

Nicholas Cecchi

Ph.D. Student in Bioengineering, admitted Autumn 2020

Publications

PUBLICATIONS

- **Physics-Informed Machine Learning Improves Detection of Head Impacts.** *Annals of biomedical engineering*
Raymond, S. J., Cecchi, N. J., Alizadeh, H. V., Callan, A. A., Rice, E., Liu, Y., Zhou, Z., Zeineh, M., Camarillo, D. B.
2022
- **Salivary S100 calcium-binding protein beta (S100B) and neurofilament light (NFL) after acute exposure to repeated head impacts in collegiate water polo players.** *Scientific reports*
Monroe, D. C., Thomas, E. A., Cecchi, N. J., Granger, D. A., Hicks, J. W., Small, S. L.
2022; 12 (1): 3439
- **Identifying Factors Associated with Head Impact Kinematics and Brain Strain in High School American Football via Instrumented Mouthguards.** *Annals of biomedical engineering*
Cecchi, N. J., Domel, A. G., Liu, Y., Rice, E., Lu, R., Zhan, X., Zhou, Z., Raymond, S. J., Sami, S., Singh, H., Rangel, I., Watson, L. P., Kleiven, et al
2021
- **Predictive Factors of Kinematics in Traumatic Brain Injury from Head Impacts Based on Statistical Interpretation.** *Annals of biomedical engineering*
Zhan, X., Li, Y., Liu, Y., Domel, A. G., Alizadeh, H. V., Zhou, Z., Cecchi, N. J., Raymond, S. J., Tiernan, S., Ruan, J., Barbat, S., Gevaert, O., Zeineh, et al
2021
- **Time Window of Head Impact Kinematics Measurement for Calculation of Brain Strain and Strain Rate in American Football.** *Annals of biomedical engineering*
Liu, Y., Domel, A. G., Cecchi, N. J., Rice, E., Callan, A. A., Raymond, S. J., Zhou, Z., Zhan, X., Li, Y., Zeineh, M. M., Grant, G. A., Camarillo, D. B.
2021
- **Head impact exposure and concussion in women's collegiate club lacrosse** *RESEARCH IN SPORTS MEDICINE*
Cecchi, N. J., Monroe, D. C., Fote, G. M., Small, S. L., Hicks, J. W.
2021: 1-6
- **A new open-access platform for measuring and sharing mTBI data.** *Scientific reports*
Domel, A. G., Raymond, S. J., Giordano, C., Liu, Y., Yousefsani, S. A., Fanton, M., Cecchi, N. J., Vovk, O., Pirozzi, I., Kight, A., Avery, B., Boumis, A., Fetters, et al
2021; 11 (1): 7501
- **Patterns of head impact exposure in men's and women's collegiate club water polo** *JOURNAL OF SCIENCE AND MEDICINE IN SPORT*
Cecchi, N. J., Monroe, D. C., Phreaner, J. J., Small, S. L., Hicks, J. W.
2020; 23 (10): 927-31
- **Effects of soccer ball inflation pressure and velocity on peak linear and rotational accelerations of ball-to-head impacts** *SPORTS ENGINEERING*
Cecchi, N. J., Monroe, D. C., Moscoso, W. X., Hicks, J. W., Reinkensmeyer, D. J.
2020; 23 (1)
- **A Dose Relationship Between Brain Functional Connectivity and Cumulative Head Impact Exposure in Collegiate Water Polo Players** *FRONTIERS IN NEUROLOGY*
Monroe, D. C., Cecchi, N. J., Gerges, P., Phreaner, J., Hicks, J. W., Small, S. L.
2020; 11: 218
- **Laboratory evaluation of a wearable head impact sensor for use in water polo and land sports** *PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART P-JOURNAL OF SPORTS ENGINEERING AND TECHNOLOGY*

Cecchi, N. J., Monroe, D. C., Oros, T. J., Small, S. L., Hicks, J. W.
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- **Comparison of head impact attenuation capabilities between a standard American football helmet and novel protective equipment that couples a helmet and shoulder pads** *SPORTS ENGINEERING*

Cecchi, N. J., Oros, T. J., Ringhofer, J. J., Monroe, D. C.
2019; 22 (3-4)

- **Head impacts sustained by male collegiate water polo athletes** *PLOS ONE*

Cecchi, N. J., Monroe, D. C., Fote, G. M., Small, S. L., Hicks, J. W.
2019; 14 (5): e0216369

- **The Effectiveness of Protective Headgear in Attenuating Ball-to-Forehead Impacts in Water Polo.** *Frontiers in sports and active living*

Cecchi, N. J., Oros, T. J., Monroe, D. C., Fote, G. M., Moscoso, W. X., Hicks, J. W., Reinkensmeyer, D. J.
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