Institute for People and Technology

TOWN HALL

January 10, 1–4 p.m.

HIT Session: The Aware Home and HomeLab (Living Labs)

Contact: Brian D Jones, Director, Aware Home, brian.jones@imtc.gatech.edu

The **Aware Home** is an authentic home facility on the NW corner of campus with two identical floors intended to facilitate research in a domestic setting. Research includes: health and well-being, digital media and entertainment, and sustainability.

Possible uses:

- **Innovate the next home technology** (assistive robotics, future home health monitoring and interventions, whole-home gaming, what's cooking?)
- **Perform human subject studies of our research in a controlled environment** (assistive robotics, behavior imaging, custom waterline sensor validation)
- **Test installation of solutions before deploying into peoples' homes** (empowering patients and care providers)
- **Engaging students in an compelling environment** (Integrated into coursework, capstone, special problems)

The Aware HomeAPI provides access to sensors and controls.

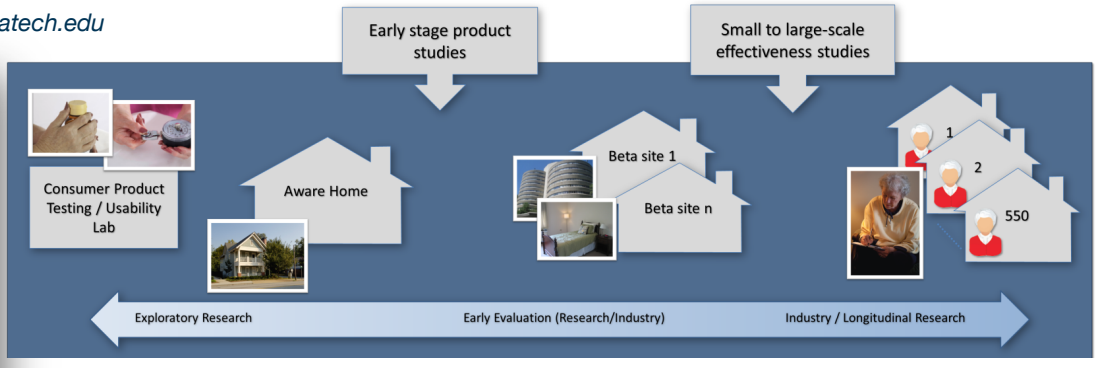
Aware Home Information: awarehome.gatech.edu

HomeLab: Georgia Tech's HomeLab initiative provides the capability to conduct in-home research that supports the development of innovative technologies that promote health, wellness, and independence for older adults. HomeLab brings together a multidisciplinary team of scientists and engineers and a community of older adults interested in participating in research.

The HomeLab community consists of 550+ individuals 50 years and older willing to participate in the research to better understand this population through surveys or studies, such as evaluation of health technologies in a home setting. Participant induction data collected includes: demographics, health conditions, functional capabilities, mental status, daily living activities, assistive technology use, technology use and home settings.

Seed grant: Need pilot data for a proposal? HomeLab is offering a seed grant program to cover HomeLab personnel costs to run pilot projects in the population.

HomeLab Information: homelab.gtri.gatech.edu



Georgia Tech IPaT Institute for People and Technology

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TOWN HALL

January 10, 1–4 p.m.

CDAIT: The Human Edge of the Internet of Things

Alain Louchez, Director, Center for the Development and Application of Internet of Things Technologies, alain.louchez@gtri.gatech.edu
Jeff Evans, Director, Information and Communications Laboratory, Georgia Tech Research Institute (GTRI), jeff.evans@gtri.gatech.edu
Trina Brennan, Program Manager, GTRI, trina.brennan@gtri.gatech.edu
Speakers: Dr. Richard Fujimoto, Director ICH and Margaret Loper, Chief Scientist ICL

The Center for the Development and Application of Internet of Things Technologies (CDAIT, pronounced *sedate*) fosters the development of interdisciplinary Internet of Things (IoT) research and education that bridges sponsors with Georgia Tech researchers and faculty as well as with industry members who share similar interests. CDAIT is based in GTRI's Information and Communications Laboratory (ICL) and will collaborate across Georgia Tech utilizing IPaT as our campus host. We seek to serve the Georgia Tech community as a research center for targeted Internet of Things (IoT) related initiatives – coordinated with external Industry membership.

This Center will **energize** the industry by increasing global awareness of IoT and the positive role IoT can have as a transformational agent for society, a catalyst for innovation, ecological sustainability, and economic growth. CDAIT seeks to become a center of excellence for promoting, developing and unlocking IoT's huge potential, while establishing Georgia Tech as an IoT thought leader and serve as a catalyst for a range of industry and government research.

A successful center will become the become the "glue" for IoT, leveraging GT's world renowned expertise related to component integration, modeling, simulation, emulation, testing and optimization.

Currently special focus is given to three key areas:

- **Privacy, Security and Trust**
  Ensuring security, privacy, trust, safety and quality in all frameworks and architectures.
- ***Socio-Technical Implications***
  Facilitating IoT's societal integration, including enterprise transformation (marketing, information management to include Big Data analytics, along with other business domains) and contribution to public policy.
- ***Quality of Service, Resilience and Interoperability***
  Addressing challenges arising out of heterogeneous networks, endpoints and applications; multiple stakeholders; and power sources (energy harvesting), together with participating in the development of IoT-related standards and protocols, including open source.

By doing this, CDAIT can directly impact and influence the direction of the IoT space, which lies at the very intersection of technology and human needs.

Recognition Received to Date:

- *Joined International Telecommunication Union (ITU) for IOT Standards – one of only 3 US-based Universities*
- *Invited to chair both the general session and one panel session of the UTI workshop steering committee on IoT Standards – Geneva, February 18*
- *Invited to attend the first world inaugural forum on IoT (invitation only), Barcelona Spain, Cisco hosting*
- *Published 14-articles, co-authoring chapter on M2M applications (Spring 2014), 4-invited speaker events, 3-hosted conferences.*

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TOWN HALL

January 10, 1–4 p.m.

EVPR Assistive Aging Task Force

Dr. Dennis Folds, Associate Director, GTRI, dennis.folds@gtri.gatech.edu
Brian D Jones, Senior Research Engineer, IMTC and Director, Aware Home, brian.jones@imtc.gatech.edu
Jon Sanford, Director, CATEA, jon.sanford@coa.gatech.edu
Wendy Rogers, Professor, School of Psychology and Director, Human Factors and Aging Lab, wendy.rogers@psych.gatech.edu

The EVPR Aging and Disability Task Force was formed in Spring, 2013 to strategize how Georgia Tech should leverage expertise across disciplines to position Georgia Tech as the leader in the research, design and development of technologies to support independence and healthy living for older adults and others experiencing functional limitations.

In this session, we will share the current results of the Task Force efforts, including:

- Vision, Mission and Goals
- Grand Challenge areas established
- Recently awarded Center on technologies to support aging and disability: RERC TechSAge

Mission: Georgia Tech and its collaborators will tackle multiple grand challenges associated with enabling older adults and those with functional limitations to live independently and maintain a high quality of life. We will apply expertise in the engineering, computing, life sciences, architecture, design, and health fields. Researchers seek to understand the causes and implications of functional decline that can compromise independence and quality of life. Through design, development, deployment, and validation of innovative technologies and services, we will enhance and enrich the lives of those with perceptual, cognitive, or physical limitations.

Grand Challenge Areas:

- Assured Monitoring - collection, processing, and interpretation of data about a person's health and function in order to empower the individual and assist caregivers in care and intervention decision-making.
- Enhanced Mobility – enhance ability to move safely and efficiently at home and to/from/at a destination, using a preferred modality of travel, with dignity and confidence.
- Enhanced Connectedness - enhancing and maintenance of desired social interactions with individuals and groups to promote feelings of inclusion, enjoyment, and satisfaction with life.

RERC TechSAge: Rehabilitation Engineering Research Center on Supportive Technologies for Successful Aging with Disability: ($4.6M/5 Year Award sponsored by NIDRR)

TechSAge MISSION: To conduct programs of advanced rehabilitation engineering (RE) and technical R&D to increase knowledge about, availability of, and access to **effective, universally-designed technologies that enable people to sustain independence, maintain health, safely engage in basic activities of daily living at home and community, and participate in society as they age with disability.**

To get involved in the Aging Task Force efforts or suggest others to include: contact Dennis Folds or Brian Jones.

Details on task force at: aditaskforce.gatech.edu (*access by request)*

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TOWN HALL

January 10, 1–4 p.m.

Community Engagement

Laurie Baird, Managing Director Midtown Buzz, IPaT, Laurie.Baird@ipat.gatech.edu
Maribeth Gandy, Director, IMTC, maribeth@imtc.gatech.edu
Chris LeDantec, Assistant Professor, School of Literature, Media, and Communication, ledantec@gatech.edu
Elizabeth Mynatt, Executive Director, IPaT, mynatt@gatech.edu
Ellen Zegura, Professor and Chair, School of Computer Science, ewz@cc.gatech.edu

Georgia Tech is working with many local communities as part of research, outreach and education activities. These activities require sustained partnership that respect and respond to the needs and values of community members. Stakeholders often include residents, local business, nonprofit organizations and other interests that operate in the community.

In this session, we discuss engagements with:

- Students in General
- Midtown and the Midtown Alliance
- Westside
- The City of Atlanta

Interested in getting involved, contact these folks:

Midtown (Laurie Baird or Maribeth Gandy)

City of Atlanta / Westside (Chris Le Dantec)

Computing 4 Good (Ellen Zegura)

Specific student opportunities include (Zegura):

- Computing 4 Good
- SLCE Council (Service Learning and Community Engagement)

Westside projects include (Le Dantec):

- Community Historians
- Atlanta Community Food Bank

Midtown projects include (Baird / Gandy):

- Midtown Buzz
- Auggie (AR Dining)
- Storytelling Workshop / Hackathon
- Tastemakers

Dates for activities this semester related to Midtown:
Jan 30: Midtown Stories Workshop
Feb 7-9: Mobile Storytelling Hackathon

City of Atlanta projects include (Le Dantec)

- Cycle Atlanta
- OneBusAway

Georgia Tech IPaT Institute for People and Technology

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TOWN HALL

January 10, 1–4 p.m.

IPaT Faculty

Elizabeth Mynatt, Executive Director, IPaT, Professor School of Interactive Computing, mynatt@gatech.edu
Leigh McCook, Deputy Director IPaT, Division Chief of the Socio-Technical Systems Division ICL GTRI, leigh.mccook@gtri.gatech.edu

*The Institute for People and Technology connects industry, government and non-profit leaders with **Georgia Tech's world-class researchers** in an effort to transform five vital sectors of society: media, health, education, enterprises, and humanitarian systems. By **integrating academic and applied research through living labs and multidisciplinary projects**, IPaT delivers real world solutions that balance people's needs with the promise of new technologies.*

IPaT Faculty make up a broad network at Georgia Tech, purposely drawn from all the academic colleges, GTRI, EI2 and many administrative and service units.

Internally we distinguish among three faculty groups:
A: Administratively housed in IPaT
B: Resident / primary user of IPaT labs and facilities, including those who are frequent collaborators with IPaT-focused partnerships and projects.
C: Participation in IPaT activities and/or applicants to seed grant programs.

In 2014, IPaT faculty membership will be more explicit and will be modeled after the IBB faculty process.

Membership benefits:

- Seed Grant Applications
- Access to Core Facilities and Services
- Invitations to Community Events
- Grant Application and Administration Support
- Industry Relations and Tech Transfer Support
- Communications
- Event Staff Support

Primary Georgia Tech faculty or faculty who hold an adjunct appointment at Georgia Tech can apply for membership. If you do not hold an appointment (primary or adjunct), you can still apply to become an affiliate member to keep you abreast of all the IPaT's activities and special invitations. There are also occasions when faculty or research members who are not affiliated with one of the local universities may also be considered for membership.

Membership responsibilities:

- Participation in IPaT activities
- Targeted communication of research activities
- Cost reimbursement for special activities, inclusion in proposal budgets for technical support, etc.

Frequent questions and future directions:

- Overhead and grant "homes"
- Relationship to research centers in GTRI and the Colleges
- Branding and identity
- Relationship to GTRI processes
- Relationship to College processes
- Centers and consortia

Georgia Tech IPaT Institute for People and Technology

Institute for People and Technology

TOWN HALL

January 10, 1–4 p.m.

Industry Research Outreach and Opportunities

Ed Price, Director of Research Partnerships and Development, IPaT, ed.price@gatech.edu
Laurie Dean Baird, Executive in Residence – Media, IPaT, laurie.baird@ipat.gatech.edu
Christina Pearson, Director of Corporate Relations, Office of Development, cpearson@gatech.edu
Sherry Farrugia Strategic Partners Officer, Health Information Technology, sherry.farrugia@innovate.gatech.edu

IPaT Industry Research Outreach Goals:

Connect industry, government and non-profit leaders with Georgia Tech's world-class researchers in an effort to transform five vital sectors of society: media, health, education, enterprises, and humanitarian systems.

Selling Points / Value Proposition:

Why Should Industry Partner with IPaT?

> Tap the Power of Georgia Tech Innovation

Brilliant Minds

Access the best minds and groundbreaking research of Georgia Tech and its many partners to help advance your industry leadership position.

Revolutionary Solutions

Trust Georgia Tech as your source for multidisciplinary research and solutions, and then develop and test new products in our living laboratories to reduce your time from lab to market.

Strategic Relationships

Develop custom, strategic relationships today with Georgia Tech faculty, researchers, students, and partners who are creating the innovations of tomorrow.

What we would like to cover today:

- Why IPaT?
- How does IPaT get Industry leads?
- What does IPaT provide to interested companies?
- Industry realities / risks
- How can you help?

Case Studies

- GM
- ESPN
- Midtown Alliance

IPaT Innovation Network

Aetna Foundation, AirWatch, Alcatel-Lucent, Amdocs, AT&T, AstraZeneca, Atlanta Journal-Constitution, California Healthcare Foundation, Centers for Disease Control and Prevention, Children's Healthcare of Atlanta, Cisco, City of Atlanta, Emory University, ESPN, General Motors, Georgia Banker's Association Insurance Trust, Inc., Georgia Department of Community Health, Georgia Department of Economic Development, Georgia Health Sciences University, Google (w/ Motorola Mobility), Greenway Medical, Gwinnett Technical College, Harris, Harvard University – SMART, HIMSS (Healthcare Information and Management Systems Society), Hill-Rom, Hitachi, HP, Humana, Inc., IBM, Intel, Invesco, Henry J. Kaiser Family Foundation, Kimberly-Clark, Medicity, Medikeeper, MedStar Health, Metro Atlanta Chamber, Midtown Alliance, Morehouse School of Medicine, Navicure, NTT, Panasonic Automotive Systems Company of America, Philips Healthcare, Philips Lighting, Qualcomm, REACH Health, Inc., RelayHealth, Rubbermaid Healthcare, SAIC, Sensiotec, SoloHealth, Telecommunications Industry Association, Technology Association of Georgia, Turner Broadcasting System, Inc., Vanderbilt University, World Economic Forum

Georgia Tech IPaT Institute for People and Technology

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TOWN HALL

January 10, 1–4 p.m.

Georgia STEM Incubator

Donna Llewellyn, Associate Vice Provost for Learning Excellence, donna.llewellyn@gatech.edu
Leigh McCook, Principal Research Associate and Division Chief, GTRI, Leigh.McCook@gtri.gatech.edu

Rationale:

With Georgia's Race to the Top grant concluding in 2014, Georgia Tech is partnering with the Governor's Office of Student Achievement (GOSA), the Georgia Department of Education, and educational stakeholders across the state to develop a K-12 STEM Education Incubator. The long-term goal of the Incubator is to nurture and support STEM K-12 education throughout Georgia. We will accomplish this goal by connecting stakeholders from K-12 education, higher education, industry and other domains, and facilitating the implementation and ongoing assessment of innovative K-12 STEM educational products and practices, including those piloted within charter schools. We will identify these products and practices by examining both Race to the Top and Innovation Fund projects, as well as products and practices from other educational initiatives, both in and outside of Georgia.

Project Plan:

The Georgia K-12 STEM Incubator will initially serve three purposes:
(a) To organize and review existing Race to the Top Innovation Fund project products as well as disseminate lessons learned, effective practices, and resources;
(b) To provide an infrastructure and resource for STEM schools, schools that are aspiring to become STEM schools, and schools that desire to improve their STEM education; and
(c) To assist with the identification and recruitment of STEM teachers and education leaders.

This Georgia STEM Incubator project plan will take place in three phases:
1) Phase 1 (October 1, 2013—March 31, 2014): Planning and needs assessment;
2) Phase 2 (April 1, 2014—August 31, 2014): Design and prototype testing;
3) Phase 3 (September 1, 2014—August 31, 2015): Implementation and testing.

Phase 1 Milestones:

- Gathering information about the RT3 and Innovation Fund STEM-related Projects and developing a database of these projects and resultant resources, models and tools (RMTs).
- Identifying and connecting with all relevant STEM education and STEM School Certification stakeholders across Georgia.
- Auditing existing STEM school models around the nation, and identifying high quality RMTs developed by non-RT3 projects in Georgia, and by programs outside of the state.
- Identifying digital resources, platforms, tools, and frameworks that might be of use to the project.
- Designing evaluation instruments to be used by the Incubator in evaluating RMTs, and a needs assessment to inform the Incubator design.
- Developing Incubator-based advisory infrastructure for schools seeking STEM certification or for schools working to improve STEM education.

GT Project Team

- Donna Llewellyn – Principal Investigator
- Marion Usselman – Co-Principal Investigator
- Donna Whiting – Content Lead, Project Director
- Meltem Alemdar – Assessment Lead
- Leigh McCook – GTRI and Partnership Lead
- Roy Craft – GTPE Lead
- Clay Fenlason – Design Lead
- Kamau Bobb – Outreach Lead
- Douglas Edwards – Teacher Lead

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January 10, 1 – 4 p.m.

Sherry Farrugia Director, Georgia Institute of Technology & Children's Healthcare of Atlanta Partnership, sherry.farrugia@innovate.gatech.edu
Leanne West, Chief Engineer of Pediatric Technologies, leanne.west@gtri.gatech.edu

In the summer of 2012, Children's Healthcare of Atlanta and Georgia Tech expanded their partnership and announced a $20 million joint investment to develop technological solutions for improving children's health. This expanded collaboration combines the proficiencies of both organizations with a common vision – to become the global leader in pediatric technologies.

Quick Wins

Quick Wins is a funding program put in place to provide rapid solutions to unmet clinical and business needs at Children's Healthcare of Atlanta. The multidisciplinary is made up of clinicians, researchers, and administrators from both entities, which meets monthly to review project proposals submitted by small teams comprised of individuals from each organization. The proposals must address a project that can deliver a workable solution to into the hands of a clinician or team within 18 months from the receipt of funds and project start. For more information, please visit https://pediatriconnect.gtri.gatech.edu/grants

Pediatric Connect (Matchmaking and More)

PediatriConnect is a new joint venture between Children's Healthcare of Atlanta and the Georgia Institute of Technology, with a goal to facilitate collaboration between clinicians, doctors, and researchers conducting fundamental and translational research to advance children's health and delivery of pediatric services in a broad range of research areas. Register today at https://pediatriconnect.gtri.gatech.edu/

Access to CHOA Data

Please reach out to Sherry Farrugia directly for more information.

Intellectual Property

Please reach out to Leanne West directly for more information.

2014 Pediatric Research Conference

The 2014 Pediatric Research Conference will be held on Tuesday, April 22, 2014 from 8-5pm at the Georgia Tech Hotel and Conference Center and is titled Pediatric Healthcare Innovation: Advancing Technologies to Improve Child Health. The conference is now accepting abstracts! Please register for the event: (https://register.eventarc.com/event/view/19742/tickets/2014-pediatric-research-conference) to receive instructions on how to submit your abstract(s). The deadline to submit an abstract is Friday, January 17, 2014 at 12:00 PM EST.

Children's Healthcare of Atlanta Seed Grants

2014 Pediatric Pilot Funding

Key Dates

Call for Proposals	February 1, 2014
Deadline for Submission	April 1, 2014 at 6pm
Notifications	June 1, 2014
Target Funding Period	August 1, 2014 to July 31, 2015
Project Report Due by	Within one month of the end of the project period

2013 CHOA/IPaT Funded Projects

- **An Ecosystem for Objectively Monitoring and Improving Medication Adherence in Adolescent Transplant Recipients**
  Maysam Ghovanloo, School of Electrical and Computer Engineering
  Christinia Choi, School of Industrial Design
  Shri Deshpande, CHOA
- **Mobile Health (mhealth) Tools to Improve Patient Engagement, Research and Disease Management of Children with Rheumatological Disease**
  Jiten Chhabra, College of Computing
  Prabhu RV Shankar, CHOA
- **Novel Breath Sampling Device for Condensate and Analysis of Volatile Organic Compounds**
  Peter Hesketh, School of Mechanical Engineering

For information regarding the Children's or any of the information listed above, please contact:

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Georgia Tech IPaT Institute for People and Technology