

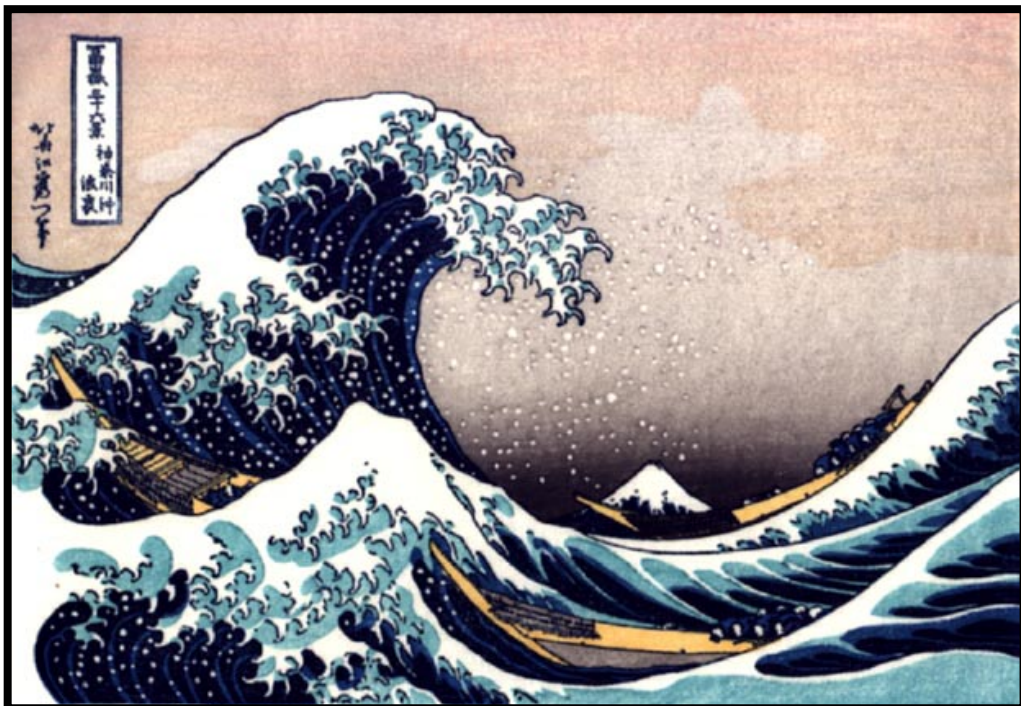


Workshop/Mini-Symposium on

ELECTROMAGNETICS IN A COMPLEX WORLD

Challenges and Perspectives

(Provisional program)



University of Sannio, Benevento
FEBRUARY 20-21, 2003
ITALY

ORGANIZING COMMITTEE

Innocenzo M. Pinto, Chair (University of Sannio, Italy)

Vincenzo Galdi, Co-Chair (University of Sannio, Italy)

Bruno Bisceglia, sj, (University of Sannio, Italy)

Giuseppe Castaldi (University of Sannio, Italy)

Vincenzo Fiumara (University of Salerno, Italy)

Vincenzo Pierro (University of Sannio, Italy)

In consultation with Prof. Leopold B. Felsen (Boston University, USA)

SPONSORED BY

Faculty of Engineering, University of Sannio
Department of Engineering, University of Sannio
Ente Provinciale per il Turismo di Benevento

COVER: "The Great Wave at Kanagawa" (from a Series of Thirty-six Views of Mount Fuji) by Katsushika Hokusai (1760–1849), The Metropolitan Museum of Art, New York.

BACKGROUND

In connection with the opening festivities for the 2003 academic year at the University of Sannio, Benevento, Italy, the "Laurea" degree *honoris causa* for "Outstanding seminal contributions to wave propagation and electromagnetics" will be bestowed on Professor Leopold B. Felsen (Department of Aerospace and Mechanical Engineering, and Department of Electrical and Computer Engineering, Boston University, USA; also University Professor Emeritus, Polytechnic University, Brooklyn, USA).

The ceremony will take place in the morning of February 20, 2003. The minisymposium thereafter is intended as an opportunity for Prof. Felsen's colleagues, collaborators and former students to celebrate this event with him.

VENUE

Please note that, contrary to what was stated in the previous announcement, the Honorary Degree ceremony will take place in the **"S. Agostino" Auditorium** of the University of Sannio (**Via G. De Nicastro, Benevento, see map on p. 8**).

The Symposium technical sessions will be held in the **"S. Domenico" Auditorium**, in the Rectorate of the University of Sannio (**Piazza Guerrazzi 1, Benevento, see map on p. 8**).

GENERAL PROGRAM AT A GLANCE

	TIME	EVENT	VENUE
THURSDAY FEB. 20, 2003	10:00am-12:00pm	Honorary degree ceremony	"S. Agostino" Auditorium
	12:30pm-2:30pm	Symposium registration and lunch	"S. Domenico" Auditorium
	2:30pm-5:30pm	Technical session	
	8:30pm-	Symposium dinner	Palazzo Rainone, S. Agata dè Goti
FRIDAY FEB. 21, 2003	9:00am-12:00pm	Technical session	"S. Domenico" Auditorium
	12:00pm-2:00pm	Lunch	
	2:00pm-3:00pm	Panel discussion	
	3:00pm	Closing ceremony	

DETAILED PROGRAM

Thursday, February 20, 2003 – Morning Program

"S. Agostino" Auditorium, via G. De Nicastro, Benevento (see map on p. 8)

10:00am BESTOWAL CEREMONY OF THE "LAUREA" DEGREE *HONORIS CAUSA* IN TELECOMMUNICATION ENGINEERING ON PROFESSOR LEOPOLD B. FELSEN

Welcome and opening remarks

Prof. Aniello Cimitile, President, University of Sannio

Laudatio

Prof. Innocenzo M. Pinto, University of Sannio

Lectio

Prof. Leopold B. Felsen, Boston University, USA

Citation

Prof. Michele Di Santo, Dean of Engineering, University of Sannio

Bestowal of the "Laurea" degree

Thursday, February 20, 2003 – Afternoon Program

"S. Domenico" Auditorium, Piazza Guerrazzi 1, Benevento (see map on p. 8)

12:30pm **Symposium registration**

1:00pm **Lunch**

1st Segment: Generics

2:30pm *Introduction and Overview*
L. B. Felsen (Boston University, USA)

2:45pm *Exterior Differential Forms in Teaching Electromagnetics*
P. Russer (Munich University of Technology, GERMANY)

3:00pm *Cooperation with the Academic World: An Operator's View*
R. Piermarini (Wind, ITALY)

3:15pm **Coffee break**

2nd Segment: Hybrid Techniques for EM Propagation and Simulation

- 3:30pm *Challenging EM Problems and Numerical Simulation Approaches*
L. Sevgi (Dogus University, TURKEY)
- 3:45pm *Wave Propagation in Guiding Environments: Modeling, Simulation, Software Calibration and Canonical Tests*
F. Akleman⁽¹⁾, L. Sevgi⁽²⁾, and L. B. Felsen⁽³⁾
(1) Istanbul Technical University, TURKEY, (2) Dogus University, TURKEY, (3) Boston University, USA
- 4:00pm *Electromagnetic Field Estimation in a Complex Urban Environment*
P. Semenzato (TIM, ITALY)
- 4:15pm *Electromagnetic Field Computations with the Generalized Network Formulation*
M. Mongiardo⁽¹⁾, V. Crinò⁽²⁾, L. B. Felsen⁽³⁾, A. Omar⁽⁴⁾, P. Russer⁽⁵⁾, and C. Tomassoni⁽¹⁾
(1) University of Perugia, ITALY, (2) Space Engineering, ITALY, (3) Boston University, USA, (4) University of Magdeburg, GERMANY, (5) Munich University of Technology, GERMANY
- 4:30pm *Challenges in Automotive Electromagnetic Compatibility Modeling and Simulation*
R. Neumayer (University of Linz, AUSTRIA) and **R. Weigel** (University of Erlangen-Nürnberg, GERMANY)
- 4:45pm *Truncated Floquet Wave Diffraction Theory for Planar Periodic Arrays on Stratified Dielectrics*
S. Maci, A. Polemi, A. Toccafondi (University of Siena, ITALY), and L. B. Felsen (Boston University, USA)
- 5:00pm *Reference-Wave Solutions for the High-Frequency Fields in Inhomogeneous Background Random Media*
R. Mazar and A. Bronshtein (Ben-Gurion University of the Negev, ISRAEL)

Thursday, February 20, 2003 – Evening Program

Palazzo Rainone, Mustilli Farm, S. Agata de' Goti, Benevento

- 6:30pm Departure from **Piazza Guerrazzi** (bus transportation will be provided)
- 7:30pm Arrival at Palazzo Rainone
Welcome wine&cheese buffet
For those interested, a guided tour of the Mustilli's wine caves has been arranged

8:30pm **Symposium dinner**

Entertainment program with presentation by Prof. Felsen's family, friends and colleagues of anecdotal reminiscences of interactions with him

~11:30pm Departure from Palazzo Rainone (bus transportation to hotels will be provided)

Friday, February 21, 2003 – Morning Program

"S. Domenico" Auditorium, Piazza Guerrazzi 1, Benevento (see map on p. 8)

1st Segment: Nonconventional Modeling

- 8:45am *Bouncing Ray Chaos and its Signatures in the Full-Wave Regime*
G. Castaldi ⁽¹⁾, V. Fiumara ⁽²⁾, **V. Galdi** ⁽¹⁾, V. Pierro ⁽¹⁾, I.M. Pinto ⁽¹⁾, and L. B. Felsen ⁽³⁾
(1) University of Sannio, ITALY, (2) University of Salerno, ITALY, (3) Boston University, USA
- 9:00am *Electromagnetic Diffraction from Fractally Corrugated Surfaces in Uniform Translating Motion: An Exact Relativistic Solution*
P. De Cupis and G. Gerosa (University of Rome "La Sapienza", ITALY)
- 9:15am *On the Tip Singularity of the Electromagnetic Field at the Apex of a Material*
M. Idemen (IŞIK University, TURKEY)
- 9:30am *Diffraction by a Dielectric Wedge by Use of the Dual Integral Equations*
J.-W. Ra (Kwangju Institute of Science and Technology, REPUBLIC OF KOREA)
- 9:45am *Challenges and Perspectives of Complex Spaces and Complex Signal Theory Analysis in Electromagnetics: A First Approach*
E. Gago-Ribas, M. J. González Morales, and C. Dehesa Martínez (University of Valladolid, SPAIN)
- 10:00am *Complex Point Source Approximation of Gaussian Beams in High Frequency Scattering - Two Examples of Applications*
G. Pelosi and S. Selleri (University of Florence, ITALY)
- 10:15am **Coffee break**

2nd Segment: Ultrawideband Techniques

- 10:30am *Electromagnetic Characterization of Ultra Wide Band Antennas*
W. Sörgel and **W. Wiesbeck** (University of Karlsruhe, GERMANY)
- 10:45am *Toward a Network Oriented Theory for Sequentially Excited Periodic Arrays: Background and Current Status*
F. Capolino (University of Siena, ITALY) and L. B. Felsen (Boston University, USA)
- 11:00am *Transient Radiation by Infinite Periodic Arrays: A Combined (TD-Floquet Wave)-(FDTD) Algorithm*
F. Capolino (University of Siena, ITALY), **G. Marrocco** (University of Rome "Tor Vergata", ITALY), and L. B. Felsen (Boston University, USA)
- 11:15am *Time-Domain Modes — Asymptotic Expansion and Error Estimates*
B. P. de Hon (Eindhoven University of Technology, THE NETHERLANDS), L. B. Felsen (Boston University, USA), and E. Heyman (Tel Aviv University, ISRAEL)

3rd Segment: Inverse Modeling

- 11:30am *Wave Field Inversion in Nondestructive Testing*
K. J. Langenberg, R. Marklein, and K. Mayer (University of Kassel, GERMANY)
- 11:45am *Embedding Approach to Modeling Simple Objects in a Complex Environment*
A. G. Tijhuis, M. C. van Beurden, B. Korkmaz (Eindhoven University of Technology, THE NETHERLANDS), and A. Franchois (Ghent University, BELGIUM)
- 12:00am *Localized Inverse Scattering*
T. Melamed (Ben-Gurion University of the Negev, ISRAEL)

Friday, February 21, 2003 – Afternoon Program

"S. Domenico" Auditorium, Piazza Guerrazzi 1, Benevento (see map on p. 8)

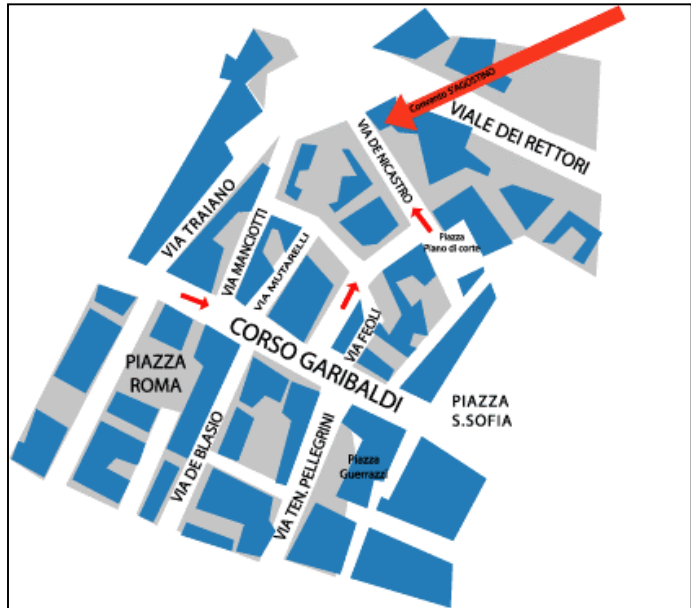
- 12:30pm **Lunch**
- 2:00pm **Panel discussion**
- 3:00pm **Closing ceremony**

HOW TO GET TO "S. AGOSTINO" AUDITORIUM

WALKING: Hotels in the suggested list are just minutes walking to Via De Nicastro (see map).

BY CAR: Follow the signs to "Benevento centro" (downtown). From Piazza Orsini, take Corso Garibaldi (one way) and follow the arrows on the map. Parking is available along Corso Garibaldi using prepaid parking tickets which can be purchased in tobacco/newspaper stores as well as most cafeterias.

BY TRAIN: From the Central Station in Benevento, take bus No. 1, 6 or 7 to Corso Garibaldi and then walk to Via De Nicastro.

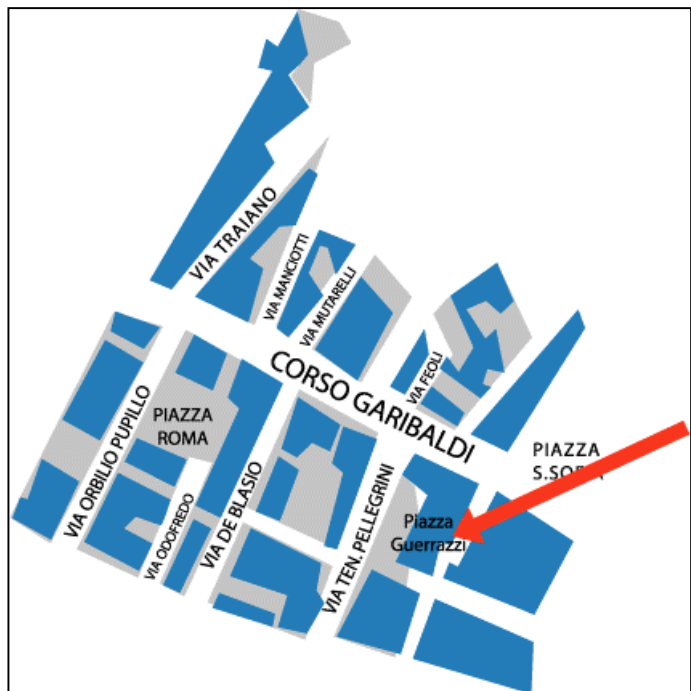


HOW TO GET TO "S. DOMENICO" AUDITORIUM

WALKING: Hotels in the suggested list are just minutes walking to Piazza Guerrazzi (see map).

BY CAR: Follow the signs to "Benevento centro" (downtown). From Piazza Orsini, take Corso Garibaldi (one way) and follow the arrows on the map. Parking is available along Corso Garibaldi using prepaid parking tickets which can be purchased in tobacco/newspaper stores as well as most cafeterias.

BY TRAIN: From the Central Station in Benevento, take bus No. 1, 6 or 7 to Corso Garibaldi and then walk to Piazza Guerrazzi.



USEFUL ADDRESSES

Symposium Secretariat

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“S. Agostino” Auditorium

Via G. De Nicastro, Benevento (see map on p. 8)

“S. Domenico” Auditorium

Piazza Guerrazzi 1, Benevento (see map on p. 8)

Hotel Villa Traiano

Viale dei Rettori 9, Benevento
Tel.: +39 0824 326241, Fax: +39 0824 326196
www.hotelvillatraiano.it

President Hotel

Via Perasso 1, Benevento
Tel.: +39 0824 316716, Fax: +39 0824 316764
digilander.libero.it/hotelpresident

Grand Hotel Italiano

Viale Principe di Napoli 137, Benevento
Tel.: +39 0824 24111, Fax: +39 0824 21758
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Hotel Della Corte

Piazza Piano Di Corte 11, Benevento
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