**Research Overview:** I am an applied economist focused on the application of quantitative and computational methods (e.g. econometrics, machine learning) for understanding and assessing questions related to natural resources finance. By natural resources finance, I refer to traditional financial analysis / economics applied to natural-resource related markets, like agriculture, forestry, energy, water, land, minerals/metals, fisheries, and wildlife.

**Financial Risk Management:** financial crises/downturns, systemic risk, financial regulation, market risk, value-at-risk, expected shortfall, volatility, bubbles, risk allocation, risk transfer, risk hedging, credit risk, counterparty risk, bond market, credit derivatives, CDS, CDO, credit risk ratings, PD, LGD, EAD, TTR, prepayment, default correlation, copula methods, spatial spillovers in PD, collateral risk, credit valuation adjustment, operational risk, loss distribution estimation, risk scenario analysis, liquidity risk, ALM risk, interest rate risk, idiosyncratic risk, shadow banking, exotic derivatives, implied volatility, extreme value theory, stress testing, risk contagion.

**Insurance:** insurance pricing, reinsurance, claim frequency and severity, claim contagion, crop insurance, livestock insurance, fire insurance, weather insurance, environmental insurance, drought insurance, supply/demand, elasticity, risk perception, willingness to pay for insurance, optimal degree of coverage, optimal insurance contracts, loss development, loss cost models, expected utility theory, prospect theory, regret theory, moral hazard, adverse selection, risk pooling and diversification, CAPM, empirical asset pricing model (EAPM), arbitrage pricing theory, loss ratio modeling, microinsurance, insurance technology, distribution channels, risk selection, economies of scope and scale, asymmetric information, insurance regulation, social inflation, globalization of insurance, credibility theory, insurance microeconomics, insurance macroeconomics, insurance markets microstructure.

**Financial Economics:** equilibrium, arbitrage, market efficiency, pricing, portfolio optimization, investment theory, valuation, risk neutrality, bid-ask spreads, expected utility, modern portfolio theory, mean-variance analysis, factor models, CAPM, Fama-French, effect of inflation, term structure of interest rates, arbitrage pricing theory, capital structure, cost of capital, dividend policy, market frictions.