1993 Gordon Research Conferences on Nonlinear Optics
This grant provided essential financial support for the Gordon Research Conference on Nonlinear Optics which was held August 1-6, 1993, at Brewster Academy, Wolfeboro, New Hampshire. The objective of this conference was to bring together scientists so they could exchange recent research results and the conference provided a mechanism for the development of close interactions between these scientists.

The conference was attended by 135 conferees. There were participants representing academic, industrial, and government institutions. In addition, there were attendees from Canada, Germany, Israel, France, United Kingdom, Czech Republic, The Netherlands, Japan, Australia, Austria, Spain, and Greece.

The quality of all of the lectures was exceptionally high and considerable discussion followed each lecture. Many of the conferees expressed very favorable comments about the intellectual stimulation provided by this conference.
1993 Gordon Research Conference on Nonlinear Optics and Lasers

August 1st through 5th, 1993, Brewster Academy, Wolfeboro, NH
Dana Z. Anderson (Chair), Yaron Silberberg (Vice-Chair)

Program Schedule

Sunday

Bus arrives 6:00 pm
Participant registration
7:00 pm  Dinner
8:30 pm  Chairman’s reception

Monday

7:45 - 8:45  Breakfast
8:45 - 9:00  Welcome to Brewster Academy by Tim Radley

Monday Morning: Nonlinear optical effects and materials
Discussion Leader: D. Hanna
9:00 - 9:45  Martin Fejer  Efficient frequency conversion in micro-structured media
9:50 - 10:35  George Stegeman  AlGaAs below half-bandgap: the silicon of nonlinear optical materials
10:40 - 11:10  Coffee Break
11:10 - 11:55  Turan Erdogan  Ultrastrong UV photosensitivity in germanosilicate glass loaded with hydrogen
12:30  Lunch
6:00 pm  Dinner

Monday Evening: New laser technologies
Discussion Leader: J. Feinberg
7:30 - 8:15  Richard Slusher  Semiconductor microdisk lasers
8:20 - 9:05  David Hanna  Up-conversion lasers

Tuesday

7:45 - 8:45  Breakfast
8:45 - 9:00  Group Photograph

Tuesday Morning: Soliton interactions
Discussion Leader: J. Sipe
9:00 - 9:45  Grover Swartzlander Jr.  Optical vortex solitons in nonlinear refractive media
9:50 - 10:35  Alejandro Aceves  Soliton interaction in fiber arrays
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:40 - 11:10</td>
<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>11:10 - 11:55</td>
<td>Martyn deSterke</td>
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<td>12:30</td>
<td><strong>LUNCH</strong></td>
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<td>6:00 pm</td>
<td><strong>DINNER</strong></td>
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<td><strong>Tuesday Evening:</strong> Spatial-temporal dynamics in optical systems</td>
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<td><strong>Discussion Leader:</strong> K. Otsuka</td>
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<td>7:30 - 8:15</td>
<td>William Firth</td>
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<td>8:20 - 9:05</td>
<td>Jerry V. Moloney</td>
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<td>9:10 - late</td>
<td><strong>POSTER SESSION</strong></td>
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<td><strong>Wednesday</strong></td>
<td><strong>BREAKFAST</strong></td>
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<td>7:45 - 9:00</td>
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<tr>
<td><strong>Wednesday Morning:</strong> Atom trapping and cooling</td>
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<td><strong>Discussion Leader:</strong> S. Gilbert</td>
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<tr>
<td>9:00 - 9:45</td>
<td>Carl Wieman</td>
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<td>9:50 - 10:35</td>
<td>Gilbert Grynberg</td>
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<td>10:40 - 11:10</td>
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<td>Peter Zoller</td>
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<td><strong>LUNCH</strong></td>
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<td>6:00 pm</td>
<td><strong>DINNER</strong></td>
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<td><strong>Wednesday Evening:</strong> Field induced interference</td>
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<td><strong>Discussion Leader:</strong> A. Kaplan</td>
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<tr>
<td>7:30 - 8:15</td>
<td>Marlan O. Scully</td>
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<td>8:20 - 9:05</td>
<td>Dan Elliot</td>
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<td>9:10 - late</td>
<td><strong>POSTER SESSION</strong></td>
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<td><strong>Thursday</strong></td>
<td><strong>BREAKFAST</strong></td>
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<td>7:45 - 9:00</td>
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<td><strong>Thursday Morning:</strong> High field effects</td>
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<td><strong>Discussion Leader:</strong> D. Bloom</td>
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<td>9:00 - 9:45</td>
<td>Paul Corkum</td>
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<td>9:50 - 10:35</td>
<td>Phil Bucksbaum</td>
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<td>10:40 - 11:10</td>
<td><strong>COFFEE BREAK</strong></td>
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<td>11:10 - 11:55</td>
<td>Roger Falcone</td>
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<tr>
<td>12:30</td>
<td><strong>LUNCH</strong></td>
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6:00 pm  DINNER  Lobster and Clam Bake

7:30 - 8:55  Business meeting (selection of the 1995 Vice-Chair, etc.†)

Thursday Evening: Optical physics
Discussion Leader: Wayne Knox
7:55 - 8:00  Closing reminders by Tim Radley
8:00 - 8:45  Ian Walmsley  Nonclassical dynamics of molecular vibrational wavepackets
8:50 - 9:35  Paul Planken  Terahertz quantum beasts in quantum wells

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Friday
7:30 - 8:30  BREAKFAST

Friday Morning: Applications of nonlinear optics
Discussion Leader: H. Winful
8:30 - 9:15  Alois Renn  From spectroscopy of single atoms to information storage
9:20 - 10:05  Stuart MacCormack  Phase-locking of laser diode arrays
10:10 - 10:40  COFFEE BREAK
10:40 - 11:25  Shimon Weiss  Ultrafast scanning probe microscopy
11:30  LUNCH
12:30  BUS DEPARTS

†The Gordon Research Conference International Activities Subcommittee asks us to consider holding a meeting at one of the Gordon Research foreign sites. As the field of Lasers and Nonlinear Optics has a large non-US contingent, it could make sense to do so. They assure us that we will not give up our scheduling seniority by missing one conference in New England.

If as a group we have an interest in such a meeting, we need to have a foreign co-Chair who can work with the upcoming Chair (Yaron Silberberg). We can elect such a co-Chair, or he/she can be selected by the Chair.

At this moment there are six foreign conferences — three in Italy in the Spring and three in Germany in the Fall. Also two conferences were held in Hawaii last November. — DZA

The organizers of this Gordon Research Conference on Nonlinear Optics and Lasers are very grateful for the support of its sponsors. In addition to the Gordon Research Conferences these include the Air Force Office of Scientific Research, the Army Research Office, the National Science Foundation and the Office of Naval Research. Their support made possible the participation of many of the speakers and attendees, particularly students and young faculty, who would otherwise not have had the opportunity to do so.
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