Curve showing force on handle over the stroke cycle (catch-drive-finish-recovery) for double sweep crew

Cross-sectional view of a racing shell and a diagram showing why such shell are inherently unstable (center of gravity is above shell meta-center)

Derivation of the expression for the acceleration of the shell-crew system

Graphical representation of crew split times

Outline of shell and rigging for a double scull boat

Curve showing oar angle (relative to water level) over the stroke cycle (catch-drive-finish-recovery) for double sweep crew

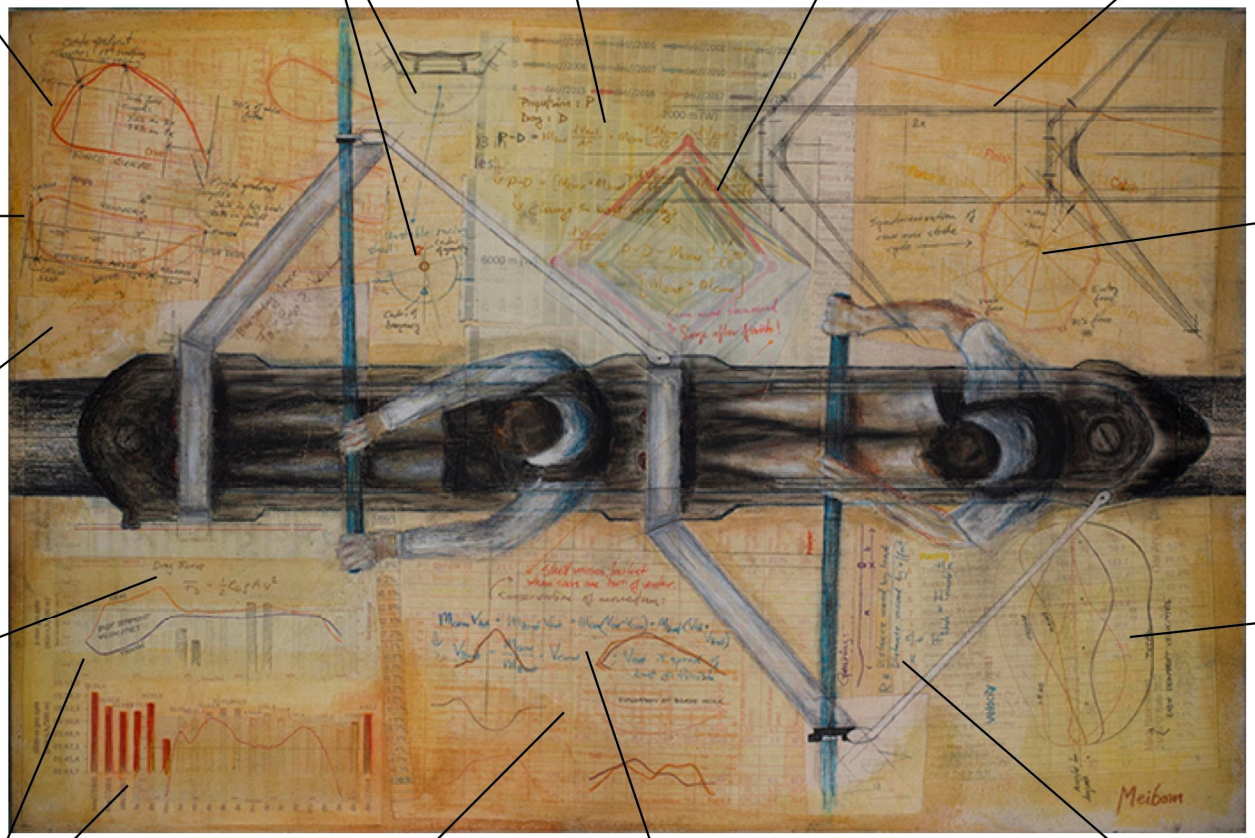

Diagram demonstrating the level of synchronization of the forces over the stroke cycle in double sweep shell

Physical relation between rower power and shell velocity (most efficient to keep constant velocity)

Velocity measurement curves of the rowers body segments and total shell-rower-oar system over the stroke cycle

Expression for drag force on shell

Double sweep crew training split times, boat speed, shell acceleration and rower body segment curves

Curves showing measurements of oar handle, vertical oar angle, shell-roll, handle velocity, shell angle, etc. over the stroke cycle

Expression for conservation of momentum in the shell-crew system illustrating why the shell surges to maximum velocity after the “finish” when the oar blade comes out of the water

Principle of oar “gearing” and the relationship between force on the oar handle and the oar blade