

## RESUME

Joachim Abraham Behar  
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Haifa, Israel

**Birthdate:** 23 April 1988

### ACADEMIC DEGREES

- 2011-2015**            PhD in Biomedical Engineering, University of Oxford, UK.  
Dissertation title: “Extraction of Clinical Information from the Non-Invasive Fetal Electrocardiogram”  
Advisor: Prof. Gari Clifford.
- 2010-2011**            M.Sc., (**with distinction**) Biomedical Engineering with distinction, University of Oxford, UK.  
Thesis title: “Analysis of accelerometer data for apnea screening”  
Advisor: Prof. Gari Clifford.
- 2008-2011**            MEng., (**with distinction**), Ingénieur civil des Mines, Ecole Nationale Supérieure des Mines de Saint-Etienne, France.

### ACADEMIC APPOINTMENTS

- 2015-2017**            Post-Doctoral Fellow, Technion Institute of Technology, Haifa, Israel  
Advisor: Prof. Yael Yaniv.
- 2009**                    Erasmus, Ecole Polytechnique Fédérale de Lausanne, Switzerland

### RESEARCH INTERESTS

Digital signal processing, machine learning, big data, mobile health, optimal state estimation, non-invasive foetal electrocardiography, sleep apnea diagnosis, heart rate variability analysis, mathematical modeling of the biochemical and bioenergetics signaling in the heart, detection of atrial fibrillation, sinoatrial node cell activity.

## **TEACHING EXPERIENCE**

- 2015-2017** Teaching assistant and lecturer, graduate level, Bioelectricity, Technion-Israel Institute of Technology, Israel.
- 2015-2017** Biomedical Instrumentation Laboratory, undergraduate level, Technion-Israel Institute of Technology, Israel.
- 2012-2014** Teaching assistant and lecturer at the department of Biomedical Engineering, University Oxford. I taught the following courses:
- Machine learning, graduate level.
  - Biomedical signal processing, graduate level.
  - Computational methods, graduate and undergraduate level.
  - Affordable healthcare technology, graduate level.
  - Biomedical instrumentation laboratory, undergraduate.
  - Mobile health workshop organizer.

## **PUBLIC PROFESSIONAL ACTIVITIES**

### **Editorial member for archived journals**

- 2016-2018** Editorial board member for IOP Physiological Measurement.

### **Participation in organizing conferences**

- 2014/2015/2017** Committee member Computing in Cardiology conference
- 2013** Co-organizer of the MIT-Physionet/Computing in Cardiology (CinC) competition 2013 on the topic of Noninvasive fetal ECG. Session chair at CinC conference 2013, Zaragoza, Spain

### **Reviewer for archived journals**

- IEEE: Transaction in Biomedical Engineering
- IEEE: Journal of Biomedical and Health Informatics
- Elsevier: Digital Signal Processing
- Elsevier: Computers in Biology and Medicine
- Elsevier: Biomedical Signal Processing and Control
- Springer: Medical & Biological Engineering & Computing
- Springer: BioMedical Engineering OnLine
- IOP Physiological Measurement
- PLOS: Plos One.

## **Other activities**

- Organiser Maths seminar series on signal processing and machine learning at the Institute of Biomedical Engineering.
- Co-founder of Oxford Engineering World Health, now Oxford Centre for Affordable Healthcare technology (<http://oxcaht.org/>).

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

- Member, International Society of Heart Research (ISHR) – 2016-2018
- Member, Institute of Physics (IOP) – 2016-2018
- Member, The Institute of Engineering and Technology (IET) – 2013/2014

## **FELLOWSHIPS, AWARDS AND HONORS**

- Technion Aly Kaufman Fellowship (10,150 NIS/month for two years), 2015-2017, Israel
- Winner ISHR Israel, Rena Yarom Young Investigator Competition, 2015, Israel
- Winner Wolfson Innovate Competition, Oxford worth k£5, 2015, UK
- Engineering and Physical Sciences Research Council (EPSRC) scholarship, UK
- Balliol French Anderson scholarship, £22,500, 2011-2014, UK
- MindChild Medical scholarship, £15,000, 2012-2014, UK
- Winner SparkVale Business competition, Oxford worth k£20 in kind, UK
- Winner MIT-Physionet/Computing in Cardiology competition 2014, Robust Detection of Heart Beats in Multimodal Data, 2014
- IET William James Award, 2013, UK
- Co-organizer and unofficial winner for Event 1-2 of the MIT-Physionet/Computing in Cardiology competition 2013 on the topic of Noninvasive Fetal ECG. Session chair at CinC conference 2013, Zaragoza, Spain
- Finalist at the MEC 2013 Dragon's Den competition (SleepAp project), 2013, UK
- *Mention Très bien* (Distinction) - *Diplôme Ingénieur Civil des Mines* (French MEng diploma), 2011
- Distinction - MSc in Biomedical Engineering, Oxford University, 2011, UK
- College Senior Science Scholarship - St Hilda's College, Oxford, 2011, UK
- Foundation i3M laureate, 2010, France
- Prize Ernst and Young for Project Management, 2009, France
- Scientific Baccalaureate with honors, 2005, France.

## Invited talks and seminars

1. Age-related pacemaker deterioration: Insights from numerical modeling. Israel Society for Physiology and Pharmacology. Tel-Aviv University, 28<sup>th</sup> February 2018.
2. The digital healthcare revolution. Technion-IIT, Medical School, 10<sup>th</sup> January 2018.
3. Non-Invasive Foetal Electrocardiography. Interventional and Diagnostic Adaptive Imaging Laboratory. French National Institute for Medical Research (INSERM), Nancy, France. 28<sup>th</sup> July 2017.
4. Internet of things (IoT) and wearables. Technion-IIT, BizTech entrepreneurship meeting, Haifa, Israel, 19<sup>th</sup> January 2017
5. Obstructive Sleep Apnoea Screening using Mobile Health Technology. BME conference, Haifa, Israel, 24<sup>th</sup> February 2016.
6. Biosignal Processing and Mathematical Modelling for Heart Rate Extraction, Interpretation and Analysis. Technion-IIT, Faculty of Biomedical Engineering, Haifa, Israel, 22<sup>th</sup> November 2015.
7. Perinatal monitoring and Global Health: From theory to application driven projects. Technion-IIT, Faculty of Biomedical Engineering, Haifa, Israel, 21<sup>th</sup> September 2014.
8. Non Invasive FECG Extraction From a Set of Abdominal Sensors, IET Annual Healthcare lecture. London, UK, 21<sup>th</sup> November 2013.

## OTHER EXPERIENCE

- **SmartCare:** Funding director. Focus on my earlier research on obstructive sleep apnea (OSA) screening resulted in the establishment of a mobile health startup (SmartCare Analytics Ltd, London, UK), which is creating a smartphone application for sleep apnea screening by harnessing the information contained in the oximetry signal.  
<http://www.smartcaresleep.com/>
- **SmartWater:** Lead developer 2011-2013. For two years, I led a team of five software engineers (also university students) in developing a system for monitoring the water consumption (represented by a time series) of water pumps in developing countries. The system was successfully trialed on 300 hand water pumps in rural Kenya and the project secured M£1.9 in 2014, when I left the UK for Israel.
- **Cardiocity:** Consultant. Cardiocity is a start-up company in the field of digital health that uses cutting Edge non-contact ECG sensors for atrial fibrillation screening. I have been doing consultancy work for the period 2012-2015 for the company on digital signal processing filters for the processing of biomedical time series. The filter are now running on their commercial hardware. The company is now trading. <http://www.cardiocity.com/>

## **STUDENTS AND TRAINEES**

I co-supervise(d) the following students:

### **Ph.D.**

1. Ido Weiser, MD-PhD student, Technion-IIT. Synchronization among sinoatrial node cells in the pacemaker tissue: from molecular mechanisms to non-invasive clinical tool. (Ongoing.)  
Principal advisor: Yael Yaniv.

### **M.Sc.**

1. Limor Arbel-Ganon, B.Sc. in Biomedical Engineering, Technion-IIT. 2017-2018 Mechano-electrical signal transduction in healthy and dysfunctional heart pacemaker tissue. (Ongoing.)  
Principal advisor: Yael Yaniv.
2. Vadim Gliner, B.Sc. in Electrical Engineering and Physics, Technion-IIT. 2015-2018 “Early detection of atrial fibrillation by monitoring changes in heart rate variability”. (Ongoing.)  
Principal advisor: Yael Yaniv.
3. Aviv Rozenberg, B.Sc. in Electrical Engineering, Technion-IIT. 2015-2018 “Non-invasive in-vivo analysis of intrinsic clock-like pacemaker mechanisms: decoupling neural input from heart rate variability measurements”. (Ongoing, submitted.)  
Principal advisor: Yael Yaniv.

### **B.Sc.**

1. Ori Shemla, B.Sc student. Student in Biomedical Engineering, Technion-IIT. “Creation of standard mammalian databases for heart rate variability analysis.” (Ongoing.)  
Principal advisor: Yael Yaniv.
2. Rahul Kumar Singh, Final Year B.Sc Student, Department of Electrical Engineering, IIT Kharagpur. “Non-contact electrocardiogram measurement for monitoring automotive drivers drowsiness”. (Ongoing.)  
Principal advisor: Yael Yaniv.
3. Eran Zvuloni, B.Sc student in Biomedical Engineering, Technion-IIT. “Characterizing the spontaneous beating rate of Pacemaker cells using Optical Flow Method”. Advanced undergraduate laboratory. (Ongoing.)  
Principal advisor: Yael Yaniv.
4. Eloul Yonatan, B.Sc student in Biomedical Engineering, Technion-IIT. “Software for annotating electrophysiological signals”. Summer project (Completed, August-October 2016).  
Principal advisor: Yael Yaniv.

5. Racheli Gordon, B.Sc student in Biomedical Engineering, Technion-IIT. “Automatic program to characterize the spontaneous beating rate of pacemaker cells. Advanced undergraduate laboratory” (Completed, August-October 2016).  
Principal advisor: Yael Yaniv.
6. Alvi Mohsan, PhD student, Department of Biomedical Engineering, Oxford, UK. fecgsyn:gui: “A GUI Interface to fecgsyn for Simulation of Maternal-Foetal Activity Mixtures on Abdominal Electrocardiogram Recordings”. (Completed, Summer project. 2014).  
Principal advisor: Gari Clifford.
7. Pierre Gilfriche, MEng, Ecole des Mines ParisTech, France. “SmartCare”. Stage de 2e annee en business development, Oxford. (Completed, June - September, 2014).  
Principal advisor: Gari Clifford.

## PUBLICATIONS

### Theses

1. **Behar Joachim** supervised by Clifford Gari D. and Oster Julien. Extraction of Clinical Information from the Non-Invasive Fetal Electrocardiogram. PhD. Thesis, University of Oxford. Michaelmas 2014.
2. **Behar Joachim** supervised by Clifford Gari D. Analysis of accelerometer data for apnea screening. MSc. Thesis, University of Oxford. Submitted August 2011.

### Refereed papers in professional journals

1. Lyashkov Alexey, **Behar Joachim**, Lakatta Edward, Yaniv Yael, Maltsev Victor. Positive feedback mechanisms among local Ca releases, NCX, & ICaL ignite pacemaker action potentials. *Accepted for publication in the Biophysical Journal* (2018).
2. **Behar Joachim** and Yaniv Yael. Age-related pacemaker deterioration is due to impaired intracellular and membrane mechanisms: insights from numerical modeling. *The Journal of General Physiology* (2017): jgp-201711792.  
Cover: <http://jgp.rupress.org/content/149/10/891>
3. Shiraz Haron-Khun, Weisbrod David, Bueno Hanna, Yadin Dor, **Behar Joachim**, Peretz Asher, Binah Ofer, Hochhauser Edith, Eldar Michael, Yaniv Yael, Arad Michael, Attali Bernard. SK4 K<sup>+</sup> channels are therapeutic targets for the treatment of cardiac arrhythmias. *EMBO molecular medicine* (2017): e201606937.

4. Lakhno Igor V.\*, **Behar Joachim\***, Oster Julien, Shulgin Vyacheslav, Ostras Oleksii, Andreotti Fernando. The use of non-invasive fetal electrocardiography in diagnosing second degree fetal atrioventricular block. *Maternal Health, Neonatology and Perinatology* 3.1 (2017):14. \* Equal contribution.
5. **Behar Joachim**, et al. The Autonomic Nervous System Regulates the Heart Rate through cAMP-PKA Dependent and Independent Coupled-Clock Pacemaker Cell Mechanisms. *Frontiers in Physiology* 7 (2016).
6. **Behar Joachim**, et al. Evaluation of the fetal QT interval using non-invasive fetal ECG technology. *Physiol. Meas.* 37.9 (2016): 1392.
7. **Behar Joachim** and Yaniv Yael. Dynamics of PKA phosphorylation and gain-of-function in cardiac pacemaker cells: a computational model analysis. *American Journal of Physiology-Heart and Circulatory Physiology*. (2016): ajpheart-00076
8. Yaniv Yael, Ahmet Ismayil, Tsutsui Kenta, **Behar Joachim** et al. Deterioration of both autonomic neuronal receptor signaling and mechanisms intrinsic to heart pacemaker cells contribute to age-associated alterations in the basal heart rate and heart rate variability in vivo. *Aging cell* 15.4 (2016): 716-724.
9. Andreotti Fernando, **Behar Joachim**, Zaunseder Sebastian, Oster Julien, Clifford. Gari D. An open-source framework for stress-testing non-invasive foetal ECG extraction algorithms. *Physiol. Meas.* 37.5 (2016): 627.
10. **Behar Joachim**, Roebuck Aoife, Shahid Mohammed, Daly Jonathan, Miranda Pureza Andre Hallack, Niclas Palmius, Stradling John, Clifford Gari D. SleepAp: An Automated Obstructive Sleep Apnoea Screening Application for Smartphones. *IEEE J of Biomed. Health Inform*, 19 (1), (2015): 325-331
11. Zhu Tingting, Dunkley Nic, **Behar Joachim**, Clifton David A. and Clifford Gari D. Fusing Continuous-valued Medical Labels using a Bayesian Model. *Annals of biomedical engineering* 43.12 (2015): 2892-2902.
12. Johnson Alistair E W, **Behar Joachim**, Clifford Gari D. and Oster Julien. Multimodal heart beat detection using signal quality indices. *Physiol. Meas.* 36 (8), (2015): 1665.  
[Winning entry of the MIT-Physionet Challenge 2014.](#)
13. Oster Julien, **Behar Joachim**, Johnson Alistair, Sayadi Omid, Nemati Shamim, Clifford Gari D. Semi-supervised ECG beat Classification and Novelty Detection based on Switching Kalman Filters. *IEEE Transactions on Biomedical Engineering* 62.9 (2015): 2125-2134.

14. **Behar Joachim**, Oster Julien, Clifford Gari D. Combining and benchmarking methods of foetal ECG extraction without maternal or scalp electrode data. *Physiol. Meas.* 35, (2014): 1569-1589.  
[Winning entry of the MIT-Physionet Challenge 2013 \(non-official\).](#)
15. **Behar Joachim**, Andreotti Fernando, Zaunseder Sebastian, Li Qiao, Oster Julien, Clifford Gari D. An ECG simulator for generating maternal-foetal activity mixtures on abdominal ECG recordings. *Physiol. Meas.* 35, (2014): 1537-1550.
16. **Behar Joachim**, Johnson Alistair, Clifford Gari D., Oster Julien. A Comparison of Single Channel Foetal ECG Extraction Methods. *Annals Biomed. Eng.* 42(6), (2014): 1340-53.
17. Zhu Tingting, Johnson Alistair E. W., **Behar Joachim**, Clifford Gari D. Crowd-Sourced Annotation of ECG Signals Using Contextual Information. *Annals Biomed. Eng.* 42.4, (2014): 871-884.
18. **Behar Joachim**, Oster Julien, Qiao Li, Clifford Gari D. Signal Quality During Arrhythmia and its Application to False Alarm Reduction. *IEEE TBME.* 60(6), (2013) 1660-6.
19. Clifford Gari D, **Behar Joachim**, Li Qiao, Iead Rezek. Signal Quality Indices and Data Fusion for Determining Acceptability of Electrocardiograms Collected in Noisy Ambulatory Environments. *Physiol. Meas.* 33(9), (2012) 1419-33.

### **Review papers**

20. **Behar Joachim**, Andreotti Fernando, Zaunseder Sebastian, Oster Julien, Clifford. Gari D. A practical guide to non-invasive foetal electrocardiogram extraction and analysis. *Physiol. Meas.* 37.5 (2016): R1.
21. **Behar Joachim**, Roebuck Aoife, Geder Elnaz, Domingos Joao, Clifford Gari D. A Review of Current Sleep Screening Applications for Smartphones. *Physiol. Meas.* 34 (2013) R29-R46.
22. Roebuck Aoife, Monasterio Violeta, Geder Elnaz, Osipov Maxim, **Behar Joachim**, Malhotra Atul, Penzel Thomas, Clifford Gari D. A review of signals used in sleep analysis. *Physiol. Meas.* 35 (2013): R1-R57.



### Others publications (Editorial and letters to the editors)

23. Yaniv Yael and **Behar Joachim**. Mutation in one Molecule Induces Beating Rate Changes by Affecting the Coupled Clock Pacemaker. *Journal of Cardiology & Cardiovascular Therapy*. 6(4) 1-3. 2017.
24. Silva Ikaro, Moody Benjamin, **Behar Joachim**, Johnson Alistair, Oster Julien and Clifford Gari D. Editorial: Robust detection of heart beats in multimodal data. *Physiol. Meas.* 36 (8), 1629, 2015.
25. Clifford Gari D., Silva Ikaro, **Behar Joachim**, Moody George. Editorial: Non-invasive fetal ECG analysis. *Physiol. Meas.* 35 1521-1536. 2014.

### Patent applications

1. Clifford Gari D., Geder Elnaz, Osipov Maxim, Monasterio Violetta, Roebuck Aoife, **Behar Joachim**. Systems and methods for determining mental and physical health using multi-scale metrics. 2012. WO Patent 2013106700.
2. **Behar Joachim**. Parasol device for collecting and restoring solar energy. 2006. FR2904686A1.

### Under review/preparation

2. **Behar Joachim**, Rosenberg Aviv, Alexandrovich Alexandra, Shemlas Ori, Weiser Ido, Yaniv Yael. PhysioZoo: a novel open access software and databases for heart rate variability analysis in mammals. *In preparation*.
3. **Behar Joachim**, Qiao Li, Camila Hirotsu, Niclas Palmius et al. Screening for obstructive sleep apnea using oximetry. *In preparation*.
4. **Behar Joachim**, Oster Julien, Shulgin Vyacheslav, Ostras Oleksii, Bonnemain Laurent and Lakhno Igor. Non-invasive fetal electrocardiography for the detection of persistent or intermittent cardiac rhythm disorders: toward a fetal Holter? *In preparation*.
5. **Behar Joachim**, Oster Julien, De Vos Maarten, Clifford Gari D. Editorial: Wearables and mHealth in mental health and neurological disorders. Editorial, to be published in *IOP Physiological Measurement* 2018.
6. **Behar Joachim**, Rosenberg Aviv, Yaniv Yael. Defining power spectral bands in mammals heart rate variability analysis. *In preparation*.
7. Kamoun David, **Behar Joachim**, Yaniv Yael. Bioenergetic feedback between heart cell contractile machinery and mitochondrial 3D deformations. *Under review*.
8. Gliner Vadim, **Behar Joachim**, Yaniv Yael. Novel method to efficiently create an mHealth application: Implementation on an innovative real-time R peak detector. *Under review*.

## CONFERENCES

### Presentation at scientific meetings

1. **Behar Joachim**, and Yael Yaniv. A novel mouse pacemaker cell mathematical model to study autonomic nervous system regulation of the beating rate and aging impairment. 42nd FEBS congress, Jerusalem, Israel. 10-14 September 2017. Vol. 284.
2. **Behar Joachim**, Rosenberg Aviv, Alexandrovich Alexandra, Elul Yonatan, Shemlas Ori, Yaniv Yael. PhysioZoo: Open source software for heart rate variability analysis of mammal's electrophysiological data. ISHR European conference, Hamburg, 24-27 July 2017.
3. **Behar Joachim**, Racheli Gordon, Sofi Segal and Yael Yaniv. Non-additive sympathetic-parasympathetic brain stimulation interaction in single sinoatrial node cells. ISHR-Israel section, Beersheba, Israel, 28 Dec 2016.
4. Elul Yonatan, Rosenberg Aviv, **Behar Joachim** and Yaniv Yael. PhysioZoo database: a Software for annotating animal electrophysiological data. ISHR-Israel section, Beersheba, Israel, 28 Dec 2016.
5. **Behar Joachim** and Yaniv Yael. Internal Pacemaker Cell Mechanisms Mediating Autonomic Nervous Regulation of the Heart Rate. XXII ISHR World Congress, Buenos Aires, Argentina, 18-21 April 2016.
6. **Behar Joachim** and Yaniv Yael. The Regulation of the Heart Beat by the Crosstalk between Brain Signaling Receptor Stimulation and Pacemaker Cell Internal Mechanisms. ISHR-Israel section, Haifa, Israel, 10 Dec 2015. Winner Rena Yarom Young Investigator Competition.
7. Palmius Niclas, Daly Jonathan, Roebuck Aoife, Morys Megan, **Behar Joachim**. SmartCare: A centralised hub for medical apps. Connected Life 2015 conference, Balliol college, Oxford 4th June 2015.
8. **Behar Joachim**, Alistair Johnson, Julien Oster, Gari D. Clifford. An Echo State Neural Network for Foetal Electrocardiogram Extraction Optimised by Random Search. NIPS Lake Tahoe, Nevada, US, 5-10 December 2013.
9. **Behar Joachim** et al. Evaluation of the fetal QT interval using non-invasive foetal ECG technology. SMFM - 34th Annual Meeting- The Pregnancy Meeting. New Orleans, LA, 8th February, 2014.
10. **Behar Joachim**, Newton Alice, Dafoulas George, Chigurupati Radhika, Naik Shreesh, Paik Kenneth, Celi Leo Anthony. Sana: Democratizing Access to Quality Healthcare using an Open mHealth Architecture. ICTT 2012. London, 6 March.

11. **Behar Joachim**, Milandri Giovanni, Raghu Arvind, Fathima Sana, Dr Clifford Gari D. Global Health Initiative through EWH-Oxford Student Organization. PGBiomed, Glasgow, 14-16 August, 2011.

### **Refereed papers in conference proceedings**

12. **Behar Joachim**, Rosenberg Aviv, Yaniv Yael, Oster Julien. Rhythm and Quality Classification from Short ECGs Recorded Using a Mobile Device. CinC, Rennes, France, 24-27th Spt 2017.
13. **Behar Joachim**, Palmius Niclas, Daly Jonathan, Li Qiao, Rizzatti Fabiola, Bittencourt Lia, Clifford Gari D. Sleep Questionnaires in Screening for Obstructive Sleep Apnoea. CinC, Rennes, France, 24-27th Spt 2017.
14. Andreotti Fernando, **Behar Joachim**, Oster Julien, Clifford Gari D., Malberg Hagen and Zaunseder Sebastian. Optimized Modelling of Maternal ECG Beats using the Stationary Wavelet Transform. CinC, Boston (MA), USA, 7-10th Spt, 2014. Poster award at Computing in Cardiology 2014.
15. Andreotti Fernando, **Behar Joachim**, Zaunseder Sebastian, Clifford Gari D., Oster Julien. Evaluation of Foetal ECG extraction Methods in the Presence of Non-Stationary Abdominal Mixtures. bi-annual Brazilian Biomed. Eng. Congress, Oct 2014.
16. Clifford Gari D., Arteta Carlos, Zhu Tingting, Pimentel Marco, Santos Mauro, Domingos Joao, Maraci Mohammad A., **Behar Joachim** and Oster Julien. A scalable mHealth system for non-communicable disease management. IEEE GHTC, 10-13th Oct 2014, Silicon Valley, San Jose, California USA.
17. Daly Jonathan, Roebuck Aoife, Morys Megan, Palmius Niclas, **Behar Joachim**, Clifford Gari D. SleepCare: a Smartphone Application for Obstructive Sleep Apnoea Monitoring. AHT2014, London, 17-18th Spt 2014.
18. Papastylianou Tasos, **Behar Joachim** et al. Smart Handpumps: Improving the reliability of rural water services. AHT2014, London, 17-18th Spt 2014.
19. Johnson Alistair E W, **Behar Joachim**, Clifford Gari D. and Oster Julien. R-Peak Estimation using Multimodal Lead Switching. CinC, Boston (MA), USA, 7-10th Spt, 2014. Winning entry of the MIT-Physionet Challenge 2014.
20. **Behar Joachim**, Oster Julien and Clifford Gari D. A Bayesian Filtering Framework for Accurate Extracting of the Non Invasive FECG Morphology. CinC, Boston (MA), USA, 7-10th Spt, 2014.

21. Alvi Mohsan, Andreotti Fernando, Oster Julien, Clifford Gari D., **Behar Joachim**. fecgsyn: A GUI Interface to fecgsyn for Simulation of Maternal-Foetal Activity Mixtures on Abdominal Electrocardiogram Recordings. CinC, Boston (MA), USA, 7-10th Spt, 2014.
22. Tingting Zhu, **Behar Joachim**, Papastylianou Tasos, Clifford Gari D. CrowdLabel: A Crowdsourcing Platform for Electrophysiology. CinC, Boston (MA), USA, 7-10th Spt, 2014.
23. **Behar Joachim**, Roebuck Aoife, Shahid Mohammed, Daly Jonathan, Andre Hallack, Niclas Palmius, Stradling John, Clifford Gari D. An Evidence Based Android OSA Screening Application. CinC, 40:257-260, Zaragoza, Spain, 22-25th Spt, 2013.
24. **Behar Joachim**, Oster Julien and Clifford Gari D. Non Invasive FECG extraction from a set of abdominal channels. CinC, Zaragoza, 40:297-300, Spain, 22-25th Spt, 2013. Winning entry of the MIT-Physionet Challenge 2013 (non-official).
25. Silva Ikaro, **Behar Joachim**, Zhu Tingting, Oster Julien, Clifford Gari D., Moody George B. Noninvasive Fetal ECG: the PhysioNet/Computing in Cardiology Challenge 2013. CinC, 40:149-152, Zaragoza, Spain, 22-25th Spt, 2013.
26. Oster Julien, **Behar Joachim**, Colloca Roberta, Qiao Li, Clifford Gari D. Open source Java-based ECG analysis software and Android app for atrial fibrillation screening. CinC, 40:731-734, Zaragoza, Spain, 22-25th Spt, 2013.
27. Zhu Tingting, Jonhson Alistair, **Behar Joachim**, Clifford Gari D. Bayesian Voting of Multiple Annotators for Improved QT Interval Estimation. CinC, 40:659-662, Zaragoza, Spain, 22-25th Spt, 2013.
28. **Behar Joachim** et al. Software Architecture to Monitor Handpump Performance in Rural Kenya. WG 9.4: 12th International Conference on Social Implications of Computers in Developing Countries, Ocho Rios Jamaica, 19-22th May, 2013.
29. **Behar Joachim**, Oster Julien, Li Qiao, Clifford Gari. A single channel ECG quality metric. CinC. Krakow, Poland, 9-12<sup>th</sup> Spt, 2012
30. Dafoulas George E, Koutsias Stylianos, **Behar Joachim** et al. Development of an mHealth Open Source Platform for Diabetic Foot Ulcers Tele-consultations, 2nd International ICST Conference on Wireless Mobile Communication and Healthcare - MobileHealth 2011, Kos Island, Greece, October 2011.