



This project receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 813483



**Title:**

15 PhD positions in Marie Skłodowska-Curie Innovative Training Network "INFANS - INtegrating Functional Assessment measures for Neonatal Safeguard"

**Offer Description:**

As part of the Marie Skłodowska-Curie Innovative Training Network "INFANS - INtegrating Functional Assessment measures for Neonatal Safeguard", funded by the European Union's Horizon 2020 Research and Innovation Programme, we advertise 15 PhD positions.

The goal of INFANS is to develop a new neonatal brain monitoring system, designed to overcome the severe shortage of clinically viable means to high quality monitor the brain function in infancy, crucial to prevent later life neurological, cognitive and motor impairment. To accomplish this goal, INFANS established a structured European PhD training programme in biomedical engineering, signal processing and clinical procedures to train a new generation of creative and entrepreneurial young researchers.

The individual research projects of the early stage researchers (ESR) encompass the topics: technological innovation, industrial development, clinical validation, identification of neonatal healthcare needs. As part of their research the INFANS ESRs will develop a novel platform for high quality, clinically-viable EEG-NIRS monitoring accessible worldwide. Well-targeted visits and secondments, soft skills and dynamic training activities, an Open Science strategy, extensive involvement of ESRs in the network events organization, extensive contacts with other research, training and industrial European networks, dissemination activities and the award of Double doctoral degrees are further assets offered to INFANS ESRs.

Excellent science, industrial leadership and societal challenge are merged in the INFANS network. The INFANS consortium includes 6 academic and 4 non-academic partners from 6 EU countries, among which leading universities, companies and clinical institutions. The partners involved in INFANS share complementary expertise and facilities to provide international, interdisciplinary and intersectoral research training and mobility that will complement local doctoral training. The INFANS ESRs will become independent researchers with improved career prospects in both the academic and non-academic sectors, and will advance the EU capacity for innovation in biomedical engineering.

The institution and the place where the different ESR projects will be carried out, the scientific supervisor(s), individual research project titles, and contact person for each available position can be found specified in the table below.



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ESR no.	Recruiting Institution	Location	Primary Supervisor (at recruiting Institution)	Secondary Supervisor	Start date	Duration (months)	ESR Project topic	Contact person
1	Technische Universität Ilmenau	Ilmenau, Germany	Prof. Jens Haueisen	Dr. Frank Zanow	01.06.2019	36	Novel dry electrodes for INFANS	Prof. Jens Haueisen Jens.Haueisen@tu-ilmenau.de
2	Technische Universität Ilmenau	Ilmenau, Germany	Prof. Sascha Klee	Prof. Silvia Comani	01.08.2019	36	Novel Spatial Harmonic Decomposition for real-time dimension reduction of EEG signals	Prof. Jens Haueisen Jens.Haueisen@tu-ilmenau.de
3*	Università degli Studi Gabriele d'Annunzio di Chieti-Pescara	Chieti, Italy	Prof. Silvia Comani ( Università degli Studi Gabriele d'Annunzio di Chieti-Pescara, Italy)	Prof. Sabine Van Huffel	01.08.2019	36	Novel BSS-based fingerprint method for the real-time correction of artefacts in infant EEG signals	Prof. Silvia Comani comani@unich.it
4	Università degli Studi Gabriele d'Annunzio di Chieti-Pescara	Chieti, Italy	Prof. Silvia Comani	Dr. Nathan Stevenson	01.08.2019	36	Neonatal functional connectivity patterns on short-term EEG to estimate brain maturity	Prof. Silvia Comani comani@unich.it
5	Università degli Studi Gabriele d'Annunzio di Chieti-Pescara	Chieti, Italy	Prof. Silvia Comani	Dr. Sampsa Vanhatalo	01.08.2019	36	Estimation of neonatal brain efficiency by means of functional network properties	Prof. Silvia Comani comani@unich.it
6	eemagine Medical Imaging Solutions GmbH / Technische Universität Ilmenau	Berlin, Germany	Dr. Patrique Fiedler	Prof. Jens Haueisen	01.06.2019	36	Development of novel compliant adaptive cap for neonates and infants sensors	Dr. Frank Zanow frank.zanow@eemagine.com
7	eemagine Medical Imaging Solutions GmbH / Technische Universität Ilmenau	Berlin, Germany	Dr. Frank Zanow	Prof. Sascha Klee	01.06.2019	36	Usability optimized control software for EEG in neonates	Dr. Frank Zanow frank.zanow@eemagine.com
8	University of Helsinki	Helsinki, Finland	Dr. Sampsa Vanhatalo ( University of Helsinki, Finland)	Prof. Jens Haueisen	01.08.2019	36	Clinical multicentre validation: focus on novel dry electrode, cap, and short-term EEG monitoring	Dr. Sampsa Vanhatalo samps.vanhatalo@helsinki.fi
9	University of Helsinki	Helsinki, Finland	Dr. Sampsa Vanhatalo	Dr. Jeroen Dudink	01.08.2019	36	Clinical multicentre validation: focus on novel GUI user interface, and short-term EEG monitoring	Dr. Sampsa Vanhatalo samps.vanhatalo@helsinki.fi
10	KU Leuven	Leuven, Belgium	Prof. Sabine Van Huffel (KU Leuven, Leuven, Belgium)	Prof. Silvia Comani	01.08.2019	36	Automated assessment of cerebral autoregulation and coupled dynamics using NIRS & EEG scoring	Prof. Sabine Van Huffel Sabine.vanhuffel@esat.kuleuven.be



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11	Kvikna ehf / University of Iceland	Reykjavic, Iceland	Prof. Thomas P. Runarsson	Mr. Gardar Thorvardsson	01.06.2019	36	Integration of developed technologies into single EEG-NIRS monitoring system (GUI interface)	Prof. Thomas Philip Runarsson tpr@hi.is
12	Artinis Medical Systems B.V. / University Medical Center Utrecht	Elst, NL	Dr. Willy Colier	Dr. Jeroen Dudink	01.06.2019	36	Development of novel infant LED based optodes	Dr. Willy Colier willy@artinis.com
13	Artinis Medical Systems B.V. / University Medical Center Utrecht	Elst, NL	Dr. Jörn Horschig	Dr. Jeroen Dudink	01.06.2019	36	Automated quality control of NIRS data and integration of SW for NIRS monitoring in neonates	Dr. Jörn Horschig jorn@artinis.com
14	University Medical Center Utrecht	Utrecht, NL	Prof. Manon Benders	Dr. Willy Colier	01.08.2019	36	Clinical multicentre validation: focus on novel sensors and cap for long- term EEG-NIRS monitoring	Prof. Manon Benders M.Benders@umcutrecht. nl
15*	University Medical Center Utrecht	Utrecht, NL	Prof. Manon Benders	Prof. Gunnar Naulaers	01.08.2019	36	Clinical multicentre validation: focus on user interface. applicative SW for long-term EEG-NIRS	Prof. Manon Benders M.Benders@umcutrecht. nl

\*= Joint or Dual Doctoral Degrees