DenTeC and Your Support

Your support will help DenTeC expand its research and educational opportunities, and give you access to DenTeC’s developments.

In addition to capital support for DenTeC’s future home — the Applied Biomedicine Building — your support will fund equipment, student research fellowships, seminars and technical workshops, faculty chairs, and visiting scientists.

We invite you to become a member of DenTeC.

By joining, you will have a significant role in helping DenTeC reach its research and educational objectives.

Membership Opportunities

All membership donations are tax-deductible.

**Platinum Level** — $5,000 per year
Benefits include:
- Invitation to Special Events, including:
  - DenTeC Hinman Open House
  - Annual Industry Planning Dinner
- 50% discount to Georgia Tech Dental Research Symposium
- Discounts to DenTeC CE Programs
- DenTeC Newsletter & Members-Only Web Access
- Acknowledgement at DenTeC CE Programs and on Website

**Gold Level** — $2,500 per year
Benefits include:
- Discounts to DenTeC CE Programs
- DenTeC Newsletter & Members-Only Web Access
- Acknowledgement at DenTeC CE Programs and on Website

**Silver Level** — $1,000 per year
Benefits include:
- Acknowledgement at DenTeC CE Programs and on Website

**Lifetime membership** is also available to reward the exceptional generosity of those donors who wish to give a one-time gift of $25,000 or more.

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Why DenTeC is Unique

The Georgia Institute of Technology’s Dental Technology Center—DenTeC@Georgia Tech—is a nonprofit, multidisciplinary research center focused on advancing dental science and technology.

DenTeC is a unique commitment to dentistry by a world-renowned engineering university. By integrating engineering knowledge and dental science, DenTeC is introducing new products and technologies for dentistry and craniofacial medicine via multi-disciplinary research, testing, and education. Through collaborative partnerships with dental professionals, other research institutions, and industry, DenTeC is rapidly building an international reputation as a leading source of research and information in the field of dental technology.

DenTeC was launched by the Georgia Institute of Technology in July 2001 following the excitement generated by the ‘virtual mouth’ project. Georgia Tech offers a fresh perspective on dental technologies that encourages the integration of discoveries from other disciplines. DenTeC was founded on the solid foundation of Georgia Tech’s leading science, engineering, and continuing education programs, world-renowned faculty, and applied research institute. Under the collaborative leadership of dentists and applied researchers, DenTeC is focused on developing engineering and technical innovations that will allow dental professionals to serve more patients and improve quality of care.

Serving the Dental Professional

DenTeC faculty and staff work closely with dental professionals to better understand the needs of the clinician and the patient. Education and open panel discussions between research scientists and the dental professional foster innovative concepts that could lead to new technologies designed to improve patient care. During local study club meetings and think tank sessions, DenTeC faculty present scientific information in focused areas of research and then open the floor to round table discussions regarding the possible applications. Local study clubs are welcome to present potential topics for discussion.

Education — Professional education courses, involving Georgia Tech research faculty, focus on the application of science-based research developed at Georgia Tech in dental and craniofacial health; courses are designed to meet the professional education needs of clinicians, surgeons, dental lab technicians, and industry researchers.

To schedule a study club meeting or to discuss ideas on professional education, contact Jennifer McDonald.

Research — DenTeC addresses issues related to the application of new technologies to dental and craniofacial treatments and supports the growth and development of new and existing companies in the dental industry.

Pre-Dental Society

Georgia Tech has initiated a Pre-Dental Society to support the education and preparation of engineering students to attend dental school. The society provides faculty advisors to assist students in their preparations, study aids for preparing for the dental admissions test, group trips to visit dental schools, local dentists to supply clinical shadowing opportunities for the students, research and internship opportunities, and guest speakers from the dental community.

Support for this society is required to offset the expense for study aids, travel, and program coordination.

<table>
<thead>
<tr>
<th>Technology</th>
<th>What it is</th>
<th>Application</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotechnology</td>
<td>Surface modification to improve implant osseointegration</td>
<td>Shortens time of osseointegration, immediate loading</td>
<td>Quicker tooth replacement</td>
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<td></td>
<td>Bone and connective tissue grafts</td>
<td>Repair of bony defects and augmentation</td>
<td>Restores form and function</td>
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<td>Tissue engineered constructs (bone, TMC, nerve-tissue, menisco)</td>
<td>Repair or build bone, TMC, nerve-tissue, menisco</td>
<td>Improved biocompatibility</td>
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<tr>
<td></td>
<td>Integration of biological tissue with nano-engineered materials</td>
<td>Grafts in craniofacial and dental surgery</td>
<td>Improved long term viability of implants</td>
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<tr>
<td>Nanotechnology &amp; Materials</td>
<td>Functional materials</td>
<td>Evaluation and analysis of material properties</td>
<td>Improve performance &amp; long-term function</td>
</tr>
<tr>
<td></td>
<td>Mechanical properties</td>
<td>Polubility of restorative material</td>
<td>Improved strength and esthetics, better wear properties</td>
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<tr>
<td></td>
<td>Optical properties</td>
<td>Reflective characteristics of the tooth</td>
<td>Improved esthetics</td>
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<tr>
<td></td>
<td>Coated nanoparticles</td>
<td>Time release properties</td>
<td>Longer effects of desired properties</td>
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<td>Nanofibrous scaffolds</td>
<td>Enhance cellular response (surface of implants)</td>
<td>Provides a more natural environment for growth</td>
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<tr>
<td>Diagnostics &amp; Imaging</td>
<td>Biophotonics</td>
<td>Surface topology and sub-surface diagnostics</td>
<td>Enhanced early detection of disease</td>
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<tr>
<td></td>
<td>Multi-spectral imaging</td>
<td>Fuses multiple image sources (pan, cephal, digital photograph, bite analysis)</td>
<td>Enhanced early detection of disease</td>
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<td>Tissue remodeling</td>
<td>Targeted growth, integration, or removal of tissue</td>
<td>Minimally invasive treatment</td>
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<td></td>
<td>Spectroscopy</td>
<td>Disease detection and cellular tissue analysis</td>
<td>Advanced diagnostic data</td>
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<td>Biomechanical simulation</td>
<td>Image enhancement and decision aides</td>
<td>Comprehensive diagnostic data</td>
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<td></td>
<td>Dental and Craniofacial Cone Beam Computed Tomography</td>
<td>Volumetric data for dental and craniofacial imaging</td>
<td>Advanced diagnostics, treatment planning and surgical assistance</td>
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<td>Nanoparticles</td>
<td>Disease detection (cancer and cysts)</td>
<td>Early detection of disease</td>
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<tr>
<td>Instrumentation</td>
<td>3D scaffolds for bio-/nano-engineered constructs</td>
<td>Biologically engineered prostheses</td>
<td>Better integration</td>
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<td></td>
<td>CAD/CAM</td>
<td>Automated fabrication of restorations and prosthetics</td>
<td>Reduce time (increase efficiency)</td>
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<td>In-office intraoral models</td>
<td>Medical models</td>
<td>Treatment planning and surgical guides</td>
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<td>Materials delivery systems</td>
<td>Flow control systems</td>
<td>Significantly reduce shrinkage</td>
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<td>Multi-modal therapeutic instrumentation</td>
<td>All-in-One lasers, abrasion</td>
<td>Integrated systems</td>
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<td>Wireless communications and software</td>
<td>Imaging and data transport</td>
<td>Portability</td>
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<td>Ergonomics and environmental safety</td>
<td>Noise control and chair/delivery design</td>
<td>ISO/IL and comfort</td>
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DenTeC is translating advanced technologies from high-tech industries and the military to rapidly evolve the future of dentistry with clinically relevant systems that enhance treatment outcomes and dentist efficiencies.