

15th Vienna International Workshop on FES & 30 years IFESS Anniversary

Preliminary Program per 15.07.2025

Tuesday 16.09.2025

08:20-08:30 Opening

Keynote Lecture

Key

Chairpersons: Unknown

08:30 Stanley Salmons (Liverpool, UK)
PARADIGM SHIFTS: THE FOUNDATIONS OF FUNCTIONAL ELECTRICAL STIMULATION

09:15-10:15 **Ceremony IFESS**

10:15-10:45 **Coffee Break**

Clinical applications of FES

Session 1

Chairpersons: Chair 1
 Chair 2

10:45 Tamsyn Street et al (United Kingdom)
QUALITY OF LIFE AND PATIENT REPORTED OUTCOME MEASURES FOLLOWING THE USE OF
FUNCTIONAL ELECTRICAL STIMULATION FOR WALKING POST STROKE

11:00 Erika G. Spaich et al (Denmark)
EFFECT OF ELECTRICAL STIMULATION ON THE TIMING OF THE PREPARATORY PHASE OF GAIT
INITIATION IN PARKINSON'S DISEASE

11:15 Ugo Carraro et al (Italy)
EFFECTIVENESS OF FES X DDM AFTER TWENTY YEARS OF PERMANENT DENERVATION AND
DEGENERATION OF HUMAN MUSCLES

11:30 Christina Buchgeher et al (Austria)
CLINICAL IMPLICATIONS OF ELECTRICAL STIMULATION IN A HOME-BASED TREATMENT SETTING
FOR PATIENTS WITH FACIAL NERVE PARALYSIS TO STOP DENERVATION ATROPHY

11:45 Tamsyn Street (United Kingdom)
A RANDOMISED, SHAM-CONTROLLED, REMOTELY CONDUCTED, PROOF OF PRINCIPLE STUDY OF
ABDOMINAL FUNCTIONAL ELECTRICAL STIMULATION (ABFES) FOR BOWEL MANAGEMENT IN
SPINAL CORD INJURY (SCI)

12:00 Ines Bersch et al (Switzerland)
THE EFFECT OF NEUROMUSCULAR ELECTRICAL STIMULATION ON BOWEL MANAGEMENT IN
PEOPLE WITH CHRONIC SPINAL CORD INJURY

12:15 Benjamin Forrest et al (United Kingdom)
A RETROSPECTIVE ANALYSIS OF ABFES IN TREATING AND MANAGING CONSTIPATION IN
INDIVIDUALS WITH NEUROLOGICAL IMPAIRMENT

12:30 Janez Rozman et al (Slovenia)
STIMULATION OF NEUROVASCULAR BUNDLES DURING ROBOT-ASSISTED RADICAL
PROSTATECTOMY

12:45-13:45 **Lunch**

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Afferent Nerve Stimulation

Session 2

Chairpersons: Chair 1
Chair 2

- 13:45 Werner Girsch et al (Austria)
TREATMENT OF CHRONIC NEUROPATHIC PAIN WITH PERIPHERAL NERVE STIMULATION
- 14:00 Milana Mileusnic et al (Austria)
CLINICAL ADVANCES IN FULL BODY NEUROMODULATION TO TREAT SPASTIC MOTOR DISORDER AND CHRONIC PAIN
- 14:15 Rebecca Grenfell et al (Australia)
FUNCTIONAL IMPACT OF THE EXOPULSE MOLLIE SUIT IN SPG4 HEREDITARY SPASTIC PARAPLEGIA: A SINGLE-SUBJECT AB CASE STUDY
- 14:30 Sarah Massey et al (United Kingdom)
OPTIMAL PARAMETERS FOR LOWER LIMB AFFERENT NERVE ROOT ACTIVATION USING TRANSCUTANEOUS SPINAL CORD STIMULATION IN HEALTHY ADULTS.
- 14:45 Anna Pataria et al (Austria)
HOME-BASED TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION FOR IDIOPATHIC SENSORY POLYNEUROPATHY: A PERSONALIZED APPROACH
- 15:00 Dibya Chowdhury et al (Austria)
REAL-TIME R-PEAK PREDICTION IN ECG FOR CARDIAC-GATED AURICULAR VAGUS NERVE STIMULATION
- 15:15-15:45 **Coffee Break**

FES-Technology

Session 3

Chairpersons: Chair 1
Chair 2

- 15:45 Javier Sáez et al (Chile)
DESIGN PARAMETERS OF CONCENTRIC ELECTRODES: A SIMULATION STUDY TO OPTIMIZE NON-INVASIVE FUNCTIONAL ELECTRICAL STIMULATION
- 16:00 Kevin Schuh et al (Austria)
LOW-RESISTANCE COST-EFFICIENT INTERFACING FOR NEUROSTIMULATION NEEDLES BASED ON PRINTED CIRCUIT BOARD TECHNOLOGY
- 16:15 Siobhan Mackenzie Hall et al (United Kingdom)
AI ELECTRODE AND STIMULUS DESIGN FOR FES RESEARCH: A PILOT STUDY
- 16:30 Hany Shaker et al (Egypt)
COST-EFFECTIVE REMOTELY FULLY-CONTROLLED ELECTRICAL STIMULATOR FOR SKELETAL MUSCLES REHABILITATION
- 16:45 Hermann Lanmüller et al (Austria)
INCREASING THE RELIABILITY OF AN IMPLANTABLE PULSE GENERATORS FOR SMALL AND LARGE LABORATORY ANIMALS
- 17:00 Hany Shaker et al (Egypt)
TOWARDS A SAFE LONG-TERM IMPLANTABLE ELECTRICAL STIMULATION: A HIGH-EFFICIENCY CHARGE BALANCER DESIGN
- 17:15-19:45 ViennaFES Cybersports 2025

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Wednesday 17.09.2025

Keynote Lecture

Key

Chairpersons: Unknown

08:30 Stanisa Raspopovic (Vienna, Austria)
TBA

Sensory Restoration

Session 4

Chairpersons: Chair 1
Chair 2

09:10 Michael Handler et al (Austria)
COMPUTER SIMULATION OF COMBINED VESTIBULAR/COCHLEAR IMPLANTSTIMULATION FOR THE ANALYSIS OF CROSS-TALK AND NEURONALRESPONSES

09:25 Laurin Xaver Koppenwallner et al (Austria)
FOCAL STIMULATION OF RETINAL GANGLION CELLS BY PULSEDURATION MODULATION AND CURRENT STEERING

09:40 Klaus Peter Koch et al (Germany)
A FIRST APPROACH TO PHASE-MODULATED INTERFERENCESTIMULATION FOR GENERATING MOVING TACTILE PERCEPTION

09:55-10:25 **Coffee Break**

Methodological Insights

Session 5

Chairpersons: Chair 1
Chair 2

10:25 Hazzira Ameera Safin Hashim et al (Malaysia)
ULTRASOUND ASSESSMENT OF FOREARM MUSCLE CHANGES FOLLOWINGFES IN SARCOPENIC ELDERLY: PRELIMINARY RESULTS OF AFEASIBILITY STUDY

10:40 Nur Azah Hamzaid et al (Malaysia)
MUSCLE OXYGENATION-BASED CLASSIFICATION OF SPINAL CORDINJURY DURING FES USING NIRS AND MACHINE LEARNING

10:55 Ellen Huld A. Þórðardóttir et al (Denmark)
INVESTIGATING PREDICTORS OF RECOVERY AFTER SPINAL CORDINJURY: A STATISTICAL APPROACH TO SECONDARY INJURY ANDCLINICAL OUTCOME ANALYSIS

11:10 Sandra Dorfer et al (Austria)
RESPIRATION-DRIVEN CLOSED-LOOP MODULATION OF BINAURAL BEATS

11:25 Matthias Krenn et al (United States)
ELECTRICAL PRECONDITIONING OF DENERVATED MUSCLE PRIOR TONERVE TRANSFER: A FEASIBILITY STUDY IN A NON-HUMAN PRIMATEMODEL

11:40 Jan Namysl (Poland)
COUPLING FES AND DYNAMIC SURFACE ELECTROMYOGRAPHY:ADVANCING

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	NEUROREHABILITATION
11:55	Ellen Huld A. Þórðardóttir et al (Denmark) EFFECTS OF INTERNAL AND EXTERNAL COOLING ON TEMPERATURE REGULATION FOLLOWING SPINAL CORD INJURY: A MATHEMATICAL SIMULATION-BASED STUDY
12:10-13:10	Lunch
	<i>FES-Cycling</i>
Session 6	Chairpersons: Chair 1 Chair 2
13:10	Stephan Baglikow et al (Germany) REAL-TIME BAYESIAN OPTIMIZATION OF FES CYCLING
13:25	Nick Donaldson et al (United Kingdom) ADDING IMPOSED ANKLE MOTION TO FES CYCLING
13:40	Mariann Mravcsik et al (Hungary) FES-INDUCED CHANGES IN EXCITABILITY OF DENERVATED MUSCLES IN FLACCID PARAPLEGIA - CASE STUDY
13:55	Isabelle Rösler et al (Austria) DEVELOPMENT OF MODELS TO ESTIMATE REALISTIC KEY PERFORMANCE INDICATORS ON A FES-CYCLING-ERGOMETER
14:10	Tiago Coelho-Magalhães et al (France) OPTIMAL CONTROL FRAMEWORK FOR PERSONALIZED FES-CYCLING IN INDIVIDUALS WITH SPINAL CORD INJURY
14:25	Martin Schmoll et al (Austria) ASSESSING ACCURACY OF POWER-PEDALS FOR LOW POWER OUTPUT IN FES-CYCLING – PRELIMINARY RESULTS
14:40-15:10	Coffee Break
	<i>Movement Restoration</i>
Session 7	Chairpersons: Chair 1 Chair 2
15:10	Jonathan Baum et al (France) TOWARDS ELECTROPHYSIOLOGICAL AND HISTOLOGICAL MAPPING OF UPPER LIMB NERVES IN PIGS USING EPINEURAL STIMULATION
15:25	Jonathan Jarvis et al (United Kingdom) INTERFERENTIAL OR MIDDLE-FREQUENCY STIMULATION OF PERIPHERAL NERVE
15:40	Manuela Riegler et al (Austria) STUDY PROTOCOL: EFFICACY OF EMG-TRIGGERED FOUR-CHANNEL FUNCTIONAL ELECTRICAL STIMULATION IN ARM-HAND PARESIS FOLLOWING STROKE
15:55	Christine Azevedo et al (France) EPINEURAL ELECTRICAL STIMULATION FOR GRASP RECOVERY: 28-DAY STUDY IN 4 TETRAPLEGIC PARTICIPANTS
16:10	Gabriel Graffagnino et al (France)

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	REAL-TIME GAIT EVENT DETECTION USING MOTION CAPTURE TO CONTROL AN ELECTRICAL STIMULATOR: PROOF-OF-CONCEPT
16:25	Christine Singleton et al (United Kingdom) FES THERAPY IMPROVES GAIT DYNAMICS IN PEOPLE WITH LIMB LOSS— A FEASIBILITY STUDY
16:40-22:40	Bus to Conference Dinner

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Thursday 18.09.2025

Keynote Lecture

Key

Chairpersons: Unknown

08:30 Ines Bersch-Porada (Nottwil, Switzerland)
TBA

Current Challenges and Future Directives of FES

Session 8

Chairpersons: Chair 1
Chair 2

09:10 Kristin E. Musselman et al (Canada)
DEVELOPMENT OF TOOLKITS AS AN IMPLEMENTATION STRATEGY FOR FUNCTIONAL ELECTRICAL STIMULATION (FES) IN NEUROREHABILITATION PRACTICE

09:25 Elina Nezon et al (Canada)
STRATEGIES TO IMPROVE USE, KNOWLEDGE, AND CONFIDENCE OF FUNCTIONAL ELECTRICAL STIMULATION IN CEREBRAL PALSY REHABILITATION

Keynote Lecture

Key

Chairpersons: Unknown

09:40 tba
TBA

Current Challenges and Future Directives of FES

Session 9

Chairpersons: Chair 1
Chair 2

10:20 Thomas Stieglitz et al (Germany)
FROM INNOVATIVE IDEAS TO CLINICAL TRIALS OPPORTUNITIES AND OBSTACLES IN TRANSLATIONAL RESEARCH ON NEURAL IMPLANTS

10:35 Christof Ullrich (Austria)
OVERVIEW: PROVIDING FUNCTIONAL ELECTRICAL STIMULATION TO PEOPLE WITH WALKING DISABILITIES IN AUSTRIA

10:50-12:20 Round Table Discussion