

**Twenty-Ninth Annual  
IEEE Communication Theory Workshop  
May 7-10, 2000  
Grenelefe Resort, Haines City, Florida**  
<http://comm-theory.ece.ufl.edu/>

The 29th Annual IEEE Communication Theory Workshop will be held Sunday, May 7 to Wednesday, May 10, 2000 at the Grenelefe Golf and Tennis Resort, Haines City, Florida. Haines City is in central Florida, approximately 45 minutes driving time from Orlando (directions and map attached).

We hope you will join us for this workshop. Ray Pickholtz and Don Schilling have put together an excellent program which provides informal presentations of cutting edge ideas, often long before formal publication. The program encourages the usual audience/speaker interchange that distinguishes this workshop from more formal conference settings. As usual, there will be no parallel sessions, and this year's speakers include many renowned leaders in both the academic and commercial arenas.

### **Technical Program**

Monday, May 8, 2000, 9:00 am - 12:00 noon

#### **New Techniques in Spread Spectrum and Channel Estimation**

Chair: Larry Milstein, University of California at San Diego, [milstein@ece.ucsd.edu](mailto:milstein@ece.ucsd.edu)

1. Mike Honig  
Northwestern University  
[mh@mingus.ece.nwu.edu](mailto:mh@mingus.ece.nwu.edu)      *"Signal Processing for Short Code CDMA"*
2. Scott Miller  
Texas A&M University  
[smiller@ee.tamu.edu](mailto:smiller@ee.tamu.edu)      *"Modulation for Highly Dispersive Fading Channels"*
3. John Proakis  
Northeastern University  
[proakis@neu.edu](mailto:proakis@neu.edu)      *"Detection Algorithms for Spatially Multiplexed Signals and Their Performance in Wireless Communications"*
4. Michael Pursley  
Clemson University  
[pursley@eng.clemson.edu](mailto:pursley@eng.clemson.edu)      *"Energy-Efficient Adaptive Transmission and Routing in Frequency-Hop Wireless Networks"*
5. Wayne Stark  
University of Michigan  
[stark@eecs.umich.edu](mailto:stark@eecs.umich.edu)      *"Iterative Decoding and Channel Estimation for Frequency-Hopped Spread Spectrum Communications"*

Monday, May 8, 2000, 2:00 - 5:00 pm

#### **OFDM and Bandwidth Efficient Modulation**

Chair: Leonard J. Cimini, Jr., AT&T Labs-Research, <mailto:ljc@research.att.com>

1. Dennis Goeckel  
University of Massachusetts  
[mailto:goeckel@chloe.ecs.umass.edu](mailto:mailto:goeckel@chloe.ecs.umass.edu)      *"A Coded Modulation Scheme Matched to Wireless OFDM Systems: Design, Performance, and Its Impact on the Single-Carrier vs Multicarrier Debate"*

2. Hermann Rohling *"COFDM Transmission Technique and Turbo Detection of Convolutionally Coded and Differentially Modulated Signals"*
3. John Cioffi  
Stanford University  
[cioffi@stanford.edu](mailto:cioffi@stanford.edu) *"Soft Cancellation"*
4. Marvin Simon  
Jet Propulsion Laboratory  
[marvin.k.simon@jpl.nasa.gov](mailto:marvin.k.simon@jpl.nasa.gov) *"Further Results on Bandwidth Efficient Trellis-Coded Modulation with Prescribed Decoding Delay"*
5. Rick Wesel  
UCLA  
[wesel@ee.ucla.edu](mailto:wesel@ee.ucla.edu) *"Edge Profile Optimal Constellation Labeling"*

Monday, May 8, 2000, 8:30 pm

### Hot Topics, New Results, and Open Problems

Chair: Branimir Vojcic, George Washington University, <mailto:vojicic@seas.wu.edu>

1. Sirikiat Lek Ariyavisitakul  
[lek@homewireless.com](mailto:lek@homewireless.com) *"Turbo Space-Time Processing to Improve Wireless Channel Capacity"*
2. Dariush Divsalar  
Jet Propulsion Laboratory  
[Dariush.Divsalar@jpl.nasa.gov](mailto:Dariush.Divsalar@jpl.nasa.gov) *"The Noise Figure of Turbo Decoders"*
3. R. Bauer  
and  
Joachim Hagenauer  
LNT, TU Muenchen  
[hag@magnet.netlab.ntt.jp](mailto:hag@magnet.netlab.ntt.jp) *"Iterative Decoding Between FEC Channel Codes and Variable Length Source Codes (VLC)"*
4. A. AlRustamani  
and  
Branimir Vojcic  
The George Washington  
University  
[vojicic@seas.gwu.edu](mailto:vojicic@seas.gwu.edu) *"Greedy Multiuser Detection"*

Tuesday, May 9, 2000, 9:00am - 12:00 noon

### Radio Channels

Chair: Vinko Erceg, AT&T Labs-Research. [vinko@research.att.com](mailto:vinko@research.att.com)

1. Michael Gans *"Fundamentals of Wireless Communications Channels"*
2. Theodore Rappaport *"Fundamentals of Broadband Spatial-Temporal Channel Modeling"*
3. Henry Bertoni *"Angle-of-Arrival and Time Delay Characterizations for Microcells"*
4. Daniel Devasirvatham *"Characterizing Spatio-Temporal Radio Channels"*
5. Larry Greenstein  
AT&T Labs-Research *"Development and Applications of a Delay Spread Model for Digital Cellular Channels"*

[ljpg@research.att.com](mailto:ljpg@research.att.com)

or

V. Erceg

Tuesday, May 9, 2000, 2:00 - 5:00 pm

### **Iterative Methods Including Turbo Codes**

Chair: Dariush Divsalar, Jet Propulsion Laboratory, [Dariush.Divsalar@jpl.nasa.gov](mailto:Dariush.Divsalar@jpl.nasa.gov)

1. Sergio Benedetto  
Politecnico  
[benedetto@polito.it](mailto:benedetto@polito.it)  
*"Versatile Bandwidth-Efficient Concatenated Codes with Interleavers"*
2. Claude Berrou  
[claude.berrou@enst-gretagne.fr](mailto:claude.berrou@enst-gretagne.fr)  
*"On Non-Binary Turbo Codes"*
3. Joachim Hagenauer  
LNT, TU Muenchen  
[hag@magnet.netlab.ntt.jp](mailto:hag@magnet.netlab.ntt.jp)  
*"Analog Decoders and Equalizers: Design Principles and VLSI Measurement Results"*
4. Shu Lin  
University of California  
[shulin@ece.ucdavis.edu](mailto:shulin@ece.ucdavis.edu)  
*"A Geometric Construction on Low-Density Parity Check Codes"*
5. Thomas Richardson  
*"Iterative Decoding of LDPC and Related Codes"*

Wednesday, May 10, 2000, 9:00am - 12:00 noon

### **Efficient Wireless Communications**

Chair: Branimir Vojcic, George Washington University, [mailto:vojic@seas.wu.edu](mailto:mailto:vojic@seas.wu.edu)

1. Sergio Verdu  
Princeton University  
[verdu@princeton.edu](mailto:verdu@princeton.edu)  
*"Spectral Efficiency of CDMA"*
2. Mahesh Varanasi  
Univ of Colorado  
[varanasi@schof.colorado.edu](mailto:varanasi@schof.colorado.edu)  
*"Bandwidth Efficient Multiple Access"*
3. Damjanovic  
and  
Branimir Vojcic  
George Washington University  
[mailto:vojic@seas.wu.edu](mailto:mailto:vojic@seas.wu.edu)  
*"Turbo Multiuser Decoding"*
4. Vahid Tarokh  
AT&T Labs-Research  
[tarokh@research.att.com](mailto:tarokh@research.att.com)  
and  
Hamid Jafarkhani  
AT&T Labs-Research  
[hamid@research.att.com](mailto:hamid@research.att.com)  
*"On Space-Time Coding"*
5. A. Stefanov  
*"Turbo Coded Modulation for High Data Rate Wireless Communications"*

and

T. Dunman

**Schedule**

The workshop will begin with a reception on Sunday evening. There will be morning and afternoon technical sessions on Monday and Tuesday, a hot-topics session on Monday evening, and a morning technical session on Wednesday. Additional receptions will be held on Monday and Tuesday evenings.

The detailed schedule is as follows:

<u>Function</u>	<u>Time</u>	<u>Days</u>
Breakfast	7:30am - 8:30am	M-T-W
Technical Sessions	9:00am - 12:00 noon 2:00pm - 5:00pm	M-T-W M-T
Reception	5:30pm - 6:30pm	S-M-T
Dinner	6:30pm - 8:30pm	S-M-T
Hot Topics Session	8:30pm	M

**Workshop Registration**

Please fill out the attached registration form and return it to Dave Newman together with your payment (Dave will accept checks and money orders only). Please return the form even if you do not preregister so as to help us anticipate the number of registrants. The registration fee will cover attendance at all technical sessions, three breakfasts, three dinners, three receptions, and all morning and afternoon coffee breaks.

Note that there is no partial registration for the Workshop. All participants, including speakers are expected to pay the full registration fee. This long-standing policy stems from the very nature of the Workshop, whereby active participation in the entire Workshop is strongly encouraged.

**Grenelefe Reservations**

Grenelefe Golf and Tennis Resort  
3200 State Road 546  
Haines City, FL 33844

Room rates (off-season) are as follows:

Single Room - \$89/night  
One Bedroom Villa - \$109/night  
Two Bedroom Villa - \$198/night

For reservations, call Grenelefe at 1-800-237-9549. Make your reservation under the block of rooms reserved for the IEEE Communication Theory workshop (May 7-10, 2000). Deadline for room reservations is April 21, 2000. It is recommended that room reservations be made early, to insure that the Workshop room rate is obtained.

The above room rates are available for up to three days preceding and following the Workshop.

Further information regarding Grenelefe is available at <http://www.grenelefe.com/>

**Directions**

**Orlando International Airport:** Take exit to 417 south (Kissimmee). 417 to I-4 west to U.S. 27 south. Turn left on State Road 544 6 miles to Grenelefe entrance. Drive time: 45 minutes.

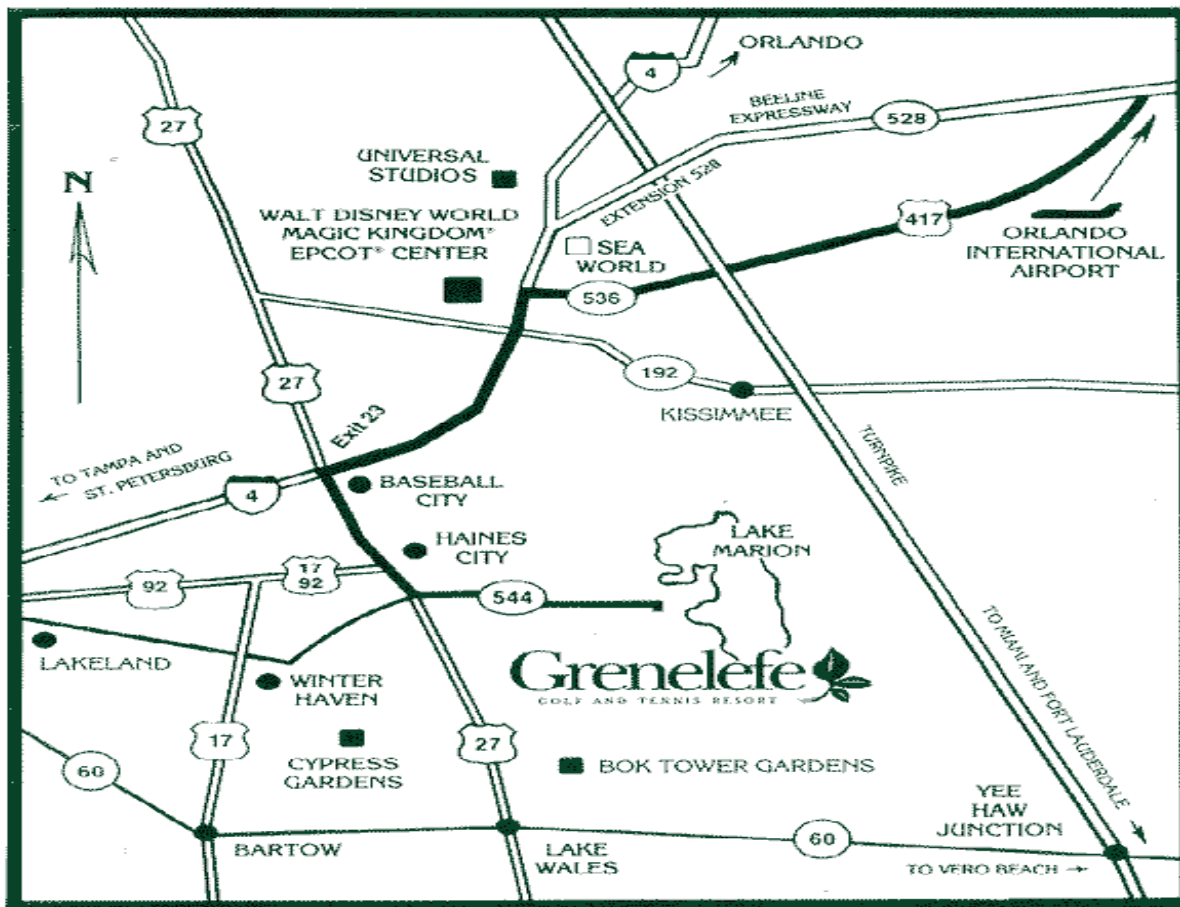
**Tallahassee:** Take I-10 east to I-75 south. I-75 to Florida Turnpike. Exit Turnpike to U.S. 27 south. Turn left on State Road 544 to Grenelefe. Drive time 3-1/2 to 4 hours.

**Jacksonville:** Take I-95 south to I-4 west at Daytona Beach. I-4 west to U.S. 27 south. Turn left on State Road 544 to Grenelefe. Drive time: 3-1/2 hours.

**Tampa Airport/St. Petersburg:** Take I-275 to I-4 east, to U.S. 27 south. Turn left on State Road 544 to Grenelefe. Drive time: 1 hour, 15 minutes.

**Miami/West Palm Beach:** Take Florida Turnpike north to State Road 60 exit (Yeehaw Junction). West on 60 to U.W. 27 north. Turn right on State Road 544 to Grenelefe. Drive Time: 4 hours.

<b><u>Shuttle Services</u></b>	<b><u>Point of Contact</u></b>	<b><u>Phone</u></b>
Associated Transportation	Mike Berry	1-800-392-7759 ext 111
Casino Royale	Danny Khaury	1-407-888-8388
Superior Transportation	Mazen	1-888-641-5466



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**Local Arrangements**

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