

The AMPS Insider

An AMPS LLC Magazine

The AMPS Insider is a quarterly magazine dedicated to all AMPS' partners and customers. Published by AMPS, it provides news and information about AMPS' products and initiatives.

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Executive Overview

46th ISCE Conference highlights. Evaluation of premature ventricular complexes during in-hospital ECG monitoring as a predictor of ventricular tachycardia in an intensive care unit cohort. Product news.

Editorial

We are proud to announce AMPS founder and Chief Scientist Fabio Badilini has been elected President of the International Society of Computerized Electrocardiology (ISCE, www.isce.org). In further news, Fabio has been appointed the Director of the Center for Physiologic Research at the UCSF School of Nursing.

Established in 1984, ISCE is a non-profit organization that advances electrocardiology through the application of computer methods and promotes a strong interaction between academia and industry. The election took place at the annual meeting of the Society in early April in Indian Wells, CA.

This important recognition follows a long-time commitment, as Fabio has been involved with the ISCE organization for more than 20 years, previously being the conference chair in 2009 and a member of the Board of Directors between 2009 and 2012. AMPS serves as a member of the ISCE Board of Trustees, reserved for industry members of the Society.

ISCE is a special organization where industry and academic researchers meet and constructively work together. In addition to the annual meeting, the Society organizes a full-day meeting with the FDA which is a unique opportunity for the organization trustees to

meet and discuss with the regulators about topics of high interest.

In his role as ISCE president, Fabio succeeds Prof. Jean-Philippe Couderc from the University of Rochester. Fabio's term is for three years and is not only a big responsibility but signifies a great honor shown to him by his election.



Fabio Badilini and Jean-Philippe Couderc

We continue the AMPS' tradition of participation in research projects in this TAI issue, as we feature one new paper published in the past quarter:

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Evaluation of premature ventricular complexes during in-hospital ECG monitoring as a predictor of ventricular tachycardia in an intensive care unit cohort.

The abstract reads:

In-hospital electrocardiographic (ECG) monitors are typically configured to alarm for premature ventricular complexes (PVCs) due to the potential association of PVCs with ventricular tachycardia (VT). However, no contemporary hospital-based studies have examined the association of PVCs with VT. Hence, the benefit of PVC monitoring in hospitalized patients is largely unknown. This secondary analysis used a large PVC alarm data set to determine whether PVCs identified during continuous ECG monitoring were associated with VT, in-hospital cardiac arrest (IHCA), and/or death in a cohort of adult intensive care unit patients. Six PVC types were examined (i.e., isolated, bigeminy, trigeminy, couplets, R-on-T, and run PVCs) and were compared between patients with and without VT, IHCA, and/or death. Of 445 patients, 48 (10.8%) had VT; 11 (2.5%) had IHCA; and 49 (11%) died. Isolated and run PVC counts were higher in the VT group ($p = 0.03$ both), but group differences were not seen for the other four PVC types. The regression models showed no significant associations between any of the six PVC types and VT or death, although confidence intervals

were wide. Due to the small number of cases, we were unable to test for associations between PVCs and IHCA. Our findings suggest that we should question the clinical relevance of activating PVC alarms as a forewarning of VT, and more work should be done with larger sample sizes. A more precise characterization of clinically relevant PVCs that might be associated with VT is warranted.

You can find the full article on the [AMPS web site](#).

Products News

An updated version of Antares (v2.22) is now available. In addition to the ISHNE and Getemed format, this version of Antares includes the capability to load all the hollers formats already accepted in input by CER-S and also to load the beat annotations from the “AMPS Continuous ECG Annotations” format when available. CER-S users can now process directly a recording generated by a Baxter H12+ after the CER-S beat detection.

In addition, with v2.22 it is possible to perform extractions from recordings with less than 12 leads, e.g., produced by 3-channels patch devices.

By the end of 3Q23, an updated version of CER-S (v4.6.0) is to be made available. This latest version will be compliant with the existing CE/FDA certifications.

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Troubles with your ecg data?? AMPS can help you!

- ❖ Conversion of ecg paper traces (or scanned images) into digital HL7 FDA xml ecg files
- ❖ Conversion of proprietary digital ecg files formats into the HL7 FDA xml ecg format
- ❖ Validation of HL7 FDA xml ecg and continuous recording ecg files prior to submission to the FDA ECG Warehouse
- ❖ Submission of HL7 FDA xml ecg files to the FDA ECG Warehouse
- ❖ Secondary analysis of already submitted or halted studies by performing state-of-the-art analysis such as: HRV, Holter Bin, Beat to Beat (B2B).

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