PROGRAMME

Sunday 8th October
9:00 a.m.-6.00 p.m.  REGISTRATION
7:00 p.m.  WELCOME RECEPTION

Monday 9th October
08:30-12:00  REGISTRATION
09:00-09:30 a.m.  OPENING CEREMONY

SCIENTIFIC PROGRAMME

"EXCITABLE MEMBRANES & STRUCTURES"
Chairpersons: D. Stuart & N. Radicheva

09:50  ELECTROPHYSIOLOGICAL PROPERTIES OF TURTLE MOTONEURONS
Hornby T.G., McDonagh J.C., Reinking R.M., Stuart D.G.

10:10  LONG-LASTING (FATIGUING) ACTIVITY OF ISOLATED MUSCLE FIBRES INFLUENCED BY MICROWAVE ELECTROMAGNETIC FIELD
Radicheva N., Mileva K., Georgieva B., Kristev I.

10:30  EVIDENCE FOR PRESYNAPTIC EFFECTS OF PHARMACOLOGIC TESTOSTERONE TREATMENT ON NEUROMUSCULAR TRANSMISSION IN THE MALE RAT
Blanco C. E., Wachi, S., Micevych, P.E, Sieck, G. C.

10:50-11:30 a.m.  BREAK

"EXCITABLE MEMBRANES & STRUCTURES"  (continued)
Chairpersons: N. Dimitrova & D. Stephanova

11:30  EMG POWER SPECTRUM AND MAXIMAL M-WAVE DURING ECCENTRIC AND CONCENTRIC ACTIONS
Linnamo V., Strojnik V., Komi P.V.

11:50  A NEW METHOD FOR THE SIMULATION OF SINGLE MOTOR UNIT SURFACE ACTION POTENTIALS
Farina D., Merletti R.

12:10  MODEL STUDY OF THE EFFECTIVENESS OF SPATIAL FILTERS PROPOSED TO IMPROVE SELECTIVITY OF SURFACE EMG
Dimitrova N.A., Dimitrov G.V., Nikitin O.A.
"MOTOR UNIT ACTIVITY"
Chairpersons: A. Kossev & G. Sjøgaard

02:00   MOTOR UNIT RECRUITMENT DURING LOW FORCE AND LONG DURATION MUSCLE CONTRACTIONS INVESTIGATED WITH SURFACE EMG
Gazzoni M., Merletti R., Farina D.

02:20   MOTOR UNIT ACTIVITY IN HUMAN FOREARM MUSCLE DURING SIMULATED COMPUTER WORK
Sjøgaard G., Søgaard K., Finsen L., Olsen H., Christensen H.

02:40   ACTIVITY PATTERN IN THE WRIST EXTENSOR MUSCLES DURING LOW FORCE CONTRACTIONS
Søgaard K., Finsen L., Graven Nielsen T., Baare Olsen H.

03:00   AN ANALYSIS OF GAPS DURING LOW FORCE CONTRACTION OF THE FATIGUED EXTENSOR CARPI RADIALIS MUSCLE
Christensen H., Baare Olsen H., Jensen C., Søgaard K.

03:20-04:00 p.m.  BREAK

04:00-06:30 p.m.  POSTER SESSION I (Posters 1-30)
Chairpersons: P. Ellaway & W. Wolf & D. Philipova & L. Christova

"EXCITABLE MEMBRANES & STRUCTURES"

1. SURFACE EMG AND CONDUCTION VELOCITY MEASUREMENTS
Kossev A.

2. CHANGES IN ELECTRICALLY EVOKED AND VOLUNTARY SKELETAL MUSCLE CONTRACTIONS DURING LONG-TERM SPACEFLIGHT
Koryak Yu. A., Kozlovskaya I. B.

3. SELECTIVITY OF SURFACE EMG ELECTRODES
Kristev I., Christova P.

4. A STUDY ON THE LOW FREQUENCY OSCILLATIONS IN THE ACTIVATION OF THE MUSCLE UNDER SUSTAINED ISOMETRIC TASK
Tarata M., Spaepen A.

5. A METHOD OF RECONSTRUCTION OF THE MUSCULAR FORCE PROFILE FROM THE EMG, IN THE VOLUNTARY EXERCISE
Tarata M., Spaepen A.

6. TERMINAL PHASE OF THE MOTOR UNIT POTENTIALS IN ISOMETRIC CONTRACTION. A SIMULATION STUDY
Dimitrova N., Dimitrov G.V., Tchakaroff V., Gergelcheva V., Dimitrov A.G.

7. CHANGES IN POTASSIUM CONCENTRATION IN MYELINATED NERVE FIBRES
Dimitrov A.G.
8. EXCITABILITY CHANGES DURING THE RECOVERY CYCLE OF MOTOR AND SENSORY HUMAN AXONS IN NORMAL CASE AND IN AMYOTROPHIC LATERAL SCLEROSIS
   Stephanova D.I., Daskalova M, Kristev I.

9. STRENGTH-DURATION PROPERTIES OF MOTOR AND SENSORY HUMAN AXONS IN NORMAL CASE AND IN AMYOTROPHIC LATERAL SCLEROSIS
   Stephanova D.I., Daskalova M, Mileva K.

"MOTOR UNIT ACTIVITY"

10. COMPARATIVE ANALYSIS OF SINGLE MOTOR UNIT PATTERN IN HEALTHY SUBJECTS AND PATIENTS WITH NEUROLOGICAL DISORDERS
    Christova L. G., Alexandrov A. S., Ishpekova B. A., Kosarov D. S.

11. A-WAVES IN PATIENTS WITH NOVEL HEREDITARY MOTOR AND SENSORY NEUROPATHY - LOM
    Alexandrov A. S., Christova L.G., Ishpekova B. A.

12. STATISTICAL AND NEURAL NETWORK CLASSIFICATION OF MUAPS. A COMPARATIVE STUDY
    Segura V., Gila L., Campos C., Lasanta I., Malanda A.

"REFLEX MOTOR CONTROL"

13. COMPARATIVE ANALYSIS OF THE STRETCH REFLEXES CHARACTERISTICS IN HUMAN UNDER CONDITIONS OF REAL AND SIMULATED MICROGRAVITY
    Sayenko D.G., Sayenko I.V.

14. BLINK REFLEX IN PATIENTS WITH NOVEL HEREDITARY MOTOR AND SENSORY NEUROPATHY - LOM
    Ishpekova B. A., Christova L. G., Alexandrov A. S.

15. EVALUATION OF METHODS FOR ASSESSMENT OF INTERNEURONAL INTERACTION
    Piotrkiewicz M.

"CENTRAL MOTOR CONTROL"

16. TYROSINE HYDROXYLASE INDUCIBLE NEURONS IN SNR IMPROVE MOTOR ACTIVITY IN PARKINSONIAN RATS: BEHAVIORAL AND HISTOCHEMICAL CORRELATIONS
    Behzadi G.

17. DYSRHYTHMIA AND THE RAT THALAMIC RETICULAR NUCLEUS
    Marini G., Ceccarelli P., Mancia M.

18. IS TREMOR AN INHERENT FEATURE OF AN INTACT BUT MISADJUSTED MOTOR CONTROL SYSTEM?
    Staude G., Dengler R., Wolf W.
19. SIMULTANEOUS ACTION OF INTRACORTICAL INHIBITION AND FACILITATION: EFFECT OF CONDITIONING TRANSCRANIAL STIMULATION ON THE LATENCY OF MOTOR EVOKED POTENTIALS  
Kossev A., Siggelkow S., Rollnik J., Peschel T., Dengler R.

20. EFFECT OF RESISTIVE RESPIRATORY LOADING ON MUSCLE FIBRE RECRUITMENT IN HUMAN TRICEPS MUSCLE  
Jackson S., Crisp E., Sumners P., Turner D.

21. ANTICIPATORY REDUCTION OF THE MUSCLE ACTIVITY ASSOCIATED WITH SELF-TRIGGERED ELECTRICAL STIMULATION OF MIXED NERVES SUPPLYING LOWER LIMB MUSCLES IN MAN  
Georgieva S., Philipova D., Gerilovsky L.

22. EFFECTS OF MATURITY AND TRAINING ON BIMANUAL HANDGRIP  
Gatev P., Gavrilenko T., Kolev N.

23. PECULIARITY OF THE ISOMETRIC EFFORT CONTROL IN NORMAL AND PATHOLOGICAL STATE OF THE MOTOR CONTROL SYSTEM  
Romanov S.P.

24. REACHING MOVEMENTS IN AGING  
Favilla M.

25. THE ROLE OF ACTION EFFECTS IN RESPONSE PLANNING  
Nattkemper D., Ziessler M.

26. EVENT-RELATED POTENTIALS ELICITED AFTER SENTENCES INDUCING MOVEMENT IMAGERY  
Popivanov D., Philipova D., Georgieva, S.

27. SLOW BRAIN POTENTIALS ASSOCIATED WITH MOTOR PREPARATION AND STIMULUS ANTICIPATION  
Philipova D., Popivanov D., Georgieva S. S., Tchukanova R. I.

28. NONLINEAR EEG DYNAMICS DURING IMAGINED SELF-PACED MOVEMENTS  
Popivanov D., Dushanova, J., Sauleva, Z.

29. DOES THE KOLMOGOROV ENTROPY GIVE MORE INFORMATION ABOUT THE ORGANIZATION OF THE VOLUNTARY MOVEMENT?  
Dushanova J., Pfurtscheller G.

30. OPTIMIZATION METHODS AND SELF-TRAINING MODELS FOR MOTOR CONTROL INVESTIGATION  
Aladjov H.Ts., Raikova, R.T.
**Tuesday 10th October**

"REFLEX MOTOR CONTROL"

**Chairpersons:** V. Gatev & E. Schomburg

09:30  CHANGES IN MUSCLE COMPLIANCE AND PROPRIOCEPTIVE ACTIVATION AFTER MUSCLE FATIGUE

_Avela J., McBride J., Kyröläinen H., Koskinen S., Komi P. V._

09:50  NOCICEPTIVE REFLEXES EVOKED BY TTX-RESISTANT C-FIBRE AFFERENTS AND THEIR SENSITIVITY TO OPIOIDS IN THE CAT

_Schomburg E. D., Steffens H., Marx B._

10:10  NEURONAL PATHWAYS IN LUMBAR SPINAL SEGMENTS (L1-L5) ACTIVATED BY GROUP I AND II AFFERENTS INNERVATING TRUNK MUSCLES IN SPINAL CATS

_Wada N._

10:30  AN INVESTIGATION OF THE JENDRASSIK MANOEUVRE MECHANISM

_Gregory J.E., Proske U._

10:50-11:30 a.m.  **BREAK**

"CENTRAL MOTOR CONTROL"

**Chairpersons:** M. Wiesendanger & A. Georgopoulos

11:30  ACTIVITY CHANGES IN POPULATIONS OF CEREBELLAR CORTICAL AND NUCLEAR NEURONS DURING ACQUISITION OF THE CONDITIONED EYEBLINK REFLEX IN THE RABBIT

_Bloedel J. R., Bracha V., Wunderlich D. A._

11:50  THE CONTROL OF GRASPING

_Wiesendanger M._

12:10  NEURAL MECHANISMS OF CATCHING: TRANSLATING MOVING TARGET INFORMATION INTO HAND INTERCEPTION MOVEMENT

_Georgopoulos A. P._

12:30  TUNING PROPERTIES OF M1 NEURONS

_Abeles M., Ben Shaul Y., Nadasdy Z., Shemtov R._

"CENTRAL MOTOR CONTROL"

**Chairpersons:** J. Bloedel & D. Popivanov

02:00  TRANSFER OF MOTOR LEARNING TO NEW TASKS IS MORE EFFICIENT IN SENIORS THAN IN YOUNG ADULTS

_Bock O., Schneider S._

02:20  LEARNING OF BIMANUAL COORDINATION IS GOVERNED BY THREE SEPARATE PROCESSES

_Bock O., Wenderoth N._
02:40 TIME-COURSE OF LEARNING DIFFERENT BIMANUAL COORDINATION PATTERNS
Wenderoth N., Krohn R., Maier A., Bock O.

03:00 FREQUENCY DYNAMICS OF EEG DURING MOVEMENT IMAGERY
Popivanov D., Likova L., Sauleva Z.

03:20-04:00 p.m.  BREAK

04:00-06.30 p.m.  POSTER SESSION II (Posters 31-45)
Chairpersons: M. Favilla & N. Wada & C. Bourdin

"POSTURE AND LOCOMOTION"

31. CHANGES IN PLANTAR PRESSURES DURING BIPEDAL STANCE
Gatev P., Koleva V., Petkova G., Dimitrova D., Ilieva L.

32. NONLINEAR DYNAMICS OF HUMAN POSTURAL SWAY DURING UPRIGHT STANCE
Stambolieva, K., Popivanov, D., Grigorova, V.

33. EFFECTS OF REAL AND SIMULATED MICROGRAVITY ON CHARACTERISTICS OF POSTURAL CORRECTION RESPONSES
Sayenko D. G., Sayenko I. V.

34. INFLUENCE OF INSTRUCTION ON VELOCITY AND COORDINATION OF OVERARM THROWING
Van den Tillaar R., Ettema G.

35. KINEMATIC ANALYSIS OF SIT-TO-STAND AND BACK-TO-SIT TRANSFERS
Dubost V., Pozzo T., Papaxanthis C., Mourey F.

36. PERCEPTUAL AND MOTOR PATTERNS IN THE ROPE JUMPING
Barreto S. M. G., Pellegrini A. M.

37. EFFECTS OF BEDREST HYPOKINESIA ON LOCOMOTION IN RHESUS MONKEY.
Badakva A.M., Miller N.V., Riazanski S.N.

38. PATTERN OF SPINAL LOCOMOTOR ACTIVITY EVOked BY ELECTRICAL STIMULATION OF SPINAL CORD IN HUMAN PARAPLEGICS
Shapkova E.Yu.

39. THE PROPRIOCEPTIVE AFFERENCES OF LEG MOVEMENT IN CONTROLLING THE PROPULSIVE FORCES DURING HUMAN GAiT :A CONSCIENT CONTROL ?
Varraine E., Bonnard M., Pailhous J.

40. ELECTROMYOGRAPHIC AND KINEMATICAL STUDY OF BACK MOVEMENTS DURING LEVEL, UPSLOPE AND DOWNSLOPE WALKING ON A TREADMILL
Wada N.

41. INTENTIONAL CONSTRAINTS OF SPACE-TIME RELATIONSHIPS IN HUMAN GAiT
Bonnard M., Pailhous J., Danion F.
"SENSORIMOTOR INTERACTIONS"

42. CROSS EFFECTS OF MUSCLE VIBRATION ON MOTOR EVOKED POTENTIALS
   Siggelkow S., Kossev A, Rollnik J., Peschel T., Dengler R.

43. VARIATIONS IN THE SCALE OF VISUAL INFORMATION AND THE CONTROL OF
    CONTINUOUS FORCE PRODUCTION
   Slifkin A. B., Vaillancourt D. E., Newell K. M.

44. EFFECT OF THE CENTRIFUGAL FORCE ON THE PERCEPTION OF THE VISUAL
    STRAIGHT-AHEAD
   Bourdin C., Blouin J., Gauthier G.M., Vercher J.-L.

45. SENSORY INPUTS CONTRIBUTION TO VESTIBULO-OCULAR REFLEX AND POSTURAL
    RESPONSE MAINTAINING SIMULTANEOUSLY BODY BALANCE.
   Grigorova V., Stambolieva K., Ikonomov R.

08:00 p.m.  OFFICIAL DINNER

Wednesday 11th October

"POSTURE AND LOCOMOTION"

Chairpersons: S. Mori & P. Gatev

09:30  A NEW JAPANESE MONKEY MODEL FOR THE STUDY OF BIPEDAL LOCOMOTION:
       STRATEGIES FOR OBSTACLE CLEARANCE AND RECOVERY FROM STUMBLING
       Mori F., Tachibana A., Takasu C., Nakajima K., Mori S.

09:50  PHRENIC, INTERCOSTAL AND SYMPATHETIC ACTIVITY RELATED TO
       FICTIVE LOCOMOTOR ACTIVITY OF LIMB MUSCLES IN SPINAL CATS
       Schomburg E.D., Steffens H., Dembowsky K.

10:10  FUSIMOTOR ACTION DURING LOCOMOTION IN THE DECEREBRATE CAT
       Ellaway P.H., Taylor A., Durbaba R., Rawlinson S.

10:30-10.50 a.m.  BREAK

"POSTURE AND LOCOMOTION" (continued)

Chairpersons: E. Shapkova & B. Dimitrov

10:50  TWO TYPES OF RHYTHMIC MOTOR MODULATION EVOKED BY SPINAL CORD
       ELECTRICAL STIMULATION (SCES) IN PARAPLEGIC PATIENTS
       Shapkova E.Yu., Schomburg E.D.

11:10  CHANGES IN CONDITIONED POSTURAL RESPONSES. COMPARISON BETWEEN
       CEREBELLAR PATIENTS AND HEALTHY SUBJECTS
       Kolb F.P., Lachauer S., Diener H.C., Timmann D.

11:30  AGEING AND MALAISE IN THE LIGHT OF BRAIN EVOKED POTENTIALS
       Dimitrov B., Gatev P.
"SENSORIMOTOR INTERACTIONS"
Chairpersons: O. Bock & L. Gerilovsky

2:00  ANTICIPATORY REDUCTION OF THE MUSCLE ACTIVITY ASSOCIATED WITH SELF-TRIGGERED ELECTRICAL STIMULATION OF MIXED NERVES AND MECHANICAL TAPS ON MUSCLE TENDONS
       Gerilovsky L., Philipova D., Struppler A.

2:20  DEPENDENCE OF POSTURAL AND OPTOKINETIC RESPONSES ON AVAILABLE SENSORY SIGNALS AND THEIR CENTRAL INTERACTION
       Grigorova V., Ivanov I., Stambolieva K.

2:40  INDEPENDENT LIMBS DURING SIMPLE, BIMANUAL POINTING AND GRASPING MOVEMENTS
       Nijhof E.J.

3:00-3:20  BREAK

"SENSORIMOTOR INTERACTIONS" (continued)
Chairpersons: D. Kosarov & F. Kolb

03:20  ACQUIRING COORDINATED MOVEMENTS: MEASUREMENTS DURING RIDING A BICYCLE WITH INVERTED STEERING MECHANISM
       Gallasch E., Rafolt D.

03:40  FIRST STEPS IN FUNCTIONAL MAGNETIC STIMULATION (FMS)-INDUCED MOVEMENTS OF THE FOREARM AND FINGERS VIA CLOSED-LOOP CONTROLLED FMS IN ORDER TO ACTIVATE NEUROMODULATION
       Havel P., Struppler A.

04:00  INFORMATION THEORETIC ANALYSIS OF MUSCLE SPINDLES
       Tock Y., Ljubisavljevic M., Thunberg J., Windhorst U., Inbar G. F., Johansson H.

06:00  CLOSING CEREMONY

Thursday 12th October - SOCIAL PROGRAMME, EXCURSION

Notes for participants:
    The Registration Desk will be open Sunday 8th October from 9.00 p.m. until 6.00 p.m. and Monday 9th October from 8.30 until noon. The Information Desk will be open Sunday 8th October from 9.00 p.m. until 6.00 p.m., Monday 9th October from 8.30 until the end of scientific programme. The other days the Information Desk will be open 30 minutes before the scientific programme until its end.
    The OFFICIAL DINNER and EXCURSION are not included in the registration fee.