Tours. Latest developments in ferrites - science, processing, applications

www.e-grid.net/conf/icf.html



EMC2004
SILICON VALLEY, CA

August 9-13 in Santa Clara
Sessions, Workshops, Exhibits
Advance Program ready

www.e-grid.net/conf/emc.html

WEDNESDAY JUNE 30

*The Case For Starting a Business for Yourself
... and In Silicon Valley:*

Forum: "The Dream – and Focusing to Make it Real"

Speaker: Manu Pillai (Product Acceleration Inc.)
Time: 6:00 PM

Presentation: "Making It - How To Go Into Business For Yourself"

Speaker: Orin Laney (PhD Candidate, Touro U.)
Time: 7:45 PM

Time: Forum at 6:00pm, Dinner at 7:00pm, after
dinner presentation at 7:45pm

Place: Wyndham Garden Hotel, 1300 Chesapeake
Terrace, Sunnyvale - off Lawrence Expy/ Caribbean
Drive at Hwy 237

Reservations: through website:
www.ieee-scv-ems.org

Cost: (with reservations thru Friday June25): \$25
(IEEE member), \$30 (non member), \$5
surcharge thereafter (cash or check at the
door). Student IEEE members - \$5.

Other information: leave message with Rich
Hendrickson at (408) 203-3462

As a sequel to our outsourcing/offshoring theme of the last few months, this month the Santa Clara Valley Engineering Management Society discusses local operations at startups. The before-dinner forum is on bootstrapping a new company in Silicon Valley, highlighting the experiences of the company's founder. Following networking and a sit-down dinner, the after-dinner topic will be on making it with your own business startup.



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Before-Dinner Forum presentation -

The Dream – and Focusing to Make it Real

After the tech bust, outsourcing and agonizing, it's time to use lessons learned and innovate ourselves out of this economy. The presentation will cover a year 2000 startup, its survival and its growth strategies. Topics will range from developing and refining go-to market ideas in product and services, to leveraging the engineering discipline, to initiating and managing sales, to building solid teams (outsourced/offshore and in-house/local) and focusing. We will discuss cash flow and fundraising options - with their risk-reward tradeoffs, including VC fundraising, government SBIR/ATP funds, and using your personal funding sources (and support systems needed for that). Marketing and advertising budget, in the areas of market intelligence, strategy development, channel selection and partner development will be discussed in the context of developing strategic partnerships. This will be a "gloves off" format, and attendees are encouraged to actively participate. At the end of this presentation, attendees should be able to start the process of assessing their risk tolerance, survival chances, and the fundamental value proposition ... and perhaps go to the next level of building their own businesses.

Manu Pillai is CEO/Founder of Product Acceleration Inc. (PAI), started in 2000 with personal funds. PAI is based on his experiences in speeding up product design and delivery across hardware and software design, manufacturing and test. PAI has now grown into a focused Engineering Software and Services company, with its own EDA products for the FPGA implementation space, and services that include design process re-engineering as well as custom software development. PAI includes Fortune 250 clients as well as emerging startups, and continues to be funded primarily by internal growth, with assistance from specific individual investors (angel investors) as well as strategic corporate investors. Manu has a BE (EE) from University College, Dublin, Ireland, and an MBA from Santa Clara University. Prior to founding PAI, he worked with Mitsubishi Electric in India, UAE and Japan, followed and then with Solectron Corp., Fujitsu PC and Maxtor in Silicon Valley. PAI was recently

(continued, next page ...)

featured by the San Jose Mercury News as an example of a small but growing company, and is hiring at a steady pace.

After-Dinner presentation -

Making It: How To Go Into Business For Yourself

After graduation, many engineers are surprised to discover that employers value them less for their academic prowess than for certain intangible qualities. The flip side of the coin is that employers are always surprised when the engineers who exemplify those intangible qualities are first to quit their "careers" to found new businesses. This is a talk on how to amaze your friends, surprise your enemies, and disconcert your spouse by starting a successful business of your own. In cooperation with the forum speaker, this talk will build on your new strategic knowledge and concentrate on the personal aspects and challenges required to transition from wage slave to a tough-as-nails captain of industry (and floor sweeper). Personal characteristics make a crucial

difference in early stage success. Topics include preparation and risk taking, decision making, and how to test your readiness. For the skeptics among you, certain reasons not to go into business will be discussed and the relative merits of employment will be included for comparison. Several of the most important mistakes of new businesses will be developed at length.

Orin Laney became interested in electronics when he built his first crystal radio at age twelve. He was raised in the Washington DC area and received his BSEE from the University of Maryland under its Co-op Engineering Program. He later obtained his MBA from Brigham Young University and has used it to found numerous small businesses in the electronics field. Mr. Laney is currently pursuing his Ph.D BA at Touro University. A senior member of the IEEE and a member and former chair of the IEEE-USA Intellectual Property Committee, he is busier than ever, designing, researching, and making deals.




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CSB2004

Computational Bioinformatics
August 16-19 at Stanford U.
Sessions, Tutorials, Keynotes
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www.e-grid.net/conf/csb.html

July 13-16:

IEEE Int'l Electronics Manufacturing Technology (IEMT) Symposium

San Jose Marriott - in conjunction with SEMICON/West.

The IEEE's IEMT is an international forum on electronic/ photonic/MEMS components and systems manufacturing technology, a joint effort of SEMI and the IEEE CPMT Society. It brings to Silicon Valley a unique venue for engineers and scientists with technical papers on research, development, and applications of manufacturing technology for components, assemblies, and systems. Individual sessions will deal with reliability, green manufacturing, MEMS packaging, design for manufacturing, the effects of using low k materials, wafer level and stacked die packaging, and testing.

You will learn:

- Practical solutions to current production problems
- How to meet the process challenges of the 90nm node
- The latest trends in final manufacturing technology from recognized experts
- What is new in advanced packaging, reliability, materials, and design for test

Who should attend:

- Process, equipment and materials engineers in assembly, packaging and test
- Process and product development managers

See also the six **Professional Development Courses**.

More information:

www.e-grid.net/conf/iemt.html

TUESDAY JULY 6

Liquid Lens Technology

Speaker: Bruno Berge, Founder, President and CTO of Varioptic, Lyon, France
Time: Pizza Social 7:00PM, presentation 8:00PM
Place: National Semiconductor Credit Union Bldg 31, large auditorium, 955 Kifer Road, Sunnyvale
RSVP: RSVP@silicavalley.com
Web: www.silicavalley.com

The electrowetting phenomenon is used to modify the shape of the interface between two non-miscible transparent liquids, thus forming a variable lens with voltage control. Varioptic is a company which develops products based on this new technology, after 10 years of academic research. The basic principle of the technology and the physical limitations will be discussed, especially the size issue. Application will be discussed in different fields of optics, including CMOS cameras for the mobile phone market.

Dr. Berge received his Ph.D in physics from the University of Grenoble (1984), then served as full time researcher at CNRS, and did two years of post-doctoral research at the University of Chicago, in Pr. Albert Libchaber, renowned for his achievements in Chaos Theory. Dr Berge studied condensed matter problems in the field of interfacial phenomena. In 1998 Dr Berge was appointed as full Professor at Ecole Normale Supérieure de Lyon, a prestigious French academic institution, where he conducted research on biophysics.

Dr. Berge's pioneering work in electrowetting, culminated in publication of "Electrowetting of water on insulator films" in 1993, reestablished this field of applied physics, which had languished since the 1930s. Electrowetting is now a burgeoning field, and Dr. Berge's foundational work and deep understanding of the underlying principals gives Varioptic a substantial competitive advantage against companies attempting to use electrowetting in optics.

Dr. Berge serves as Founder, President and CTO of Varioptic. He is responsible for overseeing R&D and collaborates with Mr. Paillard in setting the strategic direction of the Company. His research continues to generate intellectual property for Varioptic, and his refinements and variations on the vLens position it as the appropriate solution in a broad range of industrial and consumer applications.



Aug. 16-19 on the Stanford University Campus:
IEEE Computational Systems Bioinformatics Conference Tutorials: Monday, August 16
For more information, and to register online:
www.e-grid.net/conf/csb.html

SCV Consultants Network

FRIDAY JULY 9

IEEE Entrepreneur's SIG Meeting

Time: 3:00 - 5:00 P.M.

Place: NOVA

505 W. Olive

Palo Alto Room (inside 767)

Sunnyvale, CA

For further information contact Art Rahman,
Chair of IEEE CNSV, at

ataur.rahman@worldnet.att.net

Web: www.ieee-sv-consult.org/

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SF – Power Engineering

WEDNESDAY AUGUST 18

Summer Banquet

Electric Power: Demand Response Issues in California

Speakers: Mary Ann Piette (Director DR, LBNL) and
Joe Desmond (Deputy Secretary of Energy
Resources, CA)

Time: More details later – hold this date!

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CONFERENCE CALENDAR

July 13-16: **IEEE International Electronics Manufacturing Technology Symposium in San Jose**

The IEEE's IEMT is an international forum on electronic/photonic/MEMS components and systems manufacturing technology, a joint effort of SEMI and the IEEE's CPMT Society. It brings to Silicon Valley a unique venue for engineers and scientists with technical papers on research, development, and applications of manufacturing technology for components, assemblies, and systems. Individual sessions will deal with reliability, green manufacturing, MEMS packaging, design for manufacturing, the effects of using low k materials, wafer level and stacked die packaging, and testing.

Early registration discount through July 2nd. For registration information, an Advance Program and a listing of the Professional Development Courses:

www.e-grid.net/conf/iemt.html

Aug. 9-10: **Workshop on Memory Design and Testing will be in San Jose**

The workshop (MTDT'04) covers all aspects of memory design, process technologies and testability related topics, such as memory circuit designs, cell structures, fabrication processes, design architectures and related testing and verification methods for SRAM, DRAM, Flash and non-volatile memories, EPROM, EEPROM, embedded memories, logic-enhanced and FIFO memories, 3-D memories, and content addressable memories. For more information, contact Rochit Raysuman, 408 727 2222, r.rajsuman@advantest-ard.com

Aug 9-13: **IEEE Int'l Symposium on Electromagnetic Compatibility held in Santa Clara**

Attend workshops and special sessions, hear technical papers presented by leaders in the industry, and view numerous experiments and demonstrations which are designed to put into practice the theory and applications learned in the technical sessions. Visit with over 200 exhibitors of EMC-related products and services. See our [GRID display pages](#).

For registration information, see the website:

www.e-grid.net/conf/emc.html

Aug 13-15: **IEEE Symposium on Product Safety Engineering Comes to Santa Clara**

This symposium addresses safety engineering for equipment and devices. It will allow engineers, students and others with an interest in electrical product safety to discuss and disseminate technical information and enhance their professional skills. Talk and discuss problems with vendors displaying

the latest Regulatory Compliance products. Attend Technical Sessions, Workshops, Tutorials and Demonstrations specifically targeted to the electrical safety engineering professional.

See our [GRID display page](#) for more details.

For registration information, see the website:

www.e-grid.net/conf/pses.html

Aug. 16-19: **IEEE Computational Systems Bio-informatics comes to Stanford in August**

CSB2004 is one of the important bioinformatics events and provides a broad spectrum across the bioinformatics field. Our keynote speakers, paper and poster presentations, tutorials and social events have all been designed to cater to bioinformatics' eclectic mix of disciplines. CSB2004 has the lowest registration fees of any conference of its kind worldwide to make it possible for everyone to attend. And this year it is in our own "back yard."

The tutorials will be given on Monday, August 16, offering the opportunity to learn about new areas of bioinformatics research, get an introduction to important established topics, and/or develop higher skill levels in areas for which they are already knowledgeable. See our [GRID display page](#).

For more information, and to register online:

www.e-grid.net/conf/csb.html

Aug. 22-24: **Hot Chips Symposium at Stanford**

The IEEE Symposium on High Performance Chips (**HOT CHIPS 16**) will be held in Stanford's Memorial Auditorium with tutorials on Sunday followed by two days of paper presentations on Monday and Tuesday. For more information, visit the Hot Chips website: www.hotchips.org.

Aug. 23-27: **Int'l Conference on Ferrites in S.F.**

ICF'04 provides a forum for the presentation and discussion of the latest scientific and technological developments in ferrites (magnetic ceramics) and related materials. The conference covers all areas of basic science and technology for ferrites and related materials. Special emphasis is placed on advanced findings and emerging technologies that are expected to open new horizons for ferrites in the twenty-first century. More than 250 presentations on the results of academic, technical, and industrial studies will be given. Exhibits give the opportunity to visit with suppliers. Reduced registration rates through July 23. See our [GRID display page](#) for more details.

For more information, and to register online:

www.e-grid.net/conf/icf.html

Aug. 25-27: **Symposium on High Performance Interconnects being held at Stanford**

HOT INTERCONNECTS 12 brings together designers and architects of high-performance chips, software, and systems at the University and global business levels. Presentations focus on up-to-the-minute developments demonstrating leading-edge designs by engineers and researchers throughout the world. Two days of technical sessions and a day of tutorials will keep you on top of the latest developments within industry and academic laboratories. Free parking on the campus!

See our [GRID display page](#) for more details.
For more information, and to register online:

www.e-grid.net/conf/hoti.html

Sept 1-4: **Conference on Engineering in Medicine and Biology comes to San Francisco**

The IEEE Engineering in Medicine and Biology Society holds its annual international conference at the historic St. Francis Hotel on Union Square in the center of San Francisco. The conference offers an opportunity for professional interaction in all areas relevant to biomedical engineering. In addition to the technical programs, professional tours will be available, affording attendees the opportunity to visit local research facilities in both educational and industrial settings. Workshops and tutorials are on Wednesday, 9/1, and local engineers may register for only the workshops. Keynote speaker is Paul C. Lauterbur, 2003 winner of the Nobel Prize in Medicine. Extensive exhibits are free to Bay Area professionals.

See our [GRID display page](#) for more details.
For more information, and to register online:

www.e-grid.net/conf/emb.html

Sept 21-23: **Wescon comes to Anaheim this year, with NANOWorld, EI EXPO, plus more**

The re-engineered Wescon/2004 brings together the technical programs of **NANOWorld**, the **Enterprise Integration EXPO**, the **Autonomous Vehicle Technology Showcase**, and more. The vendor exhibits include pavilions on test and measurement equipment, components, EDA tools, engineering software, power components, and prototype and short-run production.

See our [GRID display page](#) for more details.
For more information, visit the website:

www.e-grid.net/conf/wescon.html

Oct 7-8: LEOS Workshop: **SBIR Grants for the Curious Engineer in Business**

The US government and other domestic agencies provide funding for projects and assistance for R&D to small businesses under the Small Business Innovative Research (SBIR) program. Funds from tens to hundreds of thousands of dollars are available for work on topics ranging from nanotechnology to astronomy.

This workshop is for engineers, entrepreneurs, and small-business executives who wish to learn how to "read between the lines" of government solicitations and how to win grants and contracts. This two-day Workshop will be held in Sunnyvale, at the National Semiconductor Credit Union meeting rooms. More details: www.ieee.org/sbir/

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Conferences are encouraged to purchase display space in the **GRID.pdf** and publicize their event on our website and in our **e-GRID** email notification service. For the Conference Publicity flyer, please download:

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