

EDUCATION

University of Central Missouri
Bachelor of Science in Kinesiology

Graduation Date: **July 2020**

University of Central Missouri
Master of Science in Kinesiology

Graduation Date: **July 2021**

University of Kansas
PhD in Exercise Physiology

Graduation Date: **June 2024**

Harvard-X
Professional Certificate in Data Science

Completion Date: **March 2024**

PROFESSIONAL EXPERIENCES (Denver Nuggets)

Sport Scientist / Assistant Strength and Conditioning Coach
Denver Nuggets Basketball Club

August 2024 – Present

- Coordinate and carry out the collection, analysis and dissemination of data to gather insights that help maintain player health and performance
- Conduction and communication of team-internal as well as published research projects surrounding field-specific topics
- Maintenance and calibration of sport science technologies
- Team Manager NBA Biomechanics Initiative
- Assistance in the design and implementation of strength and conditioning programs for the team

PROFESSIONAL EXPERIENCES (University of Kansas)

Graduate Research Assistant
Jayhawk Athletic Performance Laboratory

August 2021 – July 2024

- Conduction of research relevant to the field of sports science within the Jayhawk Athletic Performance Lab
- Responsible for data collection, data analysis, and completion of manuscripts suitable for publication in field-specific, peer-reviewed journals
- Research and sport science mentorship of undergraduate and graduate students

Graduate Teaching Assistant
University of Kansas Department of Health Sport & Exercise Science

August 2021 – July 2024

- Instructor of record for the undergraduate courses *Methods in Strength and Conditioning*, and *Clinical Fitness Evaluation Techniques*
- Responsible for generation, delivery, and assessment of content relevant to the respective undergraduate course

Applied Sport Scientist

August 2021 – July 2024

University of Kansas Basketball

- Coordination of collection, analysis, visualization, and assistance in applied integration of performance data for KU sports teams, in particular the men's and women's basketball teams
- Lead and conduct in-house, unpublished, and published research projects
- Deployment of data visualization dashboards and reports across teams
- Consultation about procedures related to collection, and integration/application of data and research to enhance decision making
- Coordination of collaborative efforts between the Jayhawk Athletic Performance Laboratory and the KU athletic department
- Generation of data-driven reports to individualize physical performance training programs
- Generation of data-driven return to play reports for respective stakeholders
- Assistance in the design and implementation of strength and conditioning programs for the KU men's basketball team

PROFESSIONAL EXPERIENCES (University of Central Missouri)

Graduate & Undergraduate Research Assistant

October 2017 – June 2021

UCM Human Performance Laboratory

- Conduction of research relevant to the field of sports science and human performance
- Responsible for data collection, assistance in data collection, data analysis, and completion of manuscripts suitable for publication in field-specific, peer-reviewed journals
- Responsible for conduction DEXA body composition assessments for athletic teams and the campus community

Graduate Teaching Assistant

August 2020 – May 2021

University of Central Missouri Kinesiology Department

- Instructor of record for the undergraduate courses *Fitness for a global community*
- Responsible for generation, delivery, and assessment of content relevant to the respective undergraduate course

Applied Sport Scientist

August 2019 – June 2021

University of Central Missouri Athletic Department

- Coordination of collection, analysis, visualization, and assistance in applied integration of physical performance data for UCM sports teams, in particular the football, men's and women's basketball teams, as well as selected track and field athletes
- Consultation about procedures related to collection, and integration/application of data
- Coordination of collaborative efforts between the UCM Human Performance Laboratory and the UCM athletic department
- Presentation of in-house research to football coaching staff, leading to adjustments to the annual off-season physical performance testing and athlete benchmarking procedures

Volunteer Strength and Conditioning Coach

September 2017 – June 2021

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University of Central Missouri Athletic Department

- Assistance in the design and implementation of strength and conditioning programs for various UCM sport teams, in particular the football, men's and women's basketball teams, as well as the group of male pole vault athletes (Total of 4 years ~ 5000 hours)

PROFESSIONAL EXPERIENCES (Other)

Sport Performance Intern

May 2019 – August 2019

Brose Baskets Bamberg Basketball Team (Germany)

- Assistance in the design and implementation of strength and conditioning programs for academy and professional team players during the off-season
- Assistance in collection and applied integration of relevant physical performance data

Professional Visit University of Oregon

April 2023

Oregon Bowerman Sport Science Center & Athletic Department

- Observation of Director of Performance and Sport Science and Sport Science Coordinator
- Discussion of current and recent projects to enhance student athlete health and wellbeing
- Assistance in collection of data for research coming out of the Bowerman Sport Science Clinic

RELEVANT PROFESSIONAL SKILLS

Sport Science Technologies and Data Analytics Tools

Sport Science Technologies

- Force Plate Technology (Hawkin Dynamics | Vald | Kistler)
- Vald Nord Board
- Kanga Tech 360
- Dari Motion Capture
- XSSENS IMU System
- Kinexon
- Velocity-Based Training Technology (Elite Form | Tendo | Gym Aware)
- Stalker ATS Radar Technology
- 1080 Sprint Technology
- DEXA Body Composition
- BIA Body Composition
- Lactate Pro 2 Blood Lactate Analyzer

Sport Science Technologies and Data Analytics Tools

Data Analytics and Visualization Software

- R
- Jamovi Statistical Software
- JASP Statistical Software
- Microsoft Power BI
- Microsoft Office

RELEVANT PROFESSIONAL CERTIFICATIONS

Certified Performance and Sport Scientist (NSCA)

Certified Strength and Conditioning Specialist (NSCA)

Certified Personal Trainer (NSCA)

Applied Performance Coach Certification and Mentorship (APC)

MANUSCRIPTS PUBLISHED IN SCIENTIFIC – PEER-REVIEWED JOURNALS (ALPHABETICAL ORDER)

Cabarkapa, D., Cabarkapa, D. V., Aleksic, J., **Philipp, N. M.**, Scott, A. A., Johnson, Q. R., & Fry, A. C. (2023). Differences in countermovement vertical jump force-time metrics between starting and non-starting professional male basketball players. *Frontiers in Sports and Active Living*, 5. <https://doi.org/10.3389/fspor.2023.1327379>

Cabarkapa, D., Cabarkapa, D., Bankovic, V., Long, H., **Philipp, N.**, & Fry, A. (2024). Changes in countermovement vertical jump force-time metrics across different competitive levels in women's volleyball. *International Journal of Strength and Conditioning*, 4(1). <https://doi.org/10.47206/ijsc.v4i1.294>

Cabarkapa, D., Cabarkapa, D. V., Ciccone, A. B., Whiting, S. M., **Philipp, N. M.**, Eserhaut, D. A., & Fry, A. C. (2023). Acute influence of resistance exercise on basketball shooting mechanics and accuracy. *Frontiers in Sports and Active Living*, 5. <https://doi.org/10.3389/fspor.2023.1272478>

Cabarkapa, D.; Cabarkapa, D.V.; **Philipp, N.M.**; Knezevic, O.M.; Mirkov, D.M.; Fry, A.C. Pre-Post Practice Changes in Countermovement Vertical Jump Force-Time Metrics in Professional Male Basketball Players. *J. Strength Cond. Res.* **2023**, 37, e609–e612.

Cabarkapa, D., Cabarkapa, D. V., **Philipp, N. M.**, Downey, G. G., & Fry, A. C. (2022). Repeatability of motion health screening scores acquired from a three-dimensional markerless motion capture system. *Journal of Functional Morphology and Kinesiology*, 7(3), 65. <https://doi.org/10.3390/jfmk7030065>

Cabarkapa, D. V., Cabarkapa, D., **Philipp, N. M.**, & Fry, A. C. (2024). Competitive Season-Long Changes in Countermovement Vertical Jump Force-Time Metrics in Female Volleyball Players. *Journal of Strength and Conditioning Research / National Strength & Conditioning Association*, 38(2), e72.

Cabarkapa, D, Eserhaut, DA, Cabarkapa, DV, **Philipp, NM**, and Fry, AC. Salivary Testosterone and Cortisol Changes During a Game in Professional Male Basketball Players. *J Strength Cond Res* 37: 1687–1691, 2023.

- Cabarkapa, D., Eserhaut, DA, Ciccone, AB., Cabarkapa, DV., **Philipp, NM.**, Fry, AC. Relationship between salivary biomarkers and external load in professional basketball players during a game. *Journal of Applied Sports Science*, 2 (2023), 107-114. 10.37393/JASS.2023.02.9
- Cabarkapa, D., Eserhaut, D., Fry, A. C., Cabarkapa, D. V., **Philipp, N. M.**, Whiting, S., & Downey, G. R. (2022). Relationship between Upper and Lower Body Strength and Basketball Shooting Performance. *Sports*, 10(10), 139. <https://doi.org/10.3390/sports10100139>
- Cabarkapa, D., Deane, M. A., Fry, A. C., Jones, G. T., Cabarkapa, D. V., **Philipp, N. M.**, & Yu, D. (2022). Game Statistics that discriminate winning and losing at the NBA level of basketball competition. *PLOS ONE*, 17(8). <https://doi.org/10.1371/journal.pone.0273427>
- Cabarkapa, D., Fry, A. C., Cabarkapa, D. V., Myers, C. A., Jones, G. T., **Philipp, N. M.**, Yu, D., & Deane, M. A. (2022). Differences in biomechanical characteristics between made and missed jump shots in male basketball players. *Biomechanics*, 2(3), 352–360. <https://doi.org/10.3390/biomechanics2030028>
- Cabarkapa, D., Johnson, Q. R., Aleksic, J., Cabarkapa, D. V., **Philipp, N. M.**, Sekulic, M., Krsman, D., Trunic, N., & Fry, A. C. (2024). Comparison of vertical jump and sprint performances between 3 × 3 and 5 × 5 elite professional male basketball players. *Frontiers in Sports and Active Living*, 6. <https://doi.org/10.3389/fspor.2024.1394739>
- Cabarkapa, D., Johnson, Q. R., Cabarkapa, D. V., **Philipp, N. M.**, Eserhaut, D. A., & Fry, A. C. (2024). Changes in Countermovement Vertical Jump Force-Time Metrics During a Game in Professional Male Basketball Players. *Journal of Strength and Conditioning Research / National Strength & Conditioning Association*, 38(7), 1326–1329.
- Cabarkapa, D., Krsman, D., Cabarkapa, D. V., **Philipp, N. M.**, & Fry, A. C. (2023). Physical and performance characteristics of 3×3 professional male basketball players. *Sports*, 11(1), 17. <https://doi.org/10.3390/sports11010017>
- Cabarkapa, D., Cabarkapa, D. V., Philipp, N. M., Myers, C. A., Whiting, S. M., Jones, G. T., & Fry, A. C. (2023). Kinematic Differences Based on Shooting Proficiency and Distance in Female Basketball Players. *Journal of Functional Morphology and Kinesiology*, 8(3), 129.
- Cabarkapa, D.V.; Cabarkapa, D.; **Philipp, N.M.**; Fry, A.C. Impact of the Anatomical Accelerometer Placement on Vertical Jump Performance Characteristics. *Sports* **2023**, 11, 92. <https://doi.org/10.3390/sports11040092>
- Cabarkapa D, **Philipp NM**, Cabarkapa DV and Fry AC (2023) Position-specific differences in countermovement vertical jump force-time metrics in professional male basketball players. *Front. Sports Act. Living* 5:1218234. doi: 10.3389/fspor.2023.1218234
- Cabarkapa, D., **Philipp, N.**, Cabarkapa, D., Eserhaut, D., & Fry, A. (2023). Comparison of Force-Time Metrics Between Countermovement Vertical Jump With and Without an Arm Swing in Professional Male Basketball Players. *International Journal of Strength and Conditioning*, 3(1). <https://doi.org/10.47206/ijsc.v3i1.197>

- Davis, D. W., Garver, M. J., Stone, W. J., Penumetcha, M., Hair, J. N., & **Philipp, N. M.** (2020). Endothelial function and arterial stiffness in young adults with histories of chronic resistance activity. *Journal of Human Sport and Exercise*, 17(2). <https://doi.org/10.14198/jhse.2022.172.11>
- Eserhaut, D.A., Cabarkapa, D., **Philipp, N.M.**, Fry, A.C. (2023). Traditional isometric mid-thigh pull system vs. portable dual-handle device: A comparative analysis. *Journal of Australian Strength & Conditioning*, 31(05): 05-12.
- Garver, M. J., Gordon, A. M., **Philipp, N. M.**, Huml, M. R., & Wakeman, A. J. (2021). Change-event steals “athlete” from “College athlete”: Perceived impact and depression, anxiety, and stress. *Journal of Multidisciplinary Healthcare, Volume 14*, 1873–1882. <https://doi.org/10.2147/jmdh.s320243>
- Harper, D. J., **Philipp, N. M.**, Eriksrud, O., Jones, P. A., Graham-Smith, P., & Dos’Santos, T. (2025). Assessing deceleration performance: Methodological and practical considerations. *Sports Medicine (Auckland, N.Z.)*. <https://doi.org/10.1007/s40279-025-02339-7>
- Mihajlovic, M., Cabarkapa, D., Cabarkapa, D. V., **Philipp, N. M.**, & Fry, A. C. (2023). Recovery Methods in Basketball: A Systematic Review. *Sportscience*, 11(11), 230.
- Yang, Y., Johnson, Q. R., **Philipp, N. M.**, Eserhaut, D. A., Kenn, J. G., Cabarkapa, D., & Fry, A. C. (2026). *Physical Profile of Strongman and Strongwoman Athletes*. International Journal of Strength and Conditioning. <https://doi.org/10.47206/ijsc.v6i1.479>
- Philipp, N. M.**, Blackburn, S. D., Cabarkapa, D., & Fry, A. C. (2023). Effect of sprint approach velocity and distance on deceleration performance in NCAA Division I female softball athletes. *Journal of Human Sport and Exercise*, *in press*. <https://doi.org/10.14198/jhse.2023.183.03>
- Philipp, N.M.**, Blackburn, S., Cabarkapa, D., Fry, A. C. The Effects of a Low-Volume, High-Intensity Pre-Season Micro-Cycle on Neuromuscular Performance in Collegiate Female Basketball Players. *Journal of Strength and Conditioning Research*.
- Philipp, N. M.**, Cabarkapa, D., Blackburn, S. D., & Fry, A. C. (2024). Dose-Response Relationship for External Workload and Neuromuscular Performance Over a Female, Collegiate, Basketball Season. *Journal of Strength and Conditioning Research / National Strength & Conditioning Association*. <https://doi.org/10.1519/JSC.0000000000004705>
- Philipp, NM**, Cabarkapa, D, Eserhaut, DA, Yu, D, and Fry, AC. Repeat sprint fatigue and altered neuromuscular performance in recreationally trained basketball players. *PLoS One* 18: e0288736, 2023.
- Philipp, N.M.**; Cabarkapa, D.; Marten, K.M.; Cabarkapa, D.V.; Mirkov, D.M.; Knezevic, O.M.; Aleksic, J.; Faj, L.; Fry, A.C. Horizontal Deceleration Performance in Professional Female Handball Players. *Biomechanics* **2023**, 3, 299-309. <https://doi.org/10.3390/biomechanics3030026>
- Philipp, N. M.**, Cabarkapa, D., Nijem, R. M., Blackburn, S. D., & Fry, A. C. (2023). Vertical Jump Neuromuscular Performance Characteristics Determining On-Court Contribution in Male and Female NCAA Division 1 Basketball Players. *Sportscience*, 11(12), 239.

- Philipp, N. M.,** Cabarkapa, D., Nijem, R. M., & Fry, A. C. (2023). Changes in countermovement jump force-time characteristic in elite male basketball players: A season-long analyses. *PloS One*, 18(9), e0286581.
- Philipp, N. M.,** Cabarkapa, D., Cabarkapa, D., Eserhaut, D. A., & Fry, A. C. (2023). Inter-Device Reliability of a Three-Dimensional Markerless Motion Capture System Quantifying Elementary Movement Patterns in Humans. *Journal of Functional Morphology and Kinesiology*, 8(2), 69. <https://doi.org/10.3390/jfmk8020069>
- Philipp, N.,** Cabarkapa, D., Eserhaut, D., Cabarkapa, D., & Fry, A. (2022). COUNTERMOVEMENT JUMP FORCE-TIME METRICS AND MAXIMAL HORIZONTAL DECELERATION PERFORMANCE IN PROFESSIONAL MALE BASKETBALL PLAYERS. *Journal of Applied Sports Sciences*, 2(2022), 11–27. <https://doi.org/10.37393/jass.2022.02.2>
- Philipp, Nicolas M.1;** Crawford, Derek A.2; Cabarkapa, Dimitrije1; Fry, Andrew C.1. Strength and Power Thresholds to Identify High and Low Linear Sprint Speed Performers in Collegiate American Football Players. *Journal of Strength and Conditioning Research* ();10.1519/JSC.0000000000004600, October 6, 2023. | DOI: 10.1519/JSC.0000000000004600
- Philipp, N. M.,** Crawford, D. A., & Fry, A. C. (2022). A total score of athleticism to estimate the amount of variance explained in on-field performance within Collegiate American Football Players. *International Journal of Strength and Conditioning*, 2(1). <https://doi.org/10.47206/ijsc.v2i1.94>
- Philipp, N. M.,** Crawford, D. A., Garver, M. J., & Strohmeyer, S. H. (2022). Evaluating Novel Methods of Classifying Interlimb Asymmetries Within Collegiate American Football Players. *International Journal of Exercise Science*, 15(6), 473–487.
- Philipp, N.,** Crawford, D., Garver, M., Davis, D., & Hair, J. (2020). Interlimb asymmetry thresholds that negatively affect change of direction performance in collegiate American Football Players. *International Journal of Exercise Science*. <https://doi.org/10.31236/osf.io/2u6nt>
- Philipp NM,** Fry AC, Mosier EM, Cabarkapa D, Nicoll JX, Sontag SA. Biological reliability of a movement analysis assessment using a markerless motion capture system. *Front Sports Act Living* [Internet]. 2024 Aug 27;6. Available from: <http://dx.doi.org/10.3389/fspor.2024.1417965>
- Philipp, N.,** Garver, M., Crawford, D., Davis, D., & Hair, J. (2020). Interlimb asymmetry affects combine-related performance in collegiate American Football Players. <https://doi.org/10.31236/osf.io/fm8z6>
- Philipp, N.,** Herda, T., Cabarkapa, D., & Fry, A. (2022). Changes in lower body strength and linear speed performance in NCAA Division 2 collegiate football players across three competitive seasons. *Journal of Applied Sports Sciences*, 1(2022), 45–56. <https://doi.org/10.37393/jass.2022.01.4>
- Philipp NM,** Johnson QR, Cabarkapa D, Fry AC. Acute effects of lower limb wearable resistance on horizontal deceleration and change of direction biomechanics. *PLoS One*. 2024 Sep 9;19(9): e0308536.
- Philipp, N. M.,** McKay, B., Martin, E., Cabarkapa, D., Fry, A. C., & Troester, J. (2024). Between-rater reliability for using radar technology to quantify maximal horizontal deceleration performance in

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NCAA division 1 American football and female lacrosse athletes. *Frontiers in Sports and Active Living*, 6. <https://doi.org/10.3389/fspor.2024.1384476>

Philipp, N.M., Fry, A.C., Mosier, E., Cabarkapa, D., Nicoll, J., Sontag, S. Biological Reliability of a Movement Analysis Assessment Using a Markerless Motion Capture System. *Frontiers in Sports and Active Living (Biomechanics of Human Movement Special Issue)*.

Philipp, N. M., Nijem, R. M., Blackburn, S. D., Cabarkapa, D., Scott, C., & Fry, A. C. (2024). Considerations for vertical jump testing in collegiate basketball players: The impact of immediate individual versus social comparison feedback and team leaderboard engagement. *International Journal of Sports Science & Coaching*. <https://doi.org/10.1177/17479541241266192>

Philipp, N. M., Nijem, R. M., Cabarkapa, D., Hollwedel, C. M., & Fry, A. C. (2024). Investigating the stretch-shortening cycle fatigue response to a high-intensity stressful phase of training in collegiate Men's basketball. *Frontiers in Sports and Active Living*, 6. <https://doi.org/10.3389/fspor.2024.1377528>

Philipp, N. M., Scott, A. A., Caldwell, B. R., Cabarkapa, D., Johnson, Q. R., & Fry, A. C. (2024). Comparing the maximal horizontal deceleration demands between a novel acceleration to deceleration assessment and the 505 change of direction test. *Journal of Human Sport and Exercise*, 19(3), 803–814.

MANUSCRIPTS IN PRODUCTION, REVIEW OR PREPARATION FOR PUBLICATION

Philipp N.M., Vial S., Fry A.C., Crawford D.A. (2025). Associations Between Dynamic Maximal Strength and Linear Speed in Collegiate American Football Players: A Technical Note on Threshold Detection to Set Actionable Training Targets. *In Review with International Journal of Strength and Conditioning*.

PROFESSIONAL REFERENCES

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