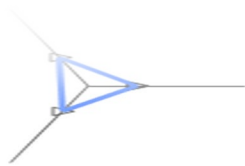
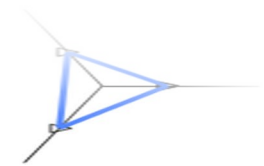
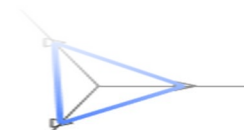
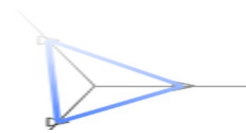


# Multivariate Statistik

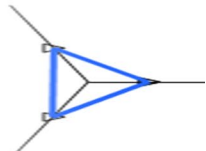
Heiko Großmann  
Wintersemester 2024/25



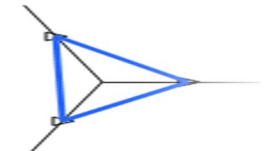
Observation 1



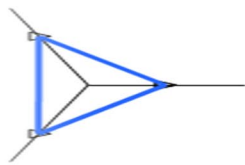
Observation 5



Observation 6



Observation 10



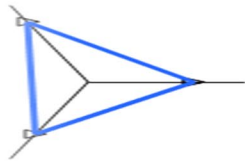
Observation 11

Observation 12

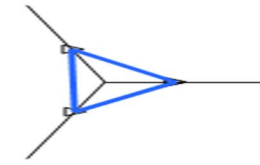
Observation 13

Observation 14

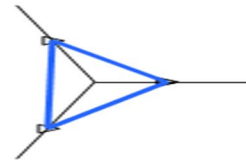
Observation 15



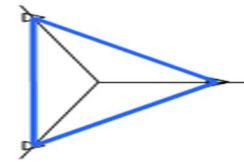
Observation 16



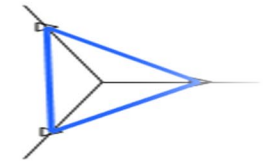
Observation 17



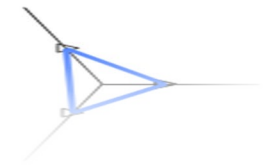
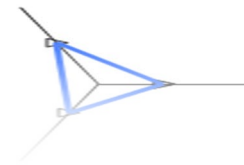
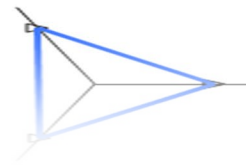
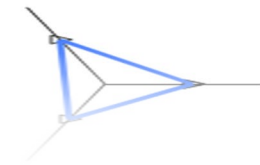
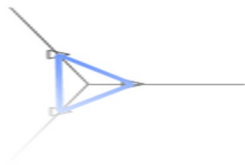
Observation 18



Observation 19

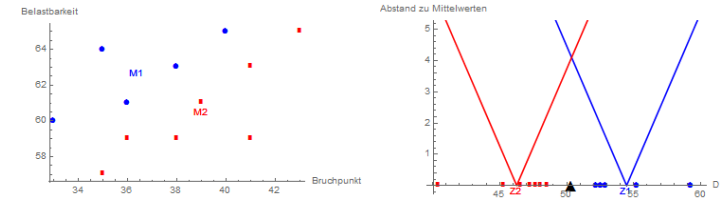


Observation 20



# Inhalt

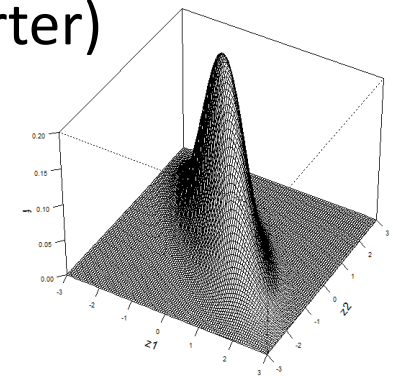
Multivariat					
Hotellings T <sup>2</sup> -Test					
Variable	Mittelwert	Hypothetischer Mittelwert	Prüfgröße	F-Wert	Wahrsch. > F
Gewicht	8,6866	10,0000	34,7107	16,6322	0,0000
Länge	68,4000	70,0000			



- Statistische Analyse mehrdimensionaler (korrelierter) Beobachtungen

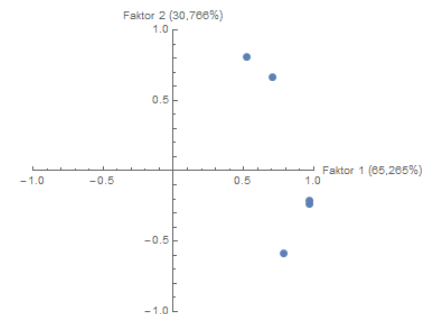
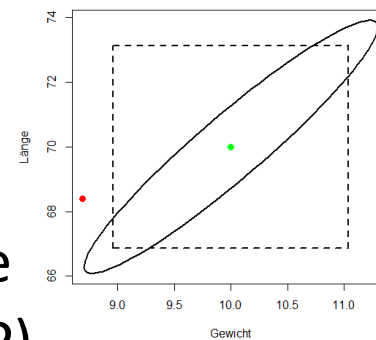
- Themen

- Grundlagen: multivariate Deskription, mehrdimensionale Normalverteilung
- Ein- und Zwei-Stichproben Tests (Hotelling's T<sup>2</sup>)
- Multivariates Lineares Modell (z.B. MANOVA)
- Hauptkomponentenanalyse
- Faktorenanalyse
- Diskriminanzanalyse
- Clusteranalyse
- ...



- Betonung angewandter Aspekte

- Illustration mit Software (R, JMP)



# Organisatorisches

- Ablauf
  - Vorlesung (mit integrierter Übung): 4 SWS
  - Literatur: Skript, Johnson & Wichern (2002), Rencher (2002)
- Zielgruppe
  - Statistik                      Master    WPF (Methodik oder Spezialisierung)
  - Mathematik                    Master    WPF
- Vorkenntnisse:
  - Statistische Grundkenntnisse
  - Nützlich: Lineare Statistische Modelle
- Masterarbeiten im Anschluss möglich