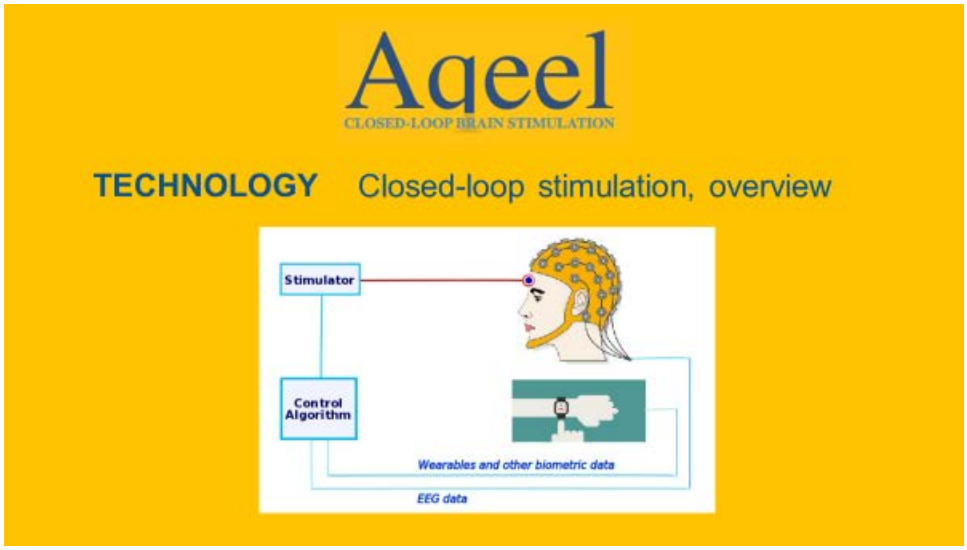
Allon Guez – Recent Research Projects

1. **Closed Loop Brain Stimulation**

With Drs Bruce Katz of Aqeel Inc. and Professor Bart Krekelberg of Rutgers University.

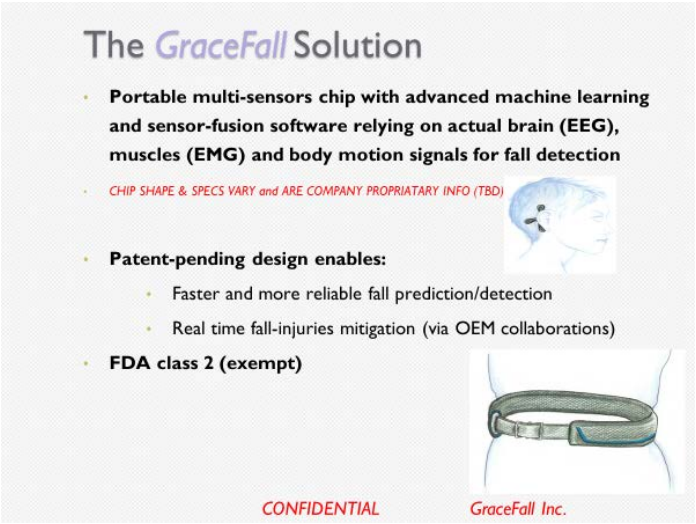
To enable dramatic improvements in current brain stimulation technologies which promises therapies to a large spectrum of mental and neural disorders as well as advance human wellness and quality of life.



2. **Fall Injuries Mitigation via Wearable Based Vestibular and Motion Monitoring**

With Prof. Emily Keshner of Temple, Udi Gal of GraceFall Inc. and Dr. Valentina of CHOP.

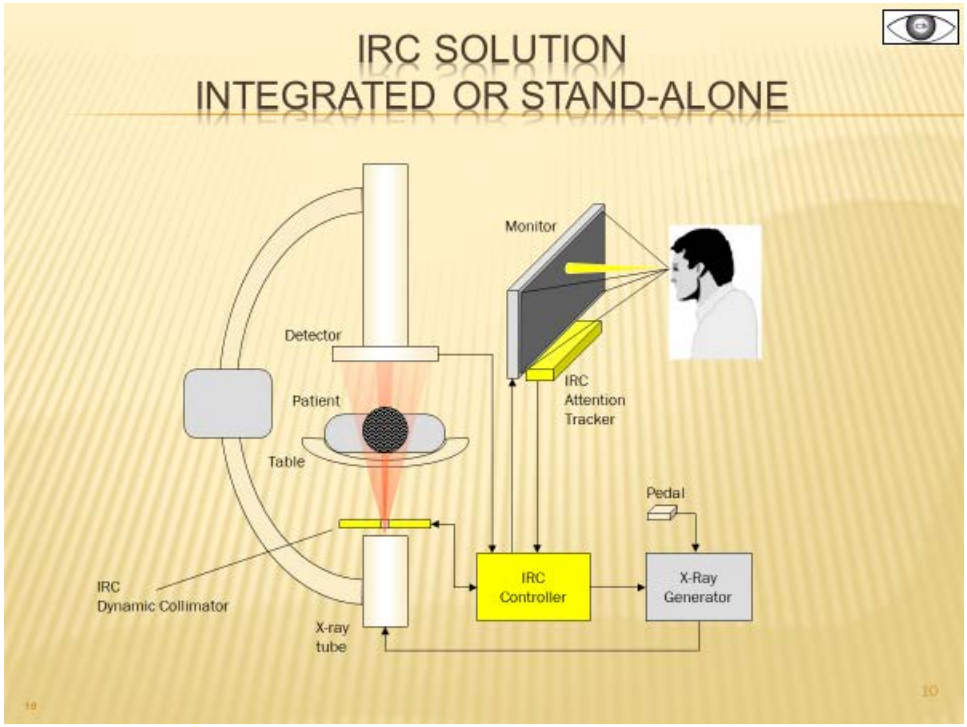
To overcome one of the world's largest aging population suffering and morbidity as well as the vast economic medical burden. Huge potential for providing fall protection in biking, motion, sports and recreational activities



3. **Ionized Radiation Dose Reduction Strategies Real Time Gaze Tracking ++ for Interventional Radiology**

With ControlRad Inc, Boston Scientific, Siemens and Several European and Israeli Hospitals.

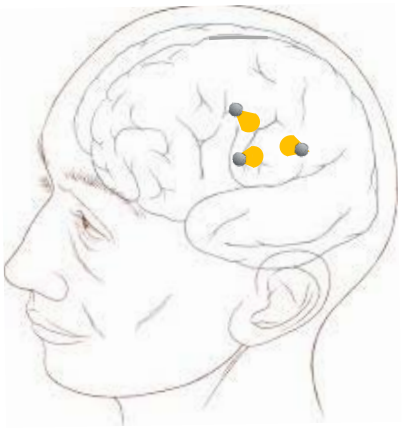
To minimize cancer and other risks associated in current use of X Ray and other ionized medical imaging.



Eye-tracker driven products literally follow the physician's gaze, automatically focusing the X-ray beam to the physician's region-of-interest.

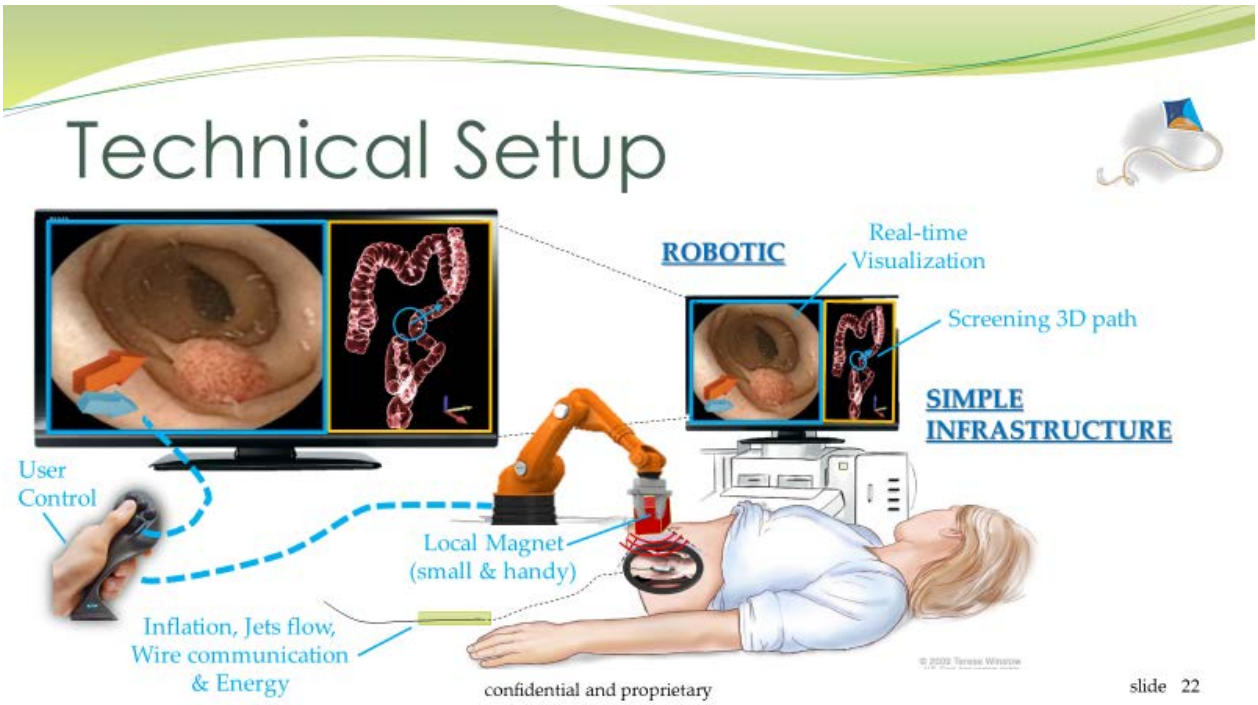
4. Micro-Robot, Noninvasive, Magnetic Navigation & Control Platform

With Prof. Gary Friedman and Professor Hagai Bergman of the Hebrew University.
To provide minimally intrusive robotic implants, maximize effectiveness in stimulation, ablation and in tissue sensing.



5. Robotic Hovering Colonoscopy

With Prof. Amir Landesberg Technion Israel.
To optimize benefits and risks of today's catheter-based colonoscopy and endoscopy.



6. **Medical Devices Cybersecurity**

With Nir Eden Et. Al. Israel
To increase safety and privacy in use of medical devices, implants and system against hacking and reckless interference with their IT platforms.

7. **Nonlinear Systems Dynamic Identification Based Approach to Advanced Brain BioMarkers Detection**

With George Huaming and Anna Shed of Shanghai University.

To improve exploitation of information buried in eeg/emg and othe physiological data

New Courses

1. **Control Technology of Biological Systems**
   Developed while on Sabbatical at Tel Aviv University and the Technion Israel

2. **Advances in Medical Robotics**

Updated course while on Sabbatical at Tel Aviv University and the Technion Israel