PENN CENTER FOR INNOVATION

IP and Opportunities

Tomas Isakowitz
Penn Center for Innovation
University of Pennsylvania
tomas@upenn.edu

Penn
University of Pennsylvania

האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

NYU

Tomás Isakowitz, Ph.D.

Janney

university city
Swim Club

国際大学
INTERNATIONAL UNIVERSITY OF JAPAN

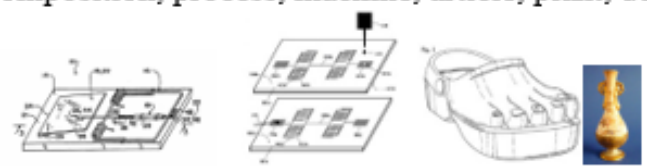
CONGREGATION
RODEPH
SHALOM

Tech Transfers and IP

- From the lab to the benefit of society
- IP has significant Value
- Research => Protect => License

Types of Intellectual Property

Grant exclusive rights to the owner.

Trade Secret	formula, practice, process, design, instrument, pattern, commercial method, or compilation of information which is **not generally known**, and by which a business can obtain an economic advantage over competitors or customers. 
Copyright	 Protects original work; **expression**: literary works, music, software, photographs, paintings.
Patent	Protects **inventions:** solution to specific technological problems; composition, process, machine, article, plant, design 
Trademark	recognizable **sign, design or expression** which distinguishes products or services from similar products 

Patents

- **The right to <u>exclude others</u> from**
  - making, using, selling, offering to sell or importing the invention
  - 20 years from earliest filing date
  - Limited geographically
- not automatic

(12) **United States Patent**
Wilson et al.

(10) **Patent No.: US 7,992,573 B2**
(45) **Date of Patent: *Aug. 9, 2011**

(54) **OPTICALLY GUIDED SYSTEM FOR PRECISE PLACEMENT OF A MEDICAL CATHETER IN A PATIENT**

(75) Inventors: **David F. Wilson**, Philadelphia, PA (US); **Gregory J. Schears**, Rochester, MN (US)

(73) Assignee: **The Trustees of the University of Pennsylvania**, Philadelphia, PA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1266 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **11/242,688**

(22) Filed: **Oct. 4, 2005**

(65) **Prior Publication Data**

US 2006/0036164 A1 Feb. 16, 2006

Related U.S. Application Data

(63) Continuation-in-part of application No. 10/482,190, filed on Nov. 2, 2004, now Pat. No. 7,273,056.

(60) Provisional application No. 60/625,002, filed on Nov. 4, 2004.

(51) **Int. Cl.**
A61B 5/00 (2006.01)
A61B 1/00 (2006.01)

(52) **U.S. Cl.** **128/899**; 600/407; 600/424; 600/473; 600/476

(58) **Field of Classification Search** 128/897–899

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,096,862	A	6/1978	DeLuca	128/348
4,444,185	A	4/1984	Shugar	128/305
4,567,882	A	2/1986	Heller	128/11
4,772,093	A	9/1988	Abele et al.	350/96.25
4,782,819	A	11/1988	Adair	128/6
4,875,897	A	10/1989	Lee	604/283
4,898,175	A	2/1990	Noguchi	128/634
4,900,933	A *	2/1990	Nestor et al.	250/458.1
4,945,895	A	8/1990	Takai et al.	128/6
5,005,180	A	4/1991	Edelman et al.	372/57
5,005,573	A	4/1991	Buchanan	128/207

(Continued)

FOREIGN PATENT DOCUMENTS

WO	WO 02/103409 A2	12/2002	

OTHER PUBLICATIONS

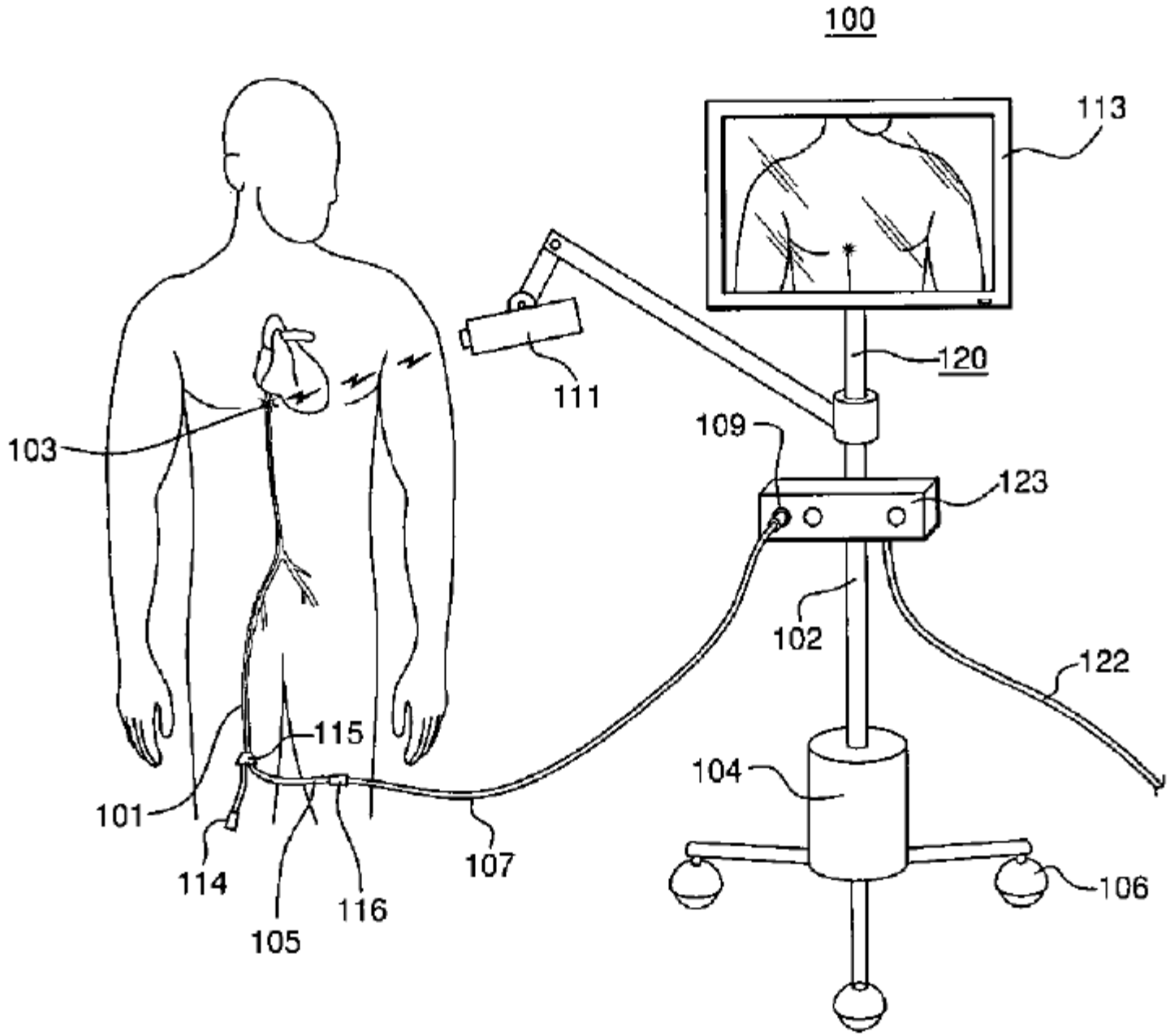
PCT International Search Report dated Oct. 7, 2008.

(Continued)

Primary Examiner — Charles A Marmor, II
Assistant Examiner — Catherine E. Burk
(74) *Attorney, Agent, or Firm* — McCarter & English, LLP

(57) **ABSTRACT**

A system is provided comprising an optically-guided catheter having a proximal end, a distal end, and at least one lumen. A light-emitting means is coupled to the catheter, the catheter is inserted into place in the patient, and light is emitted as a point or points from a selected location, usually the distal tip, of the catheter to which it is coupled. The system further comprises an external detection device that detects the transdermally projected light, emitted by the light-emitting point from within the patient, thereby indicating precise placement of the catheter within the patient.


100
113
120
111
109
123
103
102
122
115
104
101
107
106
114
116
105

PENN CENTER FOR INNOVATION

PCI FELLOWS PROGRAM

PCI Fellows Work On

Intellectual Property

- Focus on Invention Assessments
- Identify invention
- Patentability
- Market size

Marketing

- Work with Licensing Officers
- Generate marketing materials
- Contact companies

PENN CENTER FOR INNOVATION

Pre-Requisites

Penn affiliated

Advisor consent

Right to work at Penn

<u>One year commitment required</u>

2022 cohort application window closed
Application period for 2023 cohort opens Nov 2022

Shaina Oake

- Bioengineering Master student
- PCI Fellow - 2011

- UCLA Office of Intellectual Property and Industry Sponsored Research

Andrew Boodhoo

- Goldman Sachs
- SEAS Master
- PCI Fellow
- Analyst

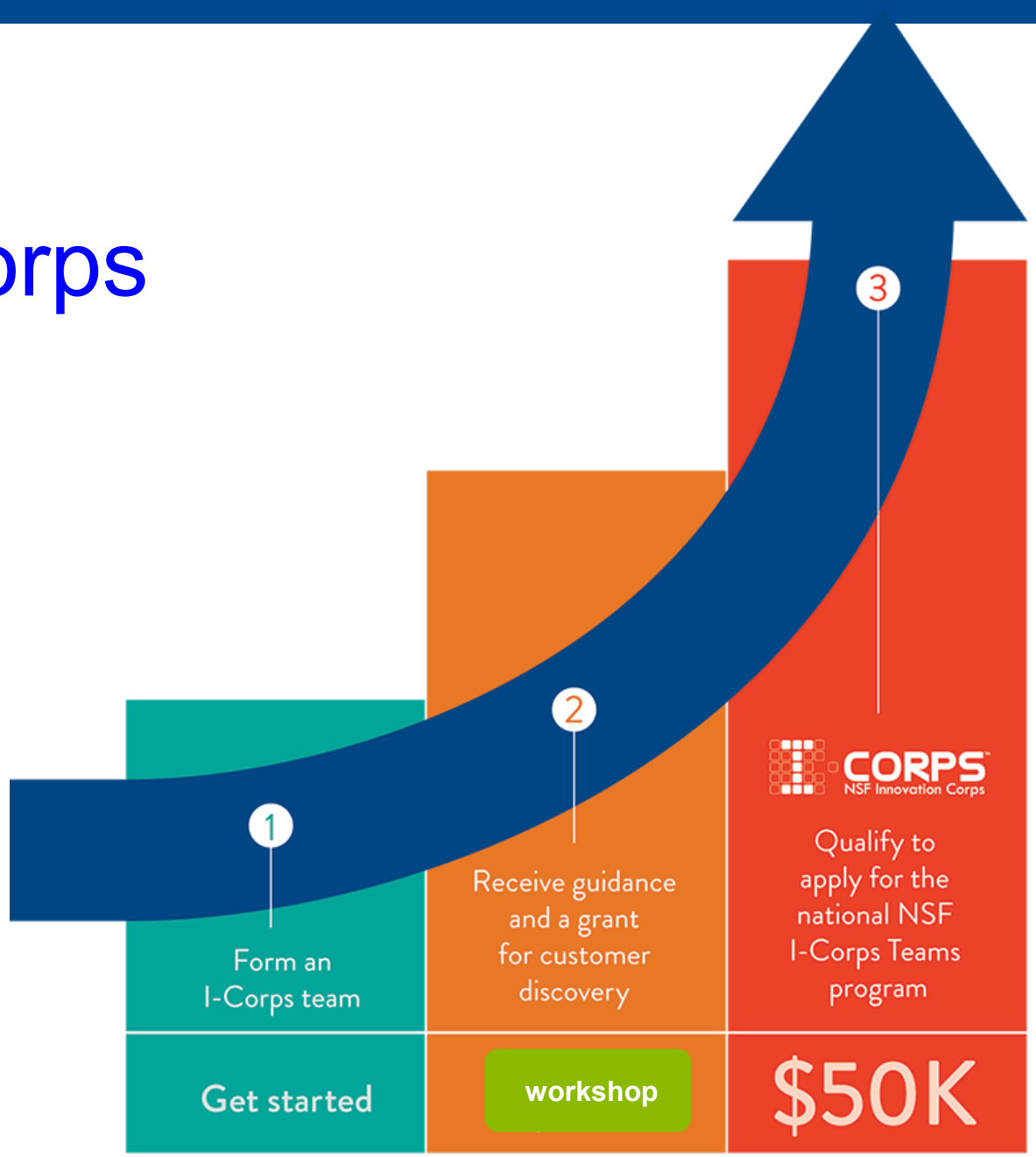
Pallab Singh

- Riverside Law LLP

- Post-Doc - SEAS
- PCI Fellow
- Patent Agent

www.pci.upenn.edu/pci-fellows/

Penn I-Corps


1
Form an I-Corps team
2
Receive guidance and a grant for customer discovery
3
CORPS
NSF Innovation Corps
Qualify to apply for the national NSF I-Corps Teams program
Get started
workshop
$50K

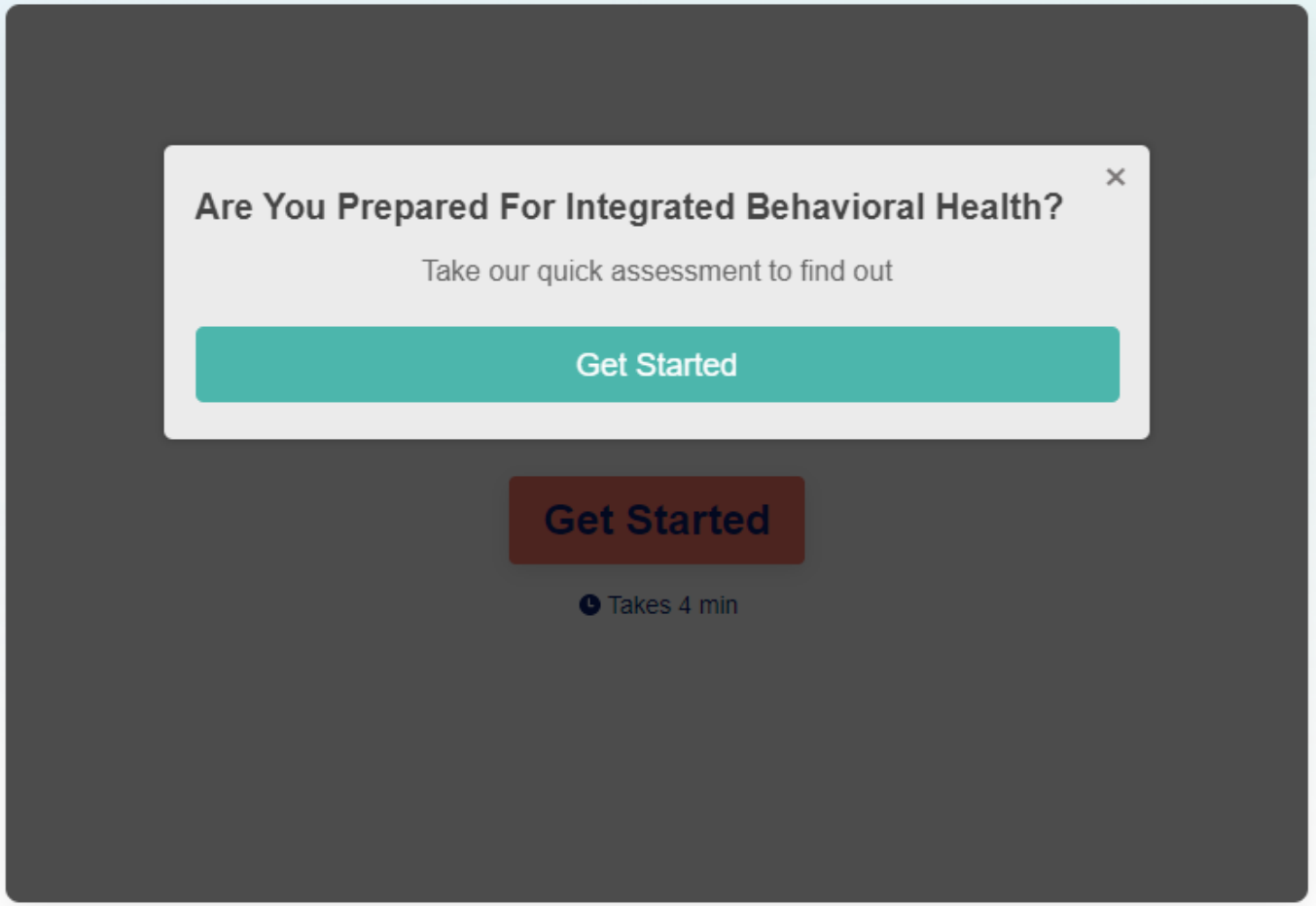
NEUROFLOW®

HOW IT WORKS SOLUTIONS CUSTOMERS COMPANY Sign Up / Log In

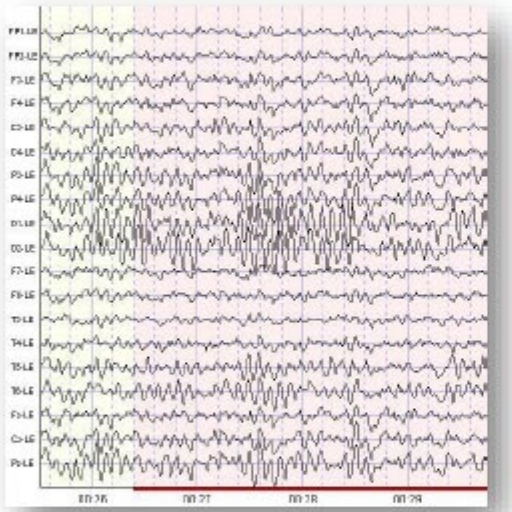
Maximizing Impact Through Integrated Behavioral Health

Physical and behavioral health are inextricably linked. Individual and population-level health and wellness require proper treatment of the whole patient, both physical and mental.

Optimizing the integration of behavioral health into your practice can be challenging, and SAMHSA recognizes that integrating holistic health initiatives occurs on a spectrum. This Integrated Behavioral Health Readiness Assessment is a diagnostic tool to help you hone in on where your organization stands today in your integration journey, and provides insights on critical areas of focus to address in order to maximize the impact of your integrated approach.

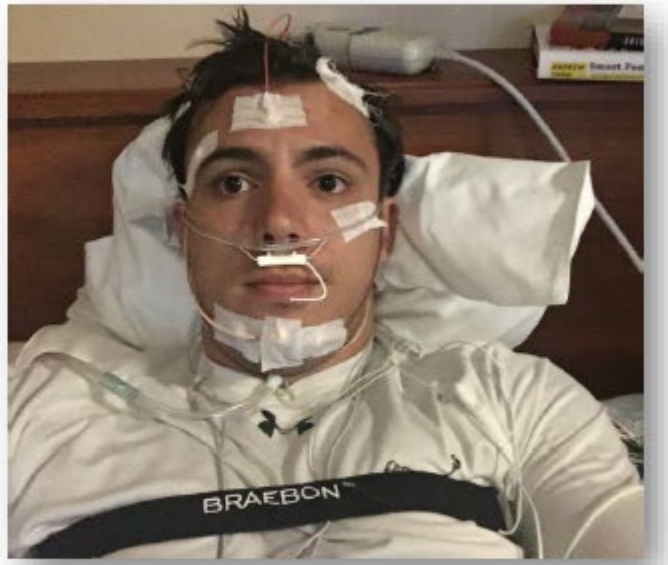


EEG is a powerful and proven technology, but has had limited use cases due to **complicated** and **expensive** hardware



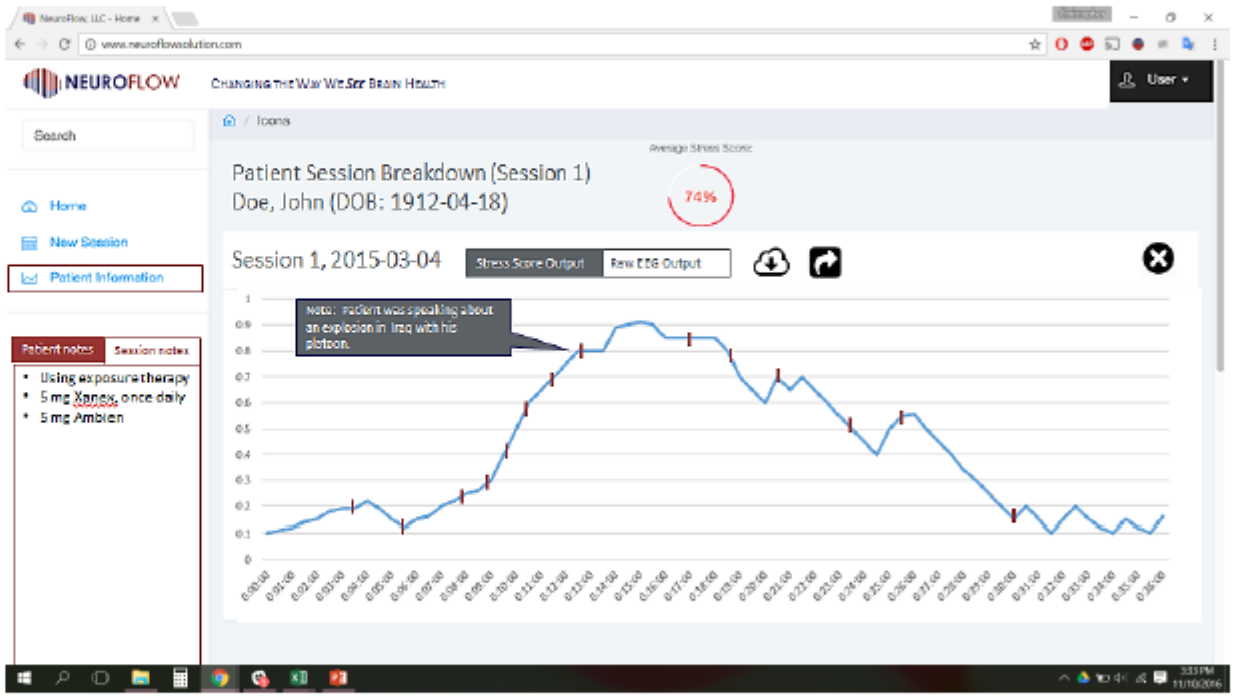
EEG Waveform Representation

Signal	Frequency	Amplitude	Activity
Delta (δ)	Less than 4 Hz	20 – 200 μV	Increased power during difficult conditions [11]
Theta (θ)	4 - 8 Hz	Around 20 μV	Power increases during the stress [11]
Alpha (α)	8 - 12 Hz	20 – 200 μV	Power suppresses during the stress [13]
Beta (β)	13 – 31 Hz	5 – 10 μV	Power varies according to task difficulty [11]



NEUROFLOW

Wireless "plug-and-play" headsets are now available, allowing for **real-time quantification** of mental stress levels



NeuroFlow helps doctors **objectively identify** concerns, **track** treatment progress, and **improve** patient care

NEUROFLOW

Penn I-Corps

150+ teams

300+ participants

$34 M + raised

PENN I-CORPS SITE
Startup Accelerator Program
NSF
COLLABORATE. EDUCATE. ACCELERATE.

How do we build a startup?

Customer D ment

Customer Discovery

PENN I-CORPS SITE
Startup Accelerator Program
COLLABORATE. EDUCATE. ACCELERATE.

I-Corps

Benefits:

- Is there a market?
- How do we get started?
- How to position for fund raising?

Requirements

- Teams of 2+ members
- all Penn affiliated (actively)
- Technology: out of research
- Commitment:
  - sessions
  - 20 interviews
  - ~ 10 hrs./week per person

https://pci.upenn.edu/icorps/

March 18 or 25	Opening Workshop
	Interim Mentoring
Apr 15 or 22	Closing Workshop

Looking for a TA

Oct-9, 12-1 pm	**Class 0: Pre-workshop** •course introduction •Get out of the building & how to get interviews
Oct-16	**Class 1: Opening Workshop** •Team Introductions •Business Model Generation
Oct-23	**Class 2: Interviewing Workshop I** •Exploring the Ecosystem •Modeling workflow+
Oct-30	**Class 3: Interviewing Workshop II** •Articulating Value Propositions •Interviewing Techniques •Designing an interview guide
Nov. 6, 12-1 pm	**Entrepreneurial Resources Panel** •Discover local resources and influencers
Week of Nov. 13	**Midpoint Review** •Field Work and Office Hours
Nov-20	**Class 4: Closing Workshop** •Lessons learned •applying for funding •Next steps

PENN CENTER FOR INNOVATION

tomas@upenn.edu