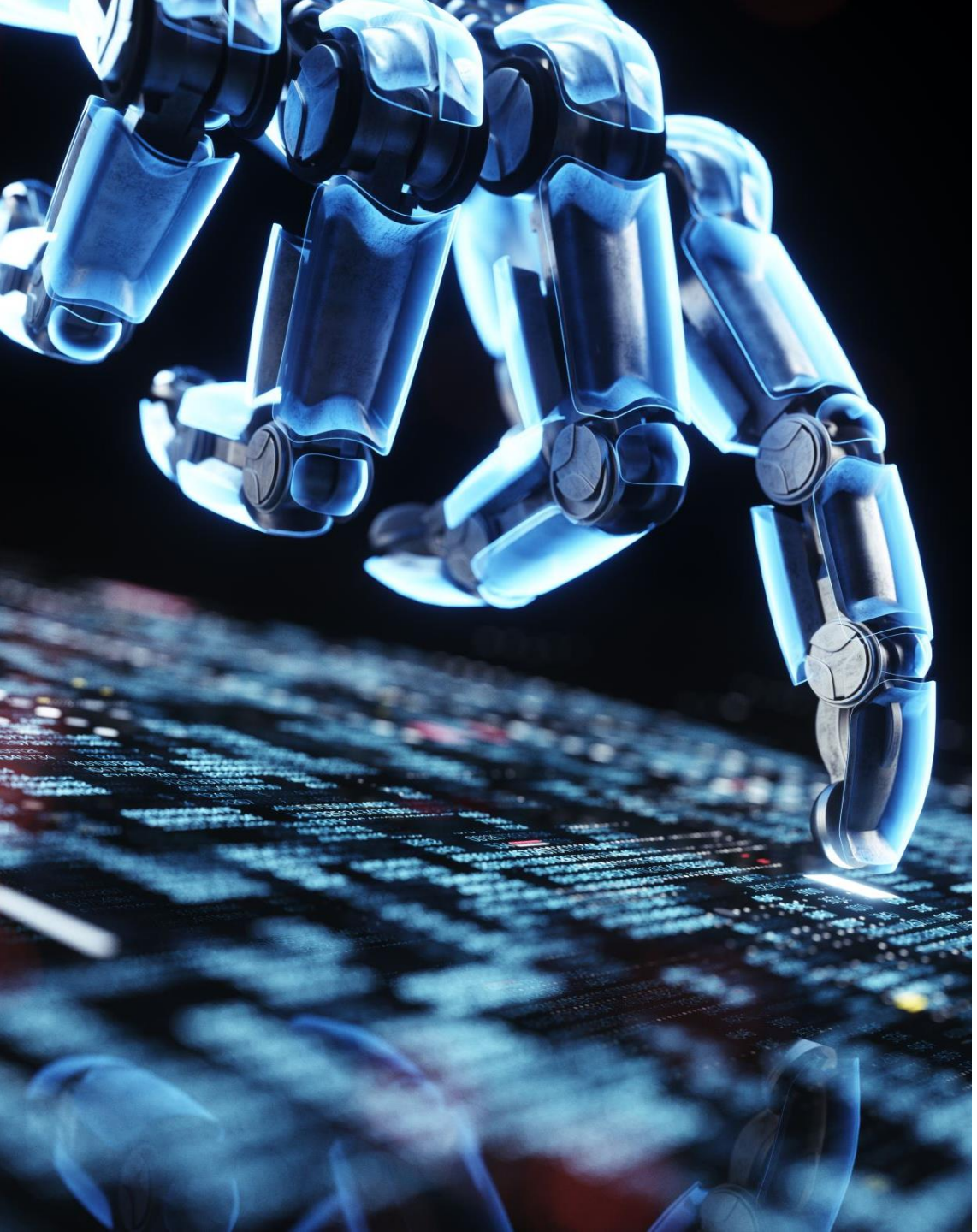
Emerging Trends in Security and Risk Management

Shaping the Future of Cybersecurity and Enterprise Risk (2024-2029)

by Gesine Linn Hamberger (16.10.2024)



AI and Machine Learning in Cybersecurity

- **Key Trend:** Advanced AI and Machine Learning for Autonomous Cyber Defence
- **Expected Impact:** Reduction in human error and increased capability to handle complex, fast-paced cyber threats without human intervention.

Reference: Ridley (2018)

Human-Centric Security Solutions

- **Key Trend:** Integrating Human Behaviour Models in Security
- **Expected Impact:** Systems that anticipate human error and malicious intent, improving both defence strategies and user compliance.

Reference: (Varshney & Alemzadeh, 2017)

Reputational Risk Management through ESG Focus

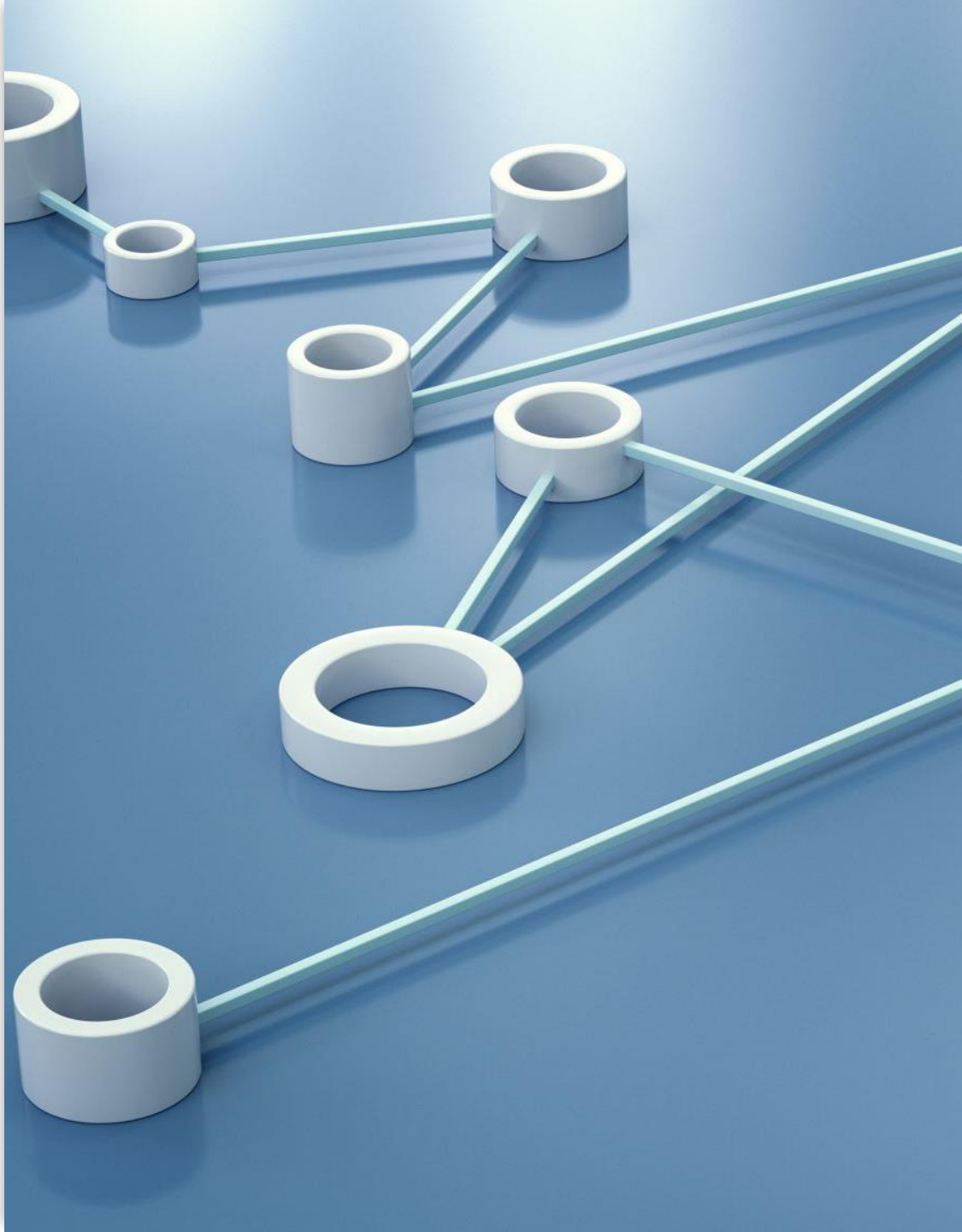
- **Key Trend:** Managing Reputational Risks with Environmental, Social, and Governance (ESG) Factors
- **Expected Impact:** Businesses will adopt more transparent and ethical practices to protect their reputations, integrating ESG into broader risk strategies.

Reference: Piñeiro-Chousa et al. (2017)

Risk Management Frameworks and Metrics

- **Key Trend:** Development of New Risk Metrics and Frameworks
- **Expected Impact:** A shift from static to dynamic risk management frameworks, offering more agile responses to emerging threats.

Reference: Marks (2019)



The Most Influential Trend

- **Key Prediction:** AI and machine learning, coupled with human behaviour analysis
- **Summary:**
  - Increased automation in cybersecurity defences
  - More integration of human behaviour models
  - Strong emphasis on reputational risk

References

- Marks, L. (2019) *The optimal risk management framework: identifying the requirements and selecting the framework*. ISACA. Available from: https://www.isaca.org/resources/isaca-journal/issues/2019/volume-1/the-optimal-risk-management-framework-identifying-the-requirements-and-selecting-the-framework [Accessed 14.10.204]
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