

ONDETICS

Vivonoetics is a physiometrics* company offering VivoSense™; the #1 choice for researchers in physiological monitoring and analysis software for body-worn sensor systems.

* Physiometrics – definite measurement of physiological endpoints

VIVOSENSETM

1. IMPORT: VivoSense™ supports most commercially available sensors and file formats. VivoSense™ also allows customized imports for novel data formats.



2. INTEGRATE:

VivoSense™ provides tools to synchronize and merge data from multiple sensor sources into a single analyzable VivoSense™ file.



3. ANALYZE: VivoSense™ includes built-in algorithms to generate over 100 published and validated algorithms. Users may also include their own analysis or published algorithms in VivoSense™.





5. DISCOVER:

The VivoSense™ framework allows users to discover and generate new indices of physiological states.



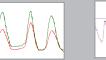
4. VISUALIZE:

VivoSense™ provides intuitive visualization of multiple time synchronized data channels.





RESPIRATION







EEG



ACTIGRAPHY





BLOOD PRESSURE



DIARY **EVENTS**



AUDIO



GSR



CASE STUDIES

Vivonoetics provides affordable software customization services to create and implement new algorithms and functionality in VivoSenseTM.

STUDY 1: IMPORT, SYNCHRONIZATION AND MERGE

A Vivonoetics customer requested **analysis** of respiratory inductance plethysmography data

alongside spirometric data, captured simultaneously with separate sensor systems. VivoSense™ was used to import this data and intelligently synchronize and merge the separate sensor data into a single file. Spirometry data was then used to accurately calibrate the plethysmographic signals to study exercise induced breathlessness in COPD subjects.

STUDY 2: COMPLEX RESPIRATORY ANALYSIS, VISUALIZATION AND DISCOVERY

A Vivonoetics customer investigating non-invasive diagnosis of infant asthma measured respiratory signals and used VivoSense™ Complex Respiratory Analysis

Module to analyze and visualize a variety of VivoSense™ generated respiratory metrics. Subsequent statistical analysis was used to discover that measures of phase relationship showed promise in objective identification of airway limitation in this population.



STUDY 3: HEART RATE VARIABILITY PHYSIOMETRICS

A Vivonoetics customer developing a "guilty knowledge" test using wearable

heart rate monitors implemented the Heart Rate Variability Module in VivoSense™ to reliably remove artifact from the measured data. The data was used to **derive** a series of indices representing autonomic tone.

STUDY 4: DISCOVERY, CLASSIFICATION AND SHARING

A Vivonoetics customer interested in developing a novel **index** of acute stress recorded several

time synchronized physiological channels. The VivoSense™ Classification module was used to identify relevant VivoSense™ metrics and intelligently combine these to develop a single new index. VivoSense™ was used to share this index with research partners to reliably reproduce and test this discovery in their own studies.