



Aframe Digital Receives NIH/NIA Grant Funding for Follow on Research in Advanced Health Monitoring Technology for Seniors

Research grant in coordination with the University of Virginia and Vinson Hall senior independent living facility will investigate the use of a non-intrusive system to gather information regarding an individual's daily activities. Results from this study will enable further research regarding use of the system to assess seniors' risk of falls and injury.

Reston, Virginia ([PRWEB](#)) August 29, 2011 -- AFrame Digital announced today the award of a follow-on grant from the National Institute of Health/National Institute on Aging for further research in falls reduction using its leading edge wireless mobile care monitor platform, a sophisticated wrist watch-like device that wirelessly communicates in real time a users' motion and location data to cloud-based monitoring and alerting resources.

Falls are the leading cause of injury-related visits to hospital emergency rooms in the United States and the primary cause of accidental deaths in people over 65. An individual's gait can change slowly over time and be unnoticeable until a fall occurs. This research path will allow AFrame Digital's non-intrusive monitoring technology to help detect subtle changes and alert medical personnel and caregivers before a fall happens.

AFrame will be conducting this latest study with support from Dr. John Lach, Associate Professor in the Charles L. Brown Department of Electrical and Computer Engineering (ECE) at the University of Virginia and the Vinson Hall Retirement Community in McLean, Virginia.

"Real time continuous monitoring of gait for the risk of falls must encompass normal activities of daily living. The new study will help differentiate between a wearer's daily activities and his or her walking. Once periods of walking can be isolated, further progress can be made in the real time analysis of abnormal gait," says Dr. Amy Papadopoulos, AFrame Digital Senior Research Scientist and PI on the research grant.

For this grant, AFrame will once again be working with Vinson Hall where 30 independent living resident volunteers 65 and older will be part of the research. The residents will be monitored in their normal living environment so that researchers can capture true daily living activities. "We are strongly supportive of falls reduction research," says RADM Kathleen L. Martin, USN (Ret), CEO of Vinson Hall Retirement Community. "We feel this research could play a significant role in predicting and preventing falls. It could ultimately improve the quality of life by keeping older adults mobile and independent not only in retirement communities but wherever they reside."

Last year, Vinson Hall Retirement Community deployed the AFrame Digital MobileCare™ Monitor System for those seniors needing advanced monitoring services to maintain an active and independent lifestyle.

"Vinson Hall's goals and understanding of the technology makes them an ideal partner for this follow-on research," says Papadopoulos. "This new phase will bring in the expertise of the University of Virginia's Department of Electrical and Computer Engineering and its development of body sensor networks (BSNs) to gather data from additional body locations such as the chest and legs."

"UVA has the facilities needed to evaluate and test both hardware and software systems like the ones developed by AFrame Digital," says John Lach, Associate Professor and Co-Director of the UVA Center for Wireless Health. UVA's evaluation of the Vinson Hall data and expertise with wireless non-invasive motion capture across human subjects in past medical research projects will ensure accurate results.



“Our primary goal for this research,” says Papadopoulos, “is to develop the ability to automatically separate periods of walking from other daily activities in real time. We will use machine learning techniques to recognize an individual’s own walking pattern. Once that goal is met, we hope to develop a means of analyzing and trending an individual’s gait in real time from data gathered as they go about their lives. This analysis could in turn lead to fewer falls and trips to the emergency room and dramatically improve the lives of millions of people and our nation’s aging population allowing them to live fuller independent lives.”

AFrame Digital, www.aframedigital.com provides real-time, continuous health and safety monitoring solutions for seniors, patients managing chronic conditions, and other at-risk individuals, with proactive, exceptions-based alerting to help caregivers quickly attend to or avert crises. The MobileCare Monitor’s advanced, easy-to-use, low-cost and scalable solution is personalized to each monitored individual's health and wellness profile, detects falls and currently is installed in senior living communities, hospitals and individual home settings. More information about AFrame Digital can be found at www.AFramedigital.com

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The basic MobileCare Monitor has received 510(k) clearance from the U.S. Food and Drug Administration (FDA).

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Contact Information

Kelly Besecker

AFrame Digital

<http://www.aframedigital.com>

571.308.0147

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