

References

- A. Asres, H. Dou, Z. Zhou, Y. Zhang, and S. Zhu., "A Combination of AR and Neural Network Technique for EMG Pattern Identification," In *Proceedings of 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, IEEE, 1996, v. 4, pp. 1464-1465.
- A.A. Atteya, "Biofeedback Traction versus Conventional Traction in Cervical Radiculopathy," *Neurosciences (Riyadh, Saudi Arabia)*, 2004, v. 9, n. 2, pp. 91-93.
- A. Binder, "The Diagnosis and Treatment of Nonspecific Neck Pain and Whiplash." *Europa medicophysica*, 2007, v. 43, n. 1, 79.
- A. Chaudhuri, and P. O. Behan, "Fatigue in Neurological Disorders," *The lancet*, 2004, v. 363, n. 9413, pp. 978-988.
- A. Goen, and D.C. Tiwari, "Review of Surface Electromyogram Signals: its Analysis and Applications," *World Academy of Science, Engineering and Technology, International Journal of Electrical, Computer, Energetic, Electronic and Communication Engineering*, 2013, v. 7, n. 11, pp. 1429-1437.
- A. Jellad, Z.B. Salah, S. Boudokhane, H. Migaou, I. Bahri, and N. Rejeb, "The Value of Intermittent Cervical Traction in Recent Cervical Radiculopathy," *Annals of Physical and Rehabilitation Medicine*, 2009, v. 52, n. 9, pp.638-652.
- A. Jordan, T. Bendix, H. Nielsen, F.R. Hansen, D. Høst, and A. Winkel, "Intensive Training, Physiotherapy, or Manipulation for Patients with Chronic Neck Pain: A Prospective, Single-Blinded, Randomized Clinical Trial," *Spine*, 1998, v. 23, n. 3, pp. 311-318.
- A. Phinyomark, A. Nuidod, P. Phukpattaranont, C. Limsakul, "Feature Extraction and Reduction of Wavelet Transform Coefficients for EMG Pattern Classification," *Elektronika ir Elektrotechnika*, 2012, v. 122, n. 6, pp. 27-32.
- A. Phinyomark, C. Limsakul and P. Phukpattaranont, "Application of Wavelet Analysis in EMG Feature Extraction for Pattern Classification," *Measurement Science Review*, 2011, v. 11, n. 2, pp. 45-52.
- A. Phinyomark, C. Limsakul, P. Phukpattaranont, "A Novel Feature Extraction for Robust EMG Pattern Recognition," *arXiv preprint arXiv: 0912.3973*, 2009.
- A. Phinyomark, P. Phukpattaranont, and C. Limsakul, "Feature Reduction and Selection for EMG Signal Classification," *Expert Systems with Applications*, 2012, v. 39, n. 8, pp. 7420-7431.

- A. Romeo, C. Vanti, V. Boldrini, M. Ruggeri, A.A. Guccione, P. Pillastrini, and L. Bertozzi, "Cervical Radiculopathy: Effectiveness of Adding Traction to Physical Therapy—A Systematic Review and Meta-analysis of Randomized Controlled Trials," *Physical Therapy*, 2018, v. 98, n. 4, pp.231-242.
- A. Schlogl, J. Kronegg, J. Huggins, and S. Mason, "Evaluation Criteria for BCI Research," *Toward Brain-Computer Interfacing*, 2007, 19.
- A. Subasi and M.K. Kiymik, "Muscle Fatigue Detection in EMG Using Time-Frequency Methods, ICA and Neural Networks," *Journal of Medical Systems*, (2010), v. 34, n. 4, pp. 777-785.
- A.Wang, W. Yuan, J. Liu, Z. Yu, and H. Li, "A Novel Pattern Recognition Algorithm: Combining ART Network with SVM to Reconstruct a Multi-class Classifier," *Computers & Mathematics with Applications*, 2009, 57(11-12), pp.1908-1914.
- A.Alkan, and M. Günay, "Identification of EMG Signals Using Discriminant Analysis and SVM Classifier," *Expert Systems with Applications*, 2012, v. 39, n.1, pp.44-47.
- A. Goen, and D.C. Tiwari, "Review of Surface Electromyogram Signals: its Analysis and Applications," *World Academy of Science, Engineering and Technology, International Journal of Electrical, Computer, Energetic, Electronic and Communication Engineering*, 2013, v. 7, n. 11, pp. 1429-1437.
- A.J. Fridlund, J.T. Cacioppo, "Guidelines for Human Electromyography Research," *Psychophysiology*, 1986, v. 23, pp.567-589.
- A.J. Fridlund and J.T. Cacioppo, "Guidelines for Human Electromyographic Research," *Psychophysiology*, 1986, v. 23, n. 5, pp. 567-589.
- A.L. Hof "Errors in Frequency Parameters of EMG Power Spectra," *IEEE Transactions on Biomedical Engineering*, 1991, v. 38, n. 11, pp. 1077-1088.
- A.L. Hof, "EMG and Muscle Force: An Introduction," *Human Movement Science*, 1984, v. n. 3 (1-2), pp.119-153.
- A.M.K Wong, M.Y. Lee, W.H. Chang, and F.T. Tang, "Clinical Trial of A Cervical Traction Modality With Electromyographic Biofeedback1," *American Journal of Physical Medicine & Rehabilitation*, v. 76, n. 1, pp.1997, 19-25.
- A.O. Ojoawo, A. Olabode, O. Esan, A. Badru, S. Odejide, and B. Arilewola, "Therapeutic Efficacy of Cervical Traction in the Management of Cervical Radiculopathy: A Control Trial," *Rwanda Journal of Health Sciences*, 2013, v. 2, n. 2, pp. 25-29.

- A.P.M.C. Carvalho Silva, A. Alexandre Acedo, A. Ludovice Carolina Antunes, M. G. Dos Santos, T. Yukio Fukuda, A. Apolinário, and P.H. Andrade Finotti, "Electromyography Analysis of Upper Trapezius Relaxation Induced by Interferential Current in Subjects with Neck Discomfort," *Journal of Applied Research*, 2011, v. 11, no. 1.
- A.R. Hafez, "Intermittent Versus Sustained Cervical Traction in Treatment of Cervical Spondylosis," *Bulletin of Faculty of Physical Therapy*, 2009, v. 14, n. 2.
- Allan I. Binder, "Cervical Spondylosis and Neck Pain," *Bmj*, 2007, v. 334, n. 7592, pp. 527-531.
- B. Bagheripour, M. Kamyab, F. Azadinia, A. Amiri, and M. Akbari, "The Efficacy of a Home-Mechanical Traction Unit for Patients with Mild to Moderate Cervical Osteoarthritis: A Pilot Study," *Medical Journal of the Islamic Republic of Iran*, 2016, v. 30, p.386.
- B. Bigland-Ritchie, D. A. Jones, G. P. Hosking, and R. H. T. Edwards, "Central and Peripheral Fatigue in Sustained Maximum Voluntary Contractions of Human Quadriceps Muscle," *Clinical Science*, 1978, v. 54, n. 6, pp. 609-614.
- B. Savva, and G. Giakas, "The Effect of Cervical Traction combined with Neural Mobilization on Pain and Disability in Cervical Radiculopathy. A Case Report," *Manual Therapy*, 2013, v. 18, n. 5, pp. 443-446.
- B. Ma C. Li, Wu Z, Huang Y, van der Zijp-Tan AC, Tan S, Li D, Fong A, Basetty C, Borchert GM, Huang J., "A PWM-Based Muscle Fatigue Detection and Recovery System," *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, 2018 Dec 3, pp. 1013-1016.
- B.N. Green, "A Literature Review of Neck Pain Associated with Computer Use: Public Health Implications," *The Journal of the Canadian Chiropractic Association*, 2008, v. 52, n. 3 pp. 161.
- C. Cortes and V. Vapnik, "Support-Vector Networks," *Machine Learning*, 1995, v. 20, n. 3, pp. 273-297.
- C. Cai, G. Ming, and L.Y. Ng, "Development of a Clinical Prediction Rule to Identify Patients With Neck Pain who are Likely to Benefit from Home-Based Mechanical Cervical Traction," *European Spine Journal*, 2011, v. 20, n. 6, pp.912-922.
- C.J. De Luca, "Surface Electromyography: Detection and Recording," *DelSys Incorporated*, 2002, v. 10, n. 2011, pp. 36.

- C.J. De Luca, "The Use of Surface Electromyography in Biomechanics," *Journal of Applied Biomechanics*, 1997, v. 13, n. 2, pp. 135-63.
- C.J. De Luca, Adam Alexander, Wotiz Robert, L.D. Gilmore, and S. Hamid Nawab, "Decomposition of Surface EMG Signals," *Journal of Neurophysiology*, 2006, v. 96, n. 3 pp. 1646-1657.
- C.M. Bono, G. Ghiselli, T.J. Gilbert, D.S. Kreiner, C. Reitman, J.T. Summers, J.L. Baisden et al. "An Evidence-Based Clinical Guideline for the Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders," *The Spine Journal*, 2011, v. 11, n.1, pp. 64-72.
- C.M. Sommerich, J.D. McGlothlin, and W.S. Marras, "Occupational Risk Factors Associated with Soft Tissue Disorders of the Shoulder: a Review of Recent Investigations in the Literature," *Ergonomics*, 1993, v. 36, n. 6, pp. 697-717.
- C.R. Pereira, D.R. Pereira, S.A. Weber, C. Hook, V.H.C. de Albuquerque, and J.P. Papa, "A Survey on Computer-Assisted Parkinson's Disease Diagnosis," *Artificial Intelligence in Medicine*, 2018.
- C.Savva, and G. Giakas, "The Effect of Cervical Traction Combined with Neural Mobilization on Pain and Disability in Cervical Radiculopathy. A Case Report," *Manual Therapy*, 2013, v. 18, n. 5, pp. 443-446.
- C.W. Hsu, C.C. Chang, and C.J. Lin., "A Practical Guide to Support Vector Classification," 2003, pp. 1-16.
- C. Wang, F. Tian, Y. Zhou, W. He, Z. Cai, "The Incidence of Cervical /Spondylosis Decreases with aging in the Elderly, and Increases with Aging in the Young and Adult Population: A Hospital-based Clinical Analysis," *Clinical Interventions*, 2016, v. 11, p. 47.
- D. Bid, A.T. Ramalingam, J.A. Bhatt, P.N. Rathod, K.V. Tandel, and S.S. Tandel, "The Effectiveness of Mechanical Cervical Traction on Patients with Unilateral Mechanical Neck Pain," *Indian Journal of Physiotherapy & Occupational Therapy*, 2014, v. 8, n. 3.
- D. Deets, K.L. Hands, and S. Sandra Hopp, "Cervical traction: A Comparison of Sitting and Supine Positions," *Physical Therapy*, 1977, v. 57, n. 3, pp. 255-261.
- D. Falla, A. Rainoldi, R. Merletti, and G. Jull, "Myoelectric Manifestations of Sternocleidomastoid and Anterior Scalene Muscle Fatigue in Chronic Neck Pain Patients," *Clinical Neurophysiology*, 2003, v. 114, n. 3, pp. 488-495.
- D. Farina, and F. Negro, "Accessing the Neural Drive to Muscle and translation to Neurorehabilitation Technologies," *IEEE Reviews in Biomedical Engineering*, 2012, v. 5, pp. 3-14.

- D. Roth, A. Mukai, P. Thomas, P. Hudgins, T. H., & J.T. Alleva, "Cervical Radiculopathy. *Dis Mon*," v. 55, n. 12, pp. 737-756.
- D. Shaw, C.R. Huang, "Assessing Muscle Fatigue by Measuring the EMG of Biceps Brachii," In *2010 3rd International Conference on Biomedical Engineering and Informatics*, IEEE 2010, v. 2, pp. 773-777.
- D. Tkach, H. Huang, and T.A. Kuiken, "Study of Stability of Time-Domain Features for Electromyographic Pattern Recognition," *Journal of Neuroengineering and Rehabilitation*, 2010, v. 7, n. 1, 21.
- D.B. Chaffin, "Localized Muscle Fatigue—Definition and Measurement," *Journal of Occupational and Environmental Medicine*, 1973, v. 15, n. 4, pp. 346-354.
- D.C. Fater, and T.W. Kernozek, "Comparison of Cervical Vertebral separation in the Supine and Seated Positions using Home traction Units," *Physiotherapy Theory and Practice*, 2008, v. 24, n. 6, pp. 430-436.
- D.G. Thelen, A.B. Schultz, S.D. Fassois, and J.A. Ashton-Miller, "Identification of Dynamic Myoelectric Signal-to-Force Models during Isometric Lumbar Muscle Contractions," *Journal of Biomechanics*, 1994, v. 27, n.7, pp. 907-919.
- D.H. Peterson and T.F. Bergman, "Chiropractic Technique: Principles and Procedures," *United States of America*, Mosby (2002).
- D.S.K. chun, Y.J. Lee, S.W. Cho, I.Youn, "Study on Muscle Fatigue Measurement During Elbow Flexion-Extension Using EMG and Open Sim," *Researches and Application in Mechanical Engineering*, 2015, v.4.
- D.U. Jette, J.E. Falkel, and C. Trombly, "Effect of Intermittent, Supine Cervical Traction on the Myoelectric Activity of the Upper Trapezius Muscle in Subjects with Neck Pain," *Physical Therapy*, 1985, v. 65, n. 8, pp. 1173-1176.
- E.A. Clancy, and N. Hogan, "Relating Agonist-Antagonist Electromyograms to Joint Torque during Isometric, Quasi-isotonic, Nonfatiguing Contractions," *IEEE Transactions on Biomedical Engineering*, 1997, v. 44, n. 10. pp. 1024-1028.
- E.B. Hunt, Marin and P.J. stone, "Experiments in Inductions," Newyork: Academic Press, 1966.
- E.H. Shroffe, and P. Manimegalai, "Hand Gesture Recognition Based on EMG Signals Using ANN." *International Journal of Computer Application*, 2013, v. 3, n. 2, pp.31-39.

- E.J. Voltonen, K. Moller, M. Wiljasob, and B. Arate, "Comparative Radiographic Study of Intermittent and Continuous Traction on Elongation of Cervical Spine," *J. Ann. Med. Intern*, 1996, v. 57, pp. 143-146.
- F.G. DeLacerda, "Effect of Angle of Traction Pull on Upper Trapezius Muscle Activity," *Journal of Orthopedic & Sports Physical Therapy*, 1980, v. 1, n. 4, pp. 205-209.
- F.J. Valero-Cuevas, M.E. Johanson, and J.D. Towles, "Towards a Realistic Biomechanical Model of The Thumb: The Choice of Kinematic Description May be More Critical than The Solution Method or The Variability Uncertainty of Musculoskeletal Parameters," *Journal of Biomechanics*, 2003, v. 36, n. 7, pp. 1019-1030.
- G. Bovim, H. Schrader and T. Sand, "Neck Pain in the General Population," *Spine*, 1994, v. 19, n.12, pp. 1307-1309.
- G. Drost, D.F. Stegeman, B.G. van Engelen, and M.J. Zwarts, "Clinical applications of high-density surface EMG: a systematic review," *Journal of Electromyography and Kinesiology*, 2006, v.16, n. 6, pp.586-602.
- G. Ozmen and A.H. Ekmekci, "Classification of Cervical Disc Herniation Disease using Muscle Fatigue Based Surface EMG Signals by Artificial Neural Networks," *International Journal of Intelligent Systems and Applications in Engineering*, 2017, v. 5, n. 4, pp. 256-262.
- G. Sundelin and M. Hagberg, "Electromyographic Signs of Shoulder Muscle Fatigue in Repetitive Arm Work Paced by the Methods-Time Measurement System," *Scandinavian journal of Work, Environment & Health*, 1992, pp. 262-268.
- G. Sundelin and M. Hagberg, "Electromyographic Signs of Shoulder Muscle Fatigue in Repetitive Arm Work Paced by the Methods-Time Measurement System," *Scandinavian journal of Work, Environment & Health*, 1992, pp.262-268.
- G.V. Dimitrov, T. I. Arabadzhiev, J-Y. Hogrel, and N. A. Dimitrova, "Simulation Analysis of Interference EMG during Fatiguing Voluntary Contractions. Part II—Changes in Amplitude and Spectral Characteristics," *Journal of Electromyography and Kinesiology*, 2008, v. 18, n. 1, pp. 35-43.
- G.E. Berrios, "Feelings of Fatigue and Psychopathology: a Conceptual History," *Comprehensive Psychiatry*, 1990, v. 31, n. 2, pp.140-151.
- G.J. van der Heijden, A.J. Beurskens, B.W. Koes, W.J. Assendelft, H.C. de Vet, and L.M. Bouter, "The Rfficacy of Traction for Back and Neck Pain: A Systematic, Blinded Review of Randomized Clinical Trial Methods," *Physical Therapy*, 1995, v. 75, n. 2, pp.93-104.

- G.L. Gottlieb, and G.C. Agarwal, "Dynamic Relationship between Isometric Muscle Tension and the Electromyogram in Man," *Journal of Applied Physiology*, 1971, v. 30, n. 3, pp. 345-351.
- G.R. Dattatreya, and L.N., Kanal, "Adaptive Pattern Recognition with Random Costs and its Application to Decision Trees," *IEEE Transactions on Systems, Man, and Cybernetics*, 1986, v. 16, n. 2, pp.208-218.
- G.R. Thukral, M. Singh, "Analysis of EMG Signals Based on Wavelet Transform – A Review," *Journal of Emerging Technologies and Innovative Research*, July 2015, v. 2, n. 7.
- H. Ali, R.H. Nasir, D. Hassan, "Effectiveness of Cervical Mobilization and Cervical Traction in Management of Nonspecific Neck Pain," *Journal of Riphah of Rehabilitation Sciences*, 2015, v. 3, n. 2, pp. 80-85.
- H. Dong, I. Ugalde, N. Figueroa, and A. El Saddik, "Towards Whole Body Fatigue Assessment of Human Movement: A Fatigue-Tracking System Based on Combined SEMG and Accelerometer Signals," *Sensors*, 2014, v. 14, n. 2, pp. 2052-2070.
- H. Safoura, A. Asadollah, Vahid Sobhani, Aref Mohseni, and Eyoup Arazi, "Comparison of Neck and Shoulder Strengthening Exercises with Weights, Traction Plus Physiotherapy, and Acupuncture in the Treatment of Patients with Chronic Cervical Disk Herniation," *International Journal of Scientific Research in Knowledge*, 2015, v. 3, n. 4, pp. 114.
- H. Sharma and N. Patel, "Effectiveness of Tens Versus Intermittent Cervical Traction in Patients with Cervical Radiculopathy," *International Journal of Physiotherapy and Research*, 2014, v. 2, pp.787-92.
- H. Vernon, K. Humphreys, and C. Hagino, "Chronic Mechanical Neck Pain in Adults Treated by Manual Therapy: A Systematic Review of Change Scores in Randomized Clinical Trials," *Journal of Manipulative and Physiological Therapeutics*, 2007, v. 30, n. 3, pp. 215-227.
- H. Yoshimatsu, K. Nagata, H. Goto, K. Sonoda, N. Ando, H. Imoto, T. Mashima, and Y. Takamiya, "Conservative Treatment for Cervical Spondylotic Myelopathy: Prediction of Treatment Effects by Multivariate Analysis," *The Spine Journal*, 2001, v.1, n. 4, pp. 269-273.
- I.A.Young, L.A. Michener, J.A. Cleland, A.J.Aguilera and A.R. Snyder, "Manual Therapy, Exercise, and Traction for Patients with Cervical Radiculopathy: a Randomized Clinical Trial," *Physical Therapy*, 2009, v. 89, n. 7, pp.632-642.

- I.B.C Korthals-de Bos, M. Müllner, J.L. Hoving, M. W. van Tulder, M.P. Rutten-van Mölken, H.J. Adèr, H.C. de Vet, B.W. Koes, H. Vondeling, L.M. Bouter, “Cost Effectiveness of Physiotherapy, Manual Therapy, and General Practitioner Care for Neck Pain: Economic Evaluation Alongside a Randomised Controlled Trial Commentary: Bootstrapping Simplifies Appreciation of statistical Inferences,” *Bmj*, 2003, v. 326, n. 7395, pp. 911-914.
- I.M. Elnaggar, H.R. Elhabashy and E. Abd El-Menam, “Influence of Spinal Traction in Treatment of Cervical Radiculopathy,” *Egypt J Neurol Psychiat Neurosurg*, 2009, v. 46, pp.455-460.
- J. Hartvigsen, K. Christensen, and H. Frederiksen, “Back and Neck Pain exhibit Many Common Features in Old Age: A Population-Based Study of 4,486 Danish twins 70–102 Years of Age,” *Spine*, 2004, v. 29, n. 5 pp. 576-580.
- J. Jerome, “Virtual Instrumentation Using LabVIEW,” PHI Learning Pvt. Ltd., 2010.
- J. Kim, S. Mastnik, E. Andre, “EMG based Hand Gesture Recognition for Real time Biosignal Interfacing,” *ACM*, 2008, pp.978-987.
- J. Kim, S. Mastnik, E. André, “EMG-Based Hand Gesture Recognition for Real Time Biosignal Interfacing, In Proceedings of the 13th International Conference on Intelligent User Interfaces 30-39, ACM, 2008.
- J.L. Hoving, H.C., de Vet, B.W. Koes, , H. van Mameren, W.L. Devillé, Windt van der, D.A. Assendelft, W.J. Pool, J.J. Scholten, R.J. Korthals–de Bos, I.B. and L.M., Bouter, “Manual Therapy, Physical Therapy, or Continued Care by the General Practitioner for Patients with Neck Pain: Long-Term Results from a Pragmatic Randomized Clinical Trial,” *The Clinical Journal of Pain*, 2006, v. 22, n. 4, pp.370-377.
- J. Pauk, “Different Techniques for EMG Signal Processing,” *Journal of Vibroengineering. – Vibroengineering*, 2008, v.10, n. 4, pp.571-576.
- J. Ragonese, “A Randomized Trial Comparing Manual Physical Therapy to Therapeutic Exercises, to a Combination of Therapies, for the Treatment of Cervical Radiculopathy,” *Orthop Phys Ther Pract*, 2009, v. 21, n. 3, pp. 71-76.
- J. Shafer, R. Agrawal and M. Mehta, “Sprint: A Scalable Parallel Classifier for Data Mining,” *Proceeding of the 22nd International Conference on very large data base* 1996.
- J. Ylinen, H. Kautiainen, K. Wirén, and A. Häkkinen, “Stretching Exercises vs Manual Therapy in Treatment of Chronic Neck Pain: A Randomized Controlled Cross-Over Trial,” *Journal of Rehabilitation Medicine*, 2007 v. 39, n. 2, pp.126-132.

- J.A. Ashton-Miller, A.B. Schultz, "Biomechanics of the Human Spine," *Basic Orthopaedic Biomechanics*, 1997, v. 2, pp. 353-385.
- J.A. Cleland, J.M. Fritz, J.M. Whitman and R. Heath, "Predictors of Short-Term Outcome in People with a Clinical Diagnosis of Cervical Radiculopathy," *Physical therapy*, 2007, v. 87, n. 12, pp.1619-1632.
- J.A. Cleland, J.M. Whitman, J.M. Fritz, and J.A. Palmer, "Manual Physical Therapy, Cervical Traction, and Strengthening Exercises in Patients with Cervical Radiculopathy: a Case Series," *Journal of Orthopedic & Sports Physical Therapy*, 2005, v. 35, n. 12, pp. 802-811.
- J.A. Lucca and S.J. Recchiuti, "Effect of Electromyographic Biofeedback on An Isometric Strengthening Program," *Physical Therapy*, 1983, v. 63, n. 2, pp. 200-203.
- J.D. Yang, K.W. Tam, T.W. Huang, S.W. Huang, T.H. Liou, and H.C. Chen, "Intermittent Cervical Traction for Treating Neck Pain: A Meta-analysis of Randomized Controlled Trials," *Spine*, 2017, v. 42, n. 13, pp. 959-965.
- J.H. Choi, M.H. Jung and K.T. Yoo, "An Analysis of the Activity and Muscle Fatigue of the Muscles around the Neck under the three most Frequent Postures While using a Smartphone," *Journal of Physical Therapy Science*, 2016, v.28, n. 5, pp.1660-1664.
- J.H. Jang, T.H. Kim, and J.S. Oh, "Effects of Visual Display Terminal Works on Cervical Movement Pattern in Patients with Neck Pain," *Journal of Physical Therapy Science*, 2014, v. 26, n. 7, pp. 1031-1032.
- J.H. Kang, and T.S. Park, "Changes in Cervical Muscle Activity According to the Traction Force of an Air-Inflatable Neck Traction Device," *Journal of Physical Therapy Science*, 2015, v. 27, n. 9, pp. 2723-2725.
- J.J. Wan, Z. Qin, P.Y.Wang, Y. Sun, and X. Liu., "Muscle Fatigue: General Understanding and Treatment," *Experimental & Molecular Medicine*, 2017, v. 49, n. e384.
- J.L. Hoving, , B.W. Koes, H.C. de Vet, D.A. van der Windt, W.J. Assendelft, H. van Mameren, W.L. Devillé, J. J. Pool, R.J. Scholten, and L.M. Bouter, "Manual Therapy, Physical Therapy, or Continued Care by a General Practitioner for Patients with Neck Pain: A Randomized Controlled Trial," *Annals of Internal Medicine*, 2002, v. 136, n. 10, pp. 713-722.
- J.M. Fritz, A. Thackeray, G.P. Brennan, and J.D. Childs, "Exercise Only, Exercise with Mechanical Traction, or Exercise with Over-Door Traction for Patients with Cervical Radiculopathy, With or Without Consideration of Status on a

- Previously Described Subgrouping Rule: A Randomized Clinical Trial,” *Journal of Orthopaedic & Sports Physical Therapy*, 2014, v. 44, n. 2, pp. 45-57.
- J.Pauk, “Different Techniques for EMG Signal Processing,” *Journal of Vibroengineering*, 2008, v. 10, n. 4, pp. 571-576.
- J.S. Petrofsky, R.M. Glaser, C.A. Phillips, A.R. LIND, and C. WILLIAMS, “Evaluation of The Amplitude and Frequency Components of The Surface EMG as an Index of Muscle Fatigue,” *Ergonomics*, 1982, v. 25, n. 3, pp. 213-223.
- J.V. Basmajian, “Research Foundations of EMG Biofeedback in Rehabilitation,” *Biofeedback and Self-Regulation*, 1988, v. 13, n. 4, pp. 275-298.
- J.W. Caldwell, and E.M. Krusen, “Effectiveness of Cervical Traction in Treatment of Neck Problems: Evaluation of Various Methods,” *Archives of Physical Medicine and Rehabilitation*, 1962, v. 43, pp. 214-221.
- K. Khan, S. Yasmeen, F. Ishaque, F. Imdad, W. Lal, S.A. Sheikh, N. Kumar, and S. Khanzada, “Effectiveness of Manual Traction and Other Physiotherapy Treatment in the Management of Painful Cervical Radiculopathy,” *International Journal of Physiotherapy*, 2016, v. 3, n. 3, pp. 286-290.
- K. Khan, S. Yasmeen, F. Ishaque, F. Imdad, W. Lal, S.A. Sheikh, N. Kumar and S. Khanzada, “Effectiveness of Manual Traction and other Physiotherapy Treatment in The Management of Painful Cervical Radiculopathy,” *International Journal of Physiotherapy*, 2016, v. 3, n. 3, pp.286-290.
- K. Kiran, and K. Uma Rani, “Analysis of EMG Signal to Evaluate Muscle Strength and Classification,” *International Research Journal of Engineering and Technology*, 2017, pp 177-182.
- K. Kroenke, D.R. Wood, A.D. Mangelsdorff, N.J. Meier and J.B. Powell, “Chronic Fatigue in Primary Care: Prevalence, Patient Characteristics, and Outcome,” 1988, *Jama* v. 260, n. 7, pp. 929-934.
- K. Nazarpour, A.H. Al-Timemy, G. Bugmann, and A. Jackson, “A Note on the Probability Distribution Function of the Surface Electromyogram Signal,” *Brain Research Bulletin*, 2013, v. 90, pp.88-91.
- K.B. Norheim, G. Jonsson, and R. Omdal, “Biological Mechanisms of Chronic Fatigue,” *Rheumatology*, 2011, v. 50, n. 6, pp.1009-1018.

- K.K. Bosmia and J. R. Kotwal, "Comparison between the Effectiveness of Manual Mulligan traction and intermittent electric traction in cervical spondylosis," *IOSR Journal of Nursing and Health Science*, 2015, v. 4, n. 5, pp. 59-64.
- L. Faller, G.N. Nogueira Neto, V.L. Button, and P. Nohama, "Muscle Fatigue Assessment by Mechanomyography during Application of NMES Protocol," *Brazilian Journal of Physical Therapy*, 2009, v. 13, n. 5, pp.422-429.
- L. Manchikanti, V. Singh, J. Rivera, and V. Pampati, "Prevalence of cervical facet joint pain in chronic neck pain," *Pain Physician*, 2002, v. 5, n. 3, pp. 243-249.
- L. Mesin, R. Merletti, A. Rainoldi, "Surface EMG: The Issue of Electrode Location," *Journal of Electromyography and Kinesiology*, 2009, v. 19, n. 5, pp. 719-726.
- L.A. Parker, "An EMG Study of the Effectiveness of Intermittent Cervical Traction on Tension Reduction of the Upper Trapezius and Posterior Neck Muscles," PhD diss., Boston University, 1978.
- L.K. Wong, Z. Luo, & N. Kurusu, "The Effect of Traction Position in Cervical Traction Therapy Based on Dynamic Simulation Models," *Journal of Biomedical Science and Engineering*, 2017, v. 10, n. 5, pp. 243.
- M. A. Shakoor, M. S. Ahmed, G. Kibria, A. A. Khan, M. A. Mian, S. A. Hasan, S. Nahar, and M. A. Hossain, "Effects of cervical traction and exercise therapy in cervical spondylosis," *Bangladesh Medical Research Council Bulletin*, 2002, v. 28, n. 2, pp. 61-69.
- M. Akbari and M. Bayat, "Effects of Intermittent Traction in Patients with Cervical Osteoarthritis," *Medical Journal of the Islamic Republic of Iran (MJIRI)* 24, no. 1 (2010): 23-28.
- M. Cifrek, V. Medved, S. Tonković and S. Ostojić, "Surface EMG Based Muscle Fatigue Evaluation in Biomechanics," *Clinical Biomechanics*, 2009, v. 24, n. 4, pp.327-340.
- M. González-Izal, A. Malanda, E. Gorostiaga, and M. Izquierdo, "Electromyographic Models to Assess Muscle Fatigue," *Journal of Electromyography and Kinesiology*, 2012, v. 22, n. 4, pp. 501-512.
- M. Gruet, J. Temesi, T. Rupp, P. Levy, G. Y. Millet, and Samuel Verges., "Stimulation of the Motor Cortex and Corticospinal Tract to Assess Human Muscle fatigue," *Neuroscience*, 2013, 231, pp. 384-399.
- M. Hagberg, "Work Load and Fatigue in Repetitive Arm Elevations," *Ergonomics*, 1981, v. 24, n. 7, pp. 543-555.

- M. Hagberg, and D.H. Wegman, "Prevalence Rates and Odds Ratios of Shoulder-Neck Diseases in Different Occupational Groups," *Occupational and Environmental Medicine*, 1987, v. 44, n. 9, pp. 602-610.
- M. Kaur, S. Singh, and D. Shaw, "Advancements in Soft Computing Methods for EMG Classification," *International Journal of Biomedical Engineering and Technology*, 2016, v. 20, n. 3, pp. 253-271.
- M. Krause, K.M. Refshauge, M. Dessen, and R. Boland, "Lumbar Spine Traction: Evaluation of Effects and Recommended Application for Treatment," *Manual Therapy*, 2000, v. 5, n. 2, pp. 72-81.
- M. Lascu, and D. Lascu, "Graphical Programming Based Biomedical Signal Acquisition and Processing" *International Journal of Circuits, Systems and Signal Processing*, 2007, v. 1, n. 4, 317-326.
- M. Nanno, "Effects of Intermittent Cervical Traction on Muscle Pain. Flowmetric and Electromyographic Studies of the Cervical Paraspinal Muscles," *Nihon Ika Daigaku zasshi*, 1994, v. 61, n. 2, pp. 137-147.
- M. Rinke, "The Effect of Manual Cervical Traction versus Mechanical Cervical Traction in the Treatment of Chronic Neck Pain," PhD diss., *University of Johannesburg*, 2014.
- M. T. Joghataei, A.M. Arab and H. Khaksar, "The Effect of Cervical Traction Combined with Conventional Therapy on Grip Strength on Patients with Cervical Radiculopathy," *Clinical Rehabilitation*, 2004, v. 18, no. 8, pp. 879-887.
- M. Umar, A. Naeem, M. Badshah, and I. Amjad, "Effectiveness of Cervical Traction Combined with Core Muscle Strengthening exercises in Cervical radiculopathy: A Randomized Control Trial," *J. Public Health Biol. Sci.* 1, 2012, pp. 115-120.
- M. Yochum, S. Binczak, T. Bakir, S. Jacquir, and R. Lepers, "A Mixed FES/EMG System for Real Time Analysis of Muscular Fatigue," In 2010 Annual International Conference of the IEEE Engineering in Medicine and Biology, IEEE 2010, pp. 4882-4885).
- M. Yochum, T. Bakir, R. Lepers, and S. Binczak, "Estimation of Muscular Fatigue Under Electromyostimulation using CWT," *IEEE Transactions on Biomedical Engineering*, 2012, v. 59, n. 12, pp.3372-3378.
- M.A. Oskoei and H. Huosheng, "Support Vector Machine-based Classification Scheme for Myoelectric Control Applied to Upper limb." *IEEE Transactions on Biomedical Engineering*, 2008, v. 55, n. 8, pp. 1956-1965.

- M.B.I. Reaz, M.S. Hussain and F. Mohd-Yasin, "Techniques of EMG signal analysis: detection, processing, classification and applications," *Biological procedures online*, 2006, v. 8, n. 1, p.11.
- M.C. Garcia and T. M. M. Vieira, "Surface Electromyography: Why, When and How to Use it," *Revista Andaluza de Medicina Del Deporte*, 2011, v. 4, n. 1, pp. 17-28.
- M.D. Sarfaraj, Dr. Deepali, "Effectiveness of Manual Cervical Traction and Mechanical Cervical Traction with Neural Mobilization in Cervical Radiculopathy," *International Journal of Advance Research and Development*, 2018, v. 3, n. 5, pp. 114-119.
- M.H.B. Helmi, C.S. Ping, N.E.B. Ishak, M.A.B.M. Saad, and A.S.N.B. Mokhtar "Assessment of muscle fatigue using electromyographm sensing," In *AIP Conference Proceeding*, 2017August, v. 1875, n. 1, p. 030019). AIP Publishing.
- M.J. Levine, T.J. Albert, and M.D. Smith, "Cervical Radiculopathy: Diagnosis and Nonoperative Management," *JAAOS-Journal of the American Academy of Orthopaedic Surgeons*, 1996, v. 4, n. 6, pp.305-316.
- M.J. Murphy, "Effects of Cervical Traction on Muscle Activity," *Journal of Orthopedic & Sports Physical Therapy*, 1991, v. 13, n. 5, pp. 220-225.
- M.J. Walker, R.E. Boyles, B.A. Young, J.B. Strunce, M.B. Garber, J.M. Whitman, G. Deyle, and R.S. Wainner, "The Effectiveness of Manual Physical Therapy and Exercise for Mechanical Neck Pain: A Randomized Clinical Trial," *Spine*, 2008, v.33, n. 22, pp. 2371-2378.
- M.L. Rammel, "Relationship Between Therapist Body Weight and Manual Traction Force on the Cervical Spine," *Journal of Orthopaedic & Sports Physical Therapy*, 1989, v. 10, n. 10, pp. 408-411.
- M.M. Janković, and D.B. Popović, "An EMG System for Studying Motor Control Strategies and Fatigue," In 10th Symposium on Neural Network Applications in Electrical Engineering IEEE 2010, pp. 15-18.
- M.O. Egwu, "Relative Therapeutic Efficacy of Some Vertebral Mobilization Techniques in the Management of Unilateral Cervical Spondylosis: A Comparative Study," *Journal of Physical Therapy Science*, 2008, v. 20, n. 2, pp.103-108.
- M.R. Ahsan, M.I. Ibrahimy, and O.O. Khalifa, "Electromyography (EMG) signal based hand gesture recognition using artificial neural network (ANN)." In *2011 4th International Conference on Mechatronics (ICOM)*, pp. 1-6. IEEE, 2011.

- M.R. Al-Mulla, F. Sepulveda, and M. Colley, "A Review of Non-Invasive Techniques to Detect and Predict Localised Muscle Fatigue," *Sensors*, 2011. v. 11, n. 4, pp.3545-3594.
- M.R. Al-Mulla, F. Sepulveda, and M. Colley, "sEMG Techniques to Detect and Predict Localised Muscle Fatigue," In *EMG Methods for Evaluating Muscle and Nerve Function*. In Tech, 2012.
- M.R. Al-Mulla, F. Sepulveda, M. Colley, "sEMG Techniques to Detect and Predict Localised Muscle Fatigue."In *EMG Methods for Evaluating Muscle and Nerve Function*. IntechOpen, 2012.
- M.T.Joghataei, A.M. Arab and H. Khaksar, "The Effect of Cervical Traction Combined with Conventional Therapy on Grip Strength on Patients with Cervical Radiculopathy," *Clinical Rehabilitation*, 2004, v. 18, n. 8, pp.879-887.
- M.Y. Lee, M.K. Wong, F.T. Tang, W.H. Chang, and Y.L. Chen, "Cervical Traction using Emg Biofeedback," *IEEE Engineering in medicine and Biology Magazine*, 1996, v. 15, n. 3, pp. 83-87.
- Magee, D.J., "Orthopedic physical assessment," Elsevier Health Sciences, 2008.
- Marri, K. and Swaminathan, R., 2015, August. Classification of Muscle Fatigue Using Surface Electromyography Signals and Multifractals. In 2015 12th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD) (pp. 669-674). IEEE.
- N.A. Kamaruddin, P.I. Khalid, A.Z. Shaameri, "The Use of Surface Electromyography in Muscle Fatigue Assessments–A Review," *Jurnal Teknologi*, 2015, v. 74, n. 6.
- N.A. Kamaruddin, P.I. Khalid, A.Z. Shaameri, "The use of Surface Electromyography in Muscle Fatigue Assessments-A Review," *Jurnal Teknologi (Science and Engineering)*, 2015, pp. 105.
- N.A. Sharawardi, Y.H. Choo, S.H. Chong, A.K. Muda, and O.S. Goh, "Single Channel sEMG Muscle Fatigue Prediction: An Implementation Using Least Square Support Vector Machine," *4th World Congress on Information and Communication Technologies WICT 2014*, pp. 320-325 IEEE.
- Neck pain - Diagnosis and Treatment - Mayo Clinic. (n.d.). Retrieved November 1, 2019, from <https://www.mayoclinic.org/diseases-conditions/neck-pain/diagnosis-pain/diagnosis-treatment/drc-20375587>
- N.G. Angela Tao, R.A.L. Arora, and L. Arora, "Effectiveness of Cervical Traction on Pain and Disability in Cervical Radiculopathy," *International Journal of Recent Scientific Research*, 2015, v. 6, n. 4, 3609-3611.

- N.K. Vøllestad, "Measurement of Human Muscle Fatigue," *Journal of Neuroscience Methods*, 1997, v. 74, n. 2, pp. 219-227.
- N.R. Prabhav and S.R. Devasahayam, "Effect of Muscle Length Changes on Classification of EMG for Prosthesis Control," *International Journal of Biomedical Engineering and Technology*, 2013, v. 13, n. 2, pp. 117-132.
- P. Bartuzi, and D. Roman-Liu, "Assessment of Muscle Load and Fatigue with the Usage of Frequency and Time-Frequency Analysis of the EMG Signals," *Acta of Bioengineering and Biomechanics*, 2014, v. 16, n. 2, pp. 31-39.
- P. Borman, D. Keskin, B. Ekici, and H. Bodur, "The Efficacy of Intermittent Cervical Traction in Patients with Chronic Neck Pain," *Clinical Rheumatology*, 2008, v. 27, n. 10, 1249-1253.
- P. Côté, J.D. Cassidy, and L. Carroll, "The Epidemiology of Neck Pain: What We Have Learned from our Population-Based Studies," *The Journal of the Canadian Chiropractic Association*, 2003, v. 47, n. 4, 284.
- P. Côté, J.D. Cassidy, L.J. Carroll, and V. Kristman, "The Annual Incidence and Course of Neck Pain in the General Population: a Population-Based Cohort Study," *Pain*, 2004, v.112, n. 3, pp.267-273.
- P. Moeti, and G. Marchetti, "Clinical Outcome from Mechanical Intermittent Cervical Traction for the Treatment of Cervical Radiculopathy: A Case Series," *Journal of Orthopaedic & Sports Physical Therapy*, 2001, v. 31, n. 4, pp.207-213.
- P. Tunwattanapong, R. Kongkasuwan and V. Kuptniratsaikul, "The Effectiveness of a Neck and Shoulder Stretching Exercise Program Among Office Workers With Neck Pain: a Randomized Controlled Trial," *Clinical Rehabilitation*, 2016, pp. 30, n. 1, pp. 64-72.
- P.A. Karthick, D.M. Ghosh, and S. Ramakrishnan, "Surface Electromyography Based Muscle Fatigue Detection using High-Resolution Time-Frequency Methods and Machine Learning Algorithms," *Computer Methods and Programs in Biomedicine*, 2018, v. 154, pp.45-56.
- P.J. Pan, Tsai, P.H. Tsai, et al., "Clinical Response and Autonomic Modulation as seen in Heart Rate Variability in Mechanical Intermittent Cervical Traction: A Pilot Study." *J Rehabil Med.*, 2012, v. 44, n. 3, pp. 229-234.
- P.R. Harris "Cervical Traction: Review of Literature and Treatment Guidelines," *Physical Therapy*, 1977, v. 57, n. 8, pp. 910-914.

- Q. Que, X. Ye, Q. Su, Y. Weng, J. Chu, L. Mei, W. Huang, R. Lu, and G. Zheng, "Effectiveness of Acupuncture Intervention for Neck Pain Caused by Cervical Spondylosis: Study Protocol for a Randomized Controlled Trial," *Trials*, 2013, v. 14, n. 1, pp. 186.
- R. Boyles, P. Toy, J. Mellon, M. Hayes and B. Hammer, "Effectiveness of Manual Physical Therapy in the Treatment of Cervical Radiculopathy: A Systematic Review," *Journal of Manual & Manipulative Therapy*, 2011, v. 19, n. 3, pp.135-142.
- R. Chattopadhyay, N.C. Krishnan, and S. Panchanathan, "March. Topology Preserving Domain Adaptation for Addressing Subject Based Variability in sEMG Signal," AAI Spring Symposium Series, 2011.
- R. Chowdhury, M. Reaz, M. Ali, A. Bakar, K. Chellappan, and T. Chang., "Surface Electromyography Signal Processing and Classification Techniques," *Sensors*, 2013, v. 13, n. 9, pp. 12431-12466.
- R. Ellenberg Maury, C. Joseph Honet, and J. Walter Treanor., "Cervical Radiculopathy," *Archives of Physical Medicine and Rehabilitation*, 1994, v. 75, n. 3, pp.342-352.
- R. Fejer, K.O. Kyvik and J. Hartvigsen, "The Prevalence of Neck Pain in the World Population: a Systematic Critical Review of the Literature." *European Spine Journal*, 2006, v. 15, n. 6, pp. 834-848.
- R. Haładaj, M. Pingot, and M. Topol, "The Effectiveness of Cervical Spondylosis Therapy with Saunders Traction Device and High-Intensity Laser Therapy: A Randomized Controlled Trial," *Medical science monitor: international medical journal of experimental and clinical research*, 2017, v. 23, pp.335.
- R. Merletti, A. Botter, A. Troiano, E. Merlo, and M.A. Minetto, "Technology and Instrumentation for Detection and Conditioning of the Surface Electromyographic Signal: State of the Art," *Clinical Biomechanics*, 2009, v. 24, n. 2, pp. 122-134.
- R. Merletti, A. Rainoldi and D. Farina, "Surface Electromyography for Noninvasive Characterization of Muscle," *Exercise and Sport Sciences Reviews*, 2001, v. 29, n. 1, pp. 20-25.
- R. Merletti, P.A. Parker, and P.J. Parker, "Electromyography: Physiology, Engineering, and Non-Invasive Applications," Vol. 11. John Wiley & Sons, 2004.
- R. Rao, "Neck Pain, Cervical Radiculopathy, and Cervical Myelopathy: Pathophysiology, Natural History, and Clinical Evaluation," *JBJS*, 2002, v. 84, n.10, pp. 1872-1881.

- R. Raut, A.A. Gurjar, "Biomedical (EMG) Signal Analysis and Feature Extraction Using Wavelet Transform," *International Journal of Engineering Research and Applications*, March 2015, v.5, n. 3, pp.17-19.
- R.L. Swezey, A.M. Swezey and K. Warner, "Efficacy of Home Cervical Traction Therapy1," *American journal of physical medicine & rehabilitation*, 1999, v. 78, n. 1, pp. 30-32.
- R.N. Scott and P.A. Parker, "Myoelectric Prostheses: State of the Art," *Journal of Medical Engineering & Technology*, 1988, v. 12, n. 4, pp. 143-151.
- R.S. Dawood, O.M. Kattabei, S.A. Nasef, K.A. Battarjee, and O.R. Abdelraouf, "Effectiveness of Kinesio taping Versus Cervical Traction on Mechanical Neck Dysfunction," *International Journal of Therapies and Rehabilitation Research*, 2013, v. 2, n. 2, pp. 1.
- R.S. Reddy, A.G. Maiya, and S.K. Rao, "Effect of Dorsal Neck Muscle Fatigue on Cervicocephalic Kinaesthetic Sensibility," *Hong Kong Physiotherapy Journal*, 2012. v. 30, n. 2, pp. 105-109.
- R.S. Wood, "The Effect of Intermittent, Mechanical Cervical Traction in the Chiropractic Management of Mechanical Neck Pain," PhD diss., 1998.
- Raman Dev and Ajai Kumar Singh, "Performance Analysis of Classifiers for EMG Signal of Different Hand Movements," *International Journal of Biomedical Engineering and Technology*, 2016, v. 22, n. 3, pp. 233-249.
- Ramasamy, S., K. Adalarasu, and Trupti N. Patel. "Estimation and Analysis of Muscle Fatigue due to different Work Patterns—A Critical Review." *International Journal of Advanced Trends in Computer Science and Engineering* 2, no. 1 (2013): 245-248.
- S. C. Colachis, "Cervical Traction: Relationship of Traction Time to Varied Tractive Force with Constant Angle of Pull," *Arch Phys Med Rehab*, 1965, v. 46, pp. 815-819.
- S. Hogg-Johnson, G. Van Der Velde, L.J. Carroll, L.W. Holm, J. David Cassidy, J. Guzman, P. Côté et al., "The burden and Determinants of Neck Pain in the General Population," *European Spine Journal*, 2008, v.17, n. 1, pp. 39-51.
- S. Qayyum, S. Waqas and H.M. Asim, "Outcomes of Mechanical Traction and Manual Therapy in C5-C6 Cervical Spondylosis for Radicular Pain Relief," *Manual Therapy*, 2017, v. 25, n. 6.2800, pp.2-20832.
- S. Ramasamy, K. Adalarasu, and T.N. Patel, "Estimation and Analysis of Muscle Fatigue due to Different Work Patterns—A Critical Review," *International*

- Journal of Advanced Trends in Computer Science and Engineering*, 2013, v. 2, n.1, pp. 245-248.
- S. Sambyal and S. Kumar, "Comparison between Nerve Mobilization And Conventional Physiotherapy In Patients With Cervical Radiculopathy," *International Journal of Innovative Research and Development*, 2013, v. 2, n. 8.
- S. Shah, S. Shakil-ur-Rehman, and S. Ahmad, "The Effects of Spinal Mobilization With and Without Manual Traction in Patients with Cervical Radiculopathy," *JIIIMC*, 2015, v. 10, n. 1 pp. 132-134.
- S. ShahShakil-ur-Rehman, and S. Ahmad, "The Effects of Spinal Mobilization With and Without Manual Traction in Patients with Cervical Radiculopathy," *JIIIMC*, 2015, v. 10, n. 1, pp.132-134.
- S. Sharma, G. Kumar, "Techniques for Feature Extraction from EMG Signal," *International Journal of Advanced Research in Computer Science and Software Engineering*, 2012, v. 2, n. 1.
- S. Thongpanja, A. Phinyomark, P. Phukpattaranont, and C. Limsakul, "Mean and Median Frequency of EMG Signal to Determine Muscle Force based on Time-Dependent Power Spectrum," *Elektronika ir Elektrotechnika*, 2013, v. 19, n. 3, pp. 51-56.
- S.C. Gandevia, "Spinal and Supraspinal Factors in Human Muscle Fatigue," *Physiological Reviews*, 2001, v. 81, n. 4, pp. 1725-1789.
- S.C.Rai, S. Ajith, K.R. Bhagavan, and D. Pinto, "Cervical Traction Reduces Pain and Disability in Patients with Unilateral Cervical Radiculopathy," *International Journal of Current Research and Review*, 2013, v. 5, n. 7, 33.
- S.D. Ruchika, "An Explanatory Study of the Parameters to be Measured from EMG Signal," *International Journal Of Engineering And Computer Science*, 2013, v. 2, n. 01.
- S.R. Akinbo, C.C. Noronha, A.O. Okanlawon and M.A. Danesi, "Effects of Different Cervical Traction Weights on Neck Pain and Mobility," *The Nigerian Postgraduate Medical journal*, 2006, v. 13, n. 3, pp. 230-235.
- S.R. Akinbo, M.A. Danesi, D.A. Oke, C.B. Aiyejusnle, and A.A. Adeyomoye, "Comparison of Supine and sitting Positions cervical Traction on Cardiovascular Parameters, Pain and Neck Mobility in Patients with Cervical Spondylosis," *Internet J Rheum*, 2013, v. 8, 8.
- S.R. Gunn, "Support Vector Machines for Classification and Regression." *ISIS Technical Report*, 1998, v. 14, n. 1, pp. 5-16.

- S.R.I. Bukhari, S. Shakil-ur-Rehman, S. Ahmad and A. Naeem, "Comparison Between Effectiveness of Mechanical and Manual Traction Combined with Mobilization and Exercise Therapy in Patients with Cervical Radiculopathy," *Pakistan Journal of Medical Sciences*, 2016, v. 32, n. 1 pp. 31.
- S.W. Chen, and Y.H. Chen, "Hardware Design and Implementation of a Wavelet Denoising Procedure for Medical signal Preprocessing," *Sensors*, 2015, v. 15, n. 10, pp.26396-26414.
- S.W. Forbush, T. Cox, and E. Wilson, "Treatment of Patients with Degenerative Cervical Radiculopathy using a Multimodal Conservative Approach in a Geriatric Population: A Case Series," *Journal of Orthopaedic & Sports Physical Therapy*, 2011, v. 41, n. 10, pp. 723-733.
- H.D. Saunders, "Use of Spinal Traction in the Treatment of Neck and Back Conditions," *Clinical Orthopaedics and Related Research*, 1983, (179), pp.31-38.
- T. Evgeniou, M. Pontil, and T. Poggio, "Statistical Learning Theory: A Primer," *International Journal of Computer Vision*, 2000, v. 38, n. 1, pp.9-13.
- T. Ghosh, "Assessment of Postural Effect on Work Related Musculoskeletal Disorders and Back Muscle Fatigue among the Goldsmiths of India," *International Journal of Occupational Safety and Health*, 2015, v. 5, n. 2, pp. 16-22.
- T. Haines, A. Gross, C.H. Goldsmith, and L. Perry, "Patient Education for Neck Pain with or Without Radiculopathy," *Cochrane Database of Systematic Reviews* 4 (2008).
- T. Oberg "Muscle Fatigue and Calibration of EMG Measurement," *International Journal of Electromyography Kinesiology*, 1995, v. 5, n.4, pp. 239-243.
- T. Sharma and K. Veer, "Wavelet Based Feature Extraction of Electromyogram Signal for Denoising," *Power*, 2014, v. 1, n. 2.
- T. Sharma, K. Veer, "Wavelet Based Feature Extraction of Electromyogram Signal for Denoising," *International Journal of Advanced Research in Computer Engineering & Technology*, 2014, v.3, n.8.
- T.D. Lalitharatne, Y. Hayashi, K. Teramoto, K. Kiguchi, "A Study on Effects of Muscle Fatigue on EMG-Based Control for Human Upper-limb Power-Assist," In *Information and Automation for Sustainability (ICIAfS)*, IEEE 6th International Conference on 124-128, IEEE, 2012.

- T.N.S. Tengku Zawawi, A.R. Abdullah, et al., "EMG Signal Analysis of Fatigue Muscle Activity in Manual Lifting," *Journal of Electrical system*, 2015, 11-3, pp. 319-325.
- T.T. Chiu, C.W.Y Hui-Chan, and G. Cheing, "A Randomized Clinical Trial of TENS and Exercise for Patients with Chronic Neck Pain," *Clinical Rehabilitation*, 2005, v. 19, n. 8, pp. 850-860.
- T.T Chiu, J.K.F. Ng, B. Walther-Zhang, R.J. Lin, L. Ortelli, and S.K.Chua, "A Randomized Controlled Trial on the Efficacy of Intermittent Cervical Traction for Patients with Chronic Neck Pain," *Clinical Rehabilitation*, 2011, v. 25, n.9, pp.814-822.
- U. Kuruganti, B. Hudgins, and R.N. Scott, "Two-Channel Enhancement of a Multifunction Control System," *IEEE Transactions on Biomedical Engineering*, 1995, v. 42, n. 1 pp. 109-111.
- V. Bajaj and A. Kumar, "Features Based on Intrinsic Mode Functions for Classification of EMG Signals," *International Journal of Biomedical Engineering and Technology*, 2015, v. 18, n. 2, pp. 156-167.
- V. Vapnik, "The Nature of Statistical Learning Theory," Springer Science & Business Media, 2013.
- W.F. Lestini and S.W. Wiesel, "The Pathogenesis of Cervical Spondylosis," *Clinical Orthopaedics and Related Research*, 1989, v. 239, pp. 69-93.
- W.M.B.W. Daud, A.B. Yahya et al. "Feature Extraction of Electromyography Signals in Time Domain on Biceps Brachii Muscle," *International Journal of Modeling and Optimization*, 2013, v.3, n.6, 515.
- W.M.B.W. Daud, A.B. Yahya, C.S. Horng, M.F. Sulaima and R. Sudirman, "Features Extraction of Electromyography Signals in Time Domain on Biceps Brachii Muscle," *International Journal of Modeling and Optimization*, 2013, v. 3, n. 6, pp. 515.
- X. Xu, Y. Zhang, X. Xu, and H. Hu, "Surface EMG-based Human-Machine Interface that can Minimise the Influence of Muscle Fatigue," *International Journal of Modelling, Identification and Control*, 2014, v. 22, n. 4, pp. 298-306.
- Y. Yazama, Y. Mitsukura, M. Fukuma, "Analysis and Recognition of wrist motions by using Multidimensional Directed Information and EMG Signal," *Fuzzy Information*, 2013, v. 2.
- Y.H. Shao, Y.S. Zhou, Y. Zhang, Y.D. Gu, G. Fekete, and J. Fernandez, "Surface EMG Based Muscle Fatigue Evaluation on Neck-Shoulder Muscles while Using

- Single-Monitor Arm,” In *Journal of Biomimetics, Biomaterials and Biomedical Engineering*, 2016, v. 29, pp. 61-67. Trans Tech Publications, 2016.
- Z. Roja, H. Kalkis, and I. Roja, “Measuring Muscle Fatigue in Relation to the Workload of Health Care Workers,” *Procedia Manufacturing*, 2015, v. 3, pp. 4189-4196.
- Z.J. Huang, J.X. Chen, and W.W. Qi, “Clinical Research on Treatment of Vertebroarterial Type of Cervical Spondylosis with 5-Step Manipulation and Traction,” *Journal of Traditional Chinese Medicine*, 2009, v. 29, n.4, pp.268-270.