**Introduction to Systems Engineering**

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**Assignment #1**

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**Book**

In this introductory chapter, we first review the science behind the two  
Association for the Advancement of Artificial Intelligence (AAAI) Symposia that  
we held in 2020 ("Al welcomes Systems Engineering. Towards the science of inter-  
dependence for autonomous human-machine teams").

(F.Lawless, 2021)

**Website**

Systems engineering is an interdisciplinary approach and means to enable the full life cycle of successful product, service, and enterprise systems.

(Zipursky, 2022)

**Conference**

Aggressive dynamic markets, products today are becoming more complex as they manage rapid technology advancements, shorter system life cycles, organizational changes, and mounting regulatory pressures.

(D. Ward, 2018)

**Journal**

All science and engineering involve abstraction of the complexity of the world into approaches and models that use simplifying assumptions, which allow generalization from one complex situation to another.

(Gilbertson, Tanju, & Eveleigh, 2017)

# References

D. Ward, M. R. (2018). The Metamorphosis of Systems Engineering through the evolution of today’s standards. *2018 IEEE International Systems Engineering Symposium (ISSE)* (pp. 20-32). Rome, Italy: IEEE.

F.Lawless, W. (2021). *System Engineering and Artifical Intelligence.* New Jersey: Springer.

Gilbertson, R., Tanju, B., & Eveleigh, T. J. (2017). IEEE Engineering Management Review. *A complexity-based heuristic decision analysis model to recommend systems engineering domain*, 64-81. Retrieved from https://ieeexplore.ieee.org/document/8048445

Zipursky, B. (2022). *Guide to the Systems Engineering Body of Knowledge (SEBoK).* New York: SEBoK. Retrieved from https://www.sebokwiki.org/