

Neural Prosthesis Seminar

"Targeted Neurostimulation Peripheral Nerve: Branches, Field "

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Inamori Center, Crawford Hall

Case Western Reserve University



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Abstract:

As experience with SCS grew it became obvious that deficiencies in its ability to achieve good control of pain in certain body regions could not be overcome by equipment improvement or techniques alone. Targeted areas in the trunk and extremities would be better served if PNS of nerve trunks or branches were used. Development of PNS is handicapped by a lack of research, prospective controlled studies in appropriate populations, equipment and the education of individuals who should have a vested interest in the field. Functional electrical stimulation has been much more successful in addressing all the foregoing areas for movement disorders. During the past few years, a number of factors have contributed to the realization that PNS has an important role in pain therapy. An increasing number of case reports and prospective studies, the recent interest in, peripheral nerve field stimulation (PNFS) and a willingness by organized medicine to promote the development of this field. This in turn has peaked the interest of industry and sources of funding without which progress in addressing all of the technical aspects of PNS, development would not be possible. Development of a neural interface distinct from current practice cf. of model T vs Ferrari – will require a major investment of time, research and technical development. Much is already available from the space industry and industrial applications.

For more information, please contact Cheryl Dudek at (216) 231-3257.

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