Yolande
About me...

Yolande Munzimi

• **Interest**
  - Research in Water Resources

• **Education**
  - Bachelor in Agronomy, Agricultural Economics (UNIKIN, D.R.Congo)
  - Master in Water & Wetland Resources (SUNY/ESF, Syracuse)
  - PhD in Geographical Sciences (UMD, College Park)

• **Expertise**
  - Water Resources Quantification
  - Streamflow and Rainfall Regimes
  - Remote Sensing based (NASA TRMM precipitation data)
  - Case Study: **Congo Basin in Central Africa**
Case Study: Congo Basin

- Ecosystem
- Hydropower
- Agriculture
- Transportation
- Woodfuel
- Flood
- Erosion
- Access

Equator
Congo Basin current rain and stream gauges

Challenge: Few rain and stream gauges, incomplete time series & non-concurrent time periods
Congo Basin versus Mississippi Basin

Similar areas but nearly triple the monthly flow

AVERAGE MONTHLY FLOW RATES OF THE CONGO RIVER
(15 YEAR PERIOD)

AVERAGE MONTHLY FLOW RATES OF THE MISSISSIPPI RIVER
(15 YEAR PERIOD)

3,700,000 km²

3,220,000 km²
Spatio-temporal Quantification of rainfall patterns

15 years (1998-2012) of daily flow discharge at Kinshasa
Peak flow and precipitation timing

ITCZ migration from north to south from August through January drives peak precipitation and flow across the Basin.