

Supplemental Information

Discriminating fluvial fans and deltas: Channel network morphometrics reflect distinct formative processes

Authors

Luke Gezovich¹, Piret Plink-Björklund¹, Jack Henry²

¹Colorado School of Mines, Geology & Geologic Engineering, 1500 Illinois Street, Golden, CO, 80401

²Rice University, Earth, Environmental and Planetary Sciences, 6100 Main St., Houston, TX, 77005-182

Supplemental Information

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Supplementary Table 1: Statistics Results

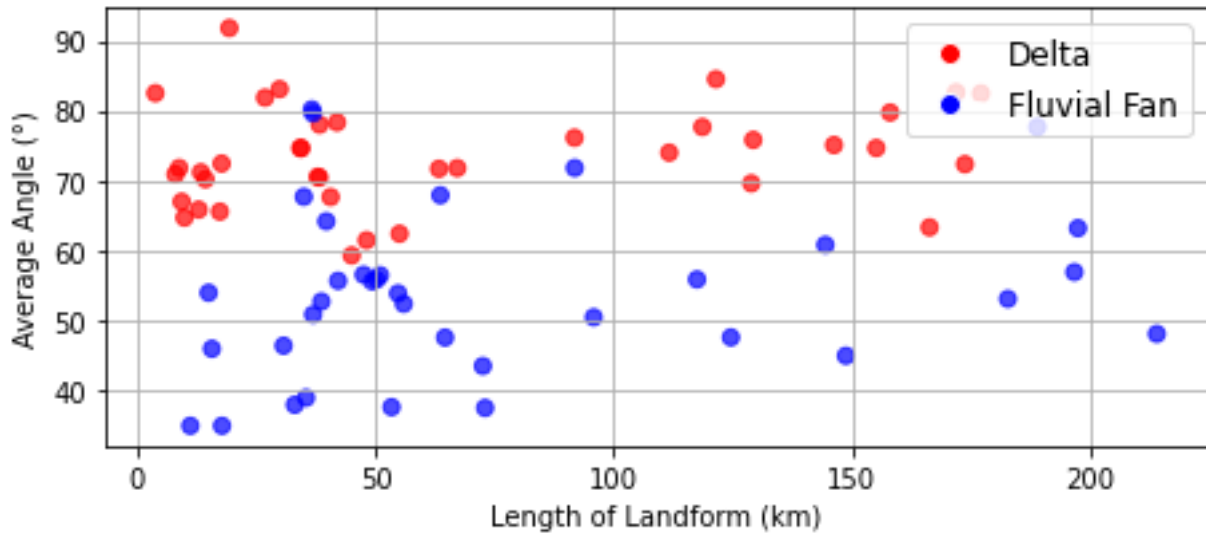
		Normality		Variations	Means	
		Shapiro-Wilk	Kolmogorov-Smirnov	Levene's Test	Independent samples, Welch's, or One-sample T-test	
Interpretation		p = 0; Non-normal		p = 0; Unequal	p = 0; Different	
Angles	Deltas	Delta	p = 0	p = 0	p > 0.05	p = 0
		Fluvial fan	p = 0	p = 0		
	Deltas	River-dominated	p = 0	p = 0	p > 0.05	p > 0.05
		Tide-influenced	p = 0	p = 0		
		Wave-influenced	Omitted due to low sample size (n = 14 < 30)			
		Non-arctic	p = 0	p = 0	p > 0.05	p = 0
		Arctic	p = 0	p = 0		
		Lake	p = 0	p = 0	p > 0.05	p > 0.05
		Ocean	p = 0	p = 0		
		Fluvial Fans	Lake	p = 0	p > 0.05	p > 0.05
	Contributory		p = 0	p > 0.05	p > 0.05	p > 0.05
	Marine		p = 0	p > 0.05	p > 0.05	p > 0.05
	Axial		p > 0.05	p > 0.05	p = 0	p = 0
	Dunes/Desert		p > 0.05	p > 0.05	p > 0.05	p > 0.05
	Playa		p = 0	p > 0.05	p = 0	p > 0.05
	Wetlands		p = 0	p > 0.05	p > 0.05	p > 0.05
Lengths	Delta	Delta	p = 0	p = 0	p = 0	p = 0
		Fluvial fan	p = 0	p = 0		
	Delta Type	River-dominated	p = 0	p = 0	p > 0.05	p > 0.05
		Tide-influenced	p = 0	p = 0	p > 0.05	p > 0.05
		Wave-influenced	p = 0	p = 0	p > 0.05	p > 0.05
	Fluvial Fan Termination Style	Axial	p = 0	p = 0	p = 0	p = 0
		Contributory	p = 0	p = 0	p > 0.05	p > 0.05
		Dunes/Desert	p = 0	p = 0	p = 0	p = 0
		Lake	p = 0	p = 0	p > 0.05	p > 0.05
		Marine	p = 0	p = 0	p = 0	p = 0
		Playa	p = 0	p = 0	p > 0.05	p = 0
		Wetlands	p = 0	p = 0	p = 0	p = 0
	Order	1 st order delta	p = 0	p > 0.05	p = 0	p = 0
		1 st order fluvial fan	p = 0	p = 0		
		2 nd order delta	p = 0	p = 0	p = 0	p = 0
		2 nd order fluvial fan	p = 0	p = 0		
		3 rd order delta	p = 0	p = 0	p = 0	p = 0
		3 rd order fluvial fan	p = 0	p = 0		
		4 th order delta	p = 0	p = 0	p = 0	p = 0
		4 th order fluvial fan	p = 0	p = 0		
5 th order delta		p = 0	p = 0	p = 0	p = 0	
5 th order fluvial fan		p = 0	p = 0			
6 th order delta		p = 0	p = 0	p = 0	p > 0.05	
6 th order fluvial fan		p = 0	p = 0			

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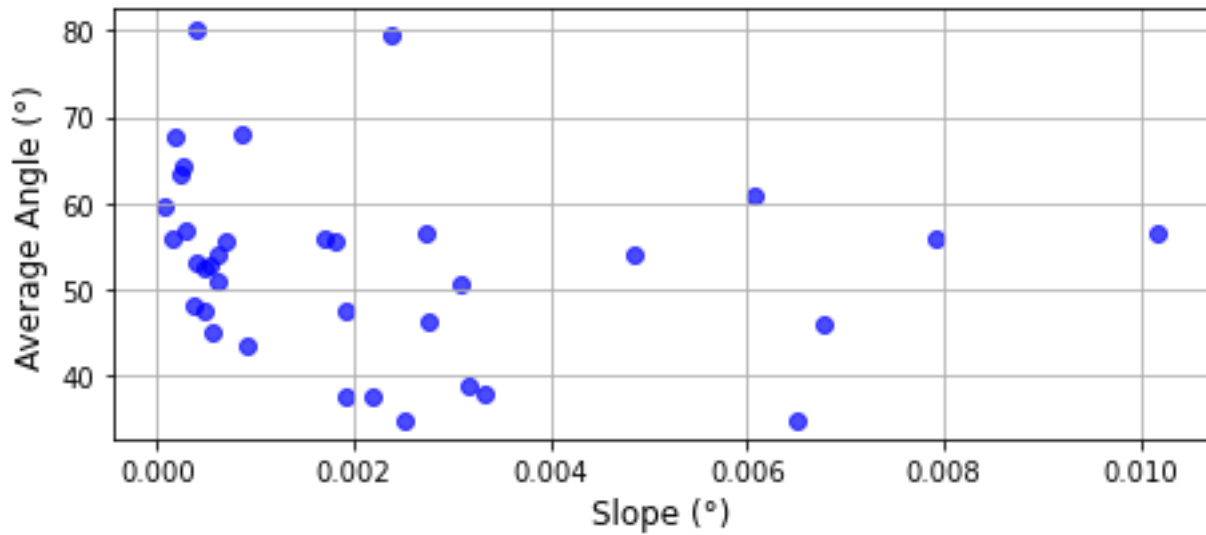
	7 th order delta	p = 0	p = 0	p > 0.05	p > 0.05	
	7 th order fluvial fan	p = 0	p = 0			
	8 th order delta	p = 0	p = 0	p = 0	p = 0	
	8 th order fluvial fan	p = 0	p = 0			
	9 th order delta	p = 0	p = 0	p > 0.05	p > 0.05	
	9 th order fluvial fan	p = 0	p = 0			
	10 th order delta	<i>Omitted due to low sample size (n = 15 < 30)</i>				
	10 th order fluvial fan	<i>Omitted due to low sample size (n = 13 < 30)</i>				
	11 th order delta	<i>Omitted due to low sample size (n = 6 < 30)</i>				
	11 th order fluvial fan	<i>Omitted due to lack of recorded data.</i>				
Widths	Delta widths	p = 0	p = 0	p = 0	p = 0	
	Fluvial fan widths	p = 0	p = 0			
	Delta Type	River-dominated	p = 0	p = 0	p > 0.05	p > 0.05
		Tide-influenced	p = 0	p = 0	p > 0.05	p = 0
		Wave-influenced	p = 0	p = 0	p > 0.05	p = 0
	Fluvial Fan Termination Style	Axial	p = 0	p = 0	p > 0.05	p = 0
		Contributory	p = 0	p = 0	p > 0.05	p > 0.05
		Dunes/Desert	p = 0	p = 0	p = 0	p = 0
		Lake	p = 0	p = 0	p = 0	p > 0.05
		Marine	p = 0	p = 0	p = 0	p = 0
		Playa	p = 0	p = 0	p > 0.05	p > 0.05
		Wetlands	p = 0	p = 0	p > 0.05	p > 0.05
		1 st order delta	p = 0	p > 0.05	p = 0	p = 0
		1 st order fluvial fan	p = 0	p = 0		
	2 nd order delta	p = 0	p = 0	p > 0.05	p = 0	
	2 nd order fluvial fan	p = 0	p = 0			
	3 rd order delta	p = 0	p = 0	p = 0	p = 0	
	3 rd order fluvial fan	p = 0	p = 0			
	4 th order delta	p = 0	p = 0	p = 0	p = 0	
	4 th order fluvial fan	p = 0	p = 0			
	5 th order delta	p = 0	p = 0	p = 0	p = 0	
	5 th order fluvial fan	p = 0	p = 0			
	6 th order delta	p = 0	p = 0	p = 0	p = 0	
	6 th order fluvial fan	p = 0	p = 0			
	7 th order delta	p = 0	p = 0	p > 0.05	p = 0	
	7 th order fluvial fan	p = 0	p > 0.05			
	8 th order delta	p = 0	p = 0	p > 0.05	p = 0	
	8 th order fluvial fan	p = 0	p = 0			
	9 th order delta	p = 0	p = 0	p > 0.05	p > 0.05	
	9 th order fluvial fan	p = 0	p = 0			
	10 th order delta	<i>Omitted due to low sample size (n = 15 < 30)</i>				
	10 th order fluvial fan	<i>Omitted due to low sample size (n = 13 < 30)</i>				
11 th order delta	<i>Omitted due to low sample size (n = 6 < 30)</i>					
11 th order fluvial fan	<i>Omitted due to lack of recorded data.</i>					

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Supplementary Figure 1: Average network angle and length of landform.

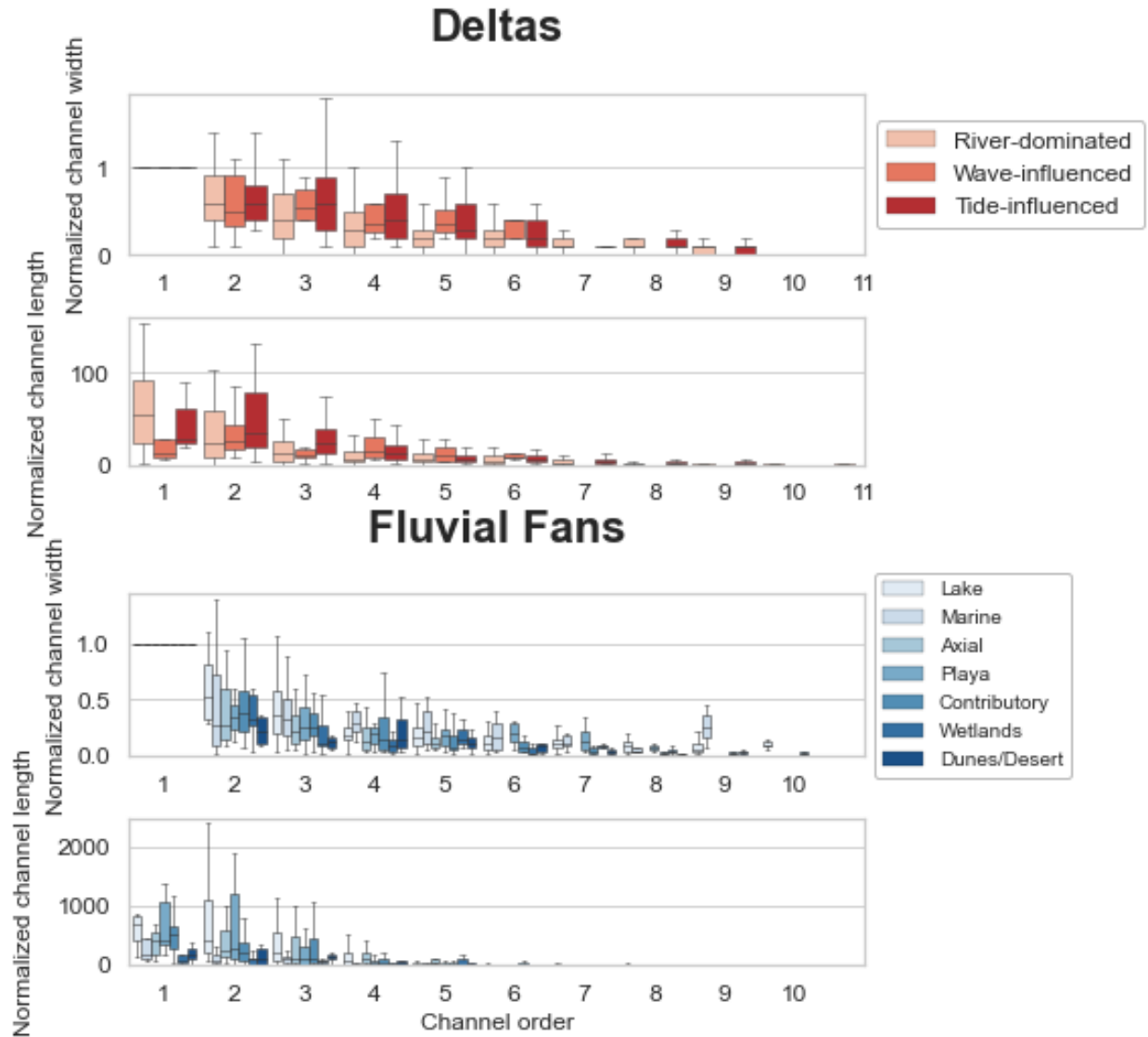


Supplementary Figure 2: Average network angle and slope for fluvial fans.



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Supplementary Figure 3: Normalized channel widths and lengths by order for deltas grouped by process regime and fluvial fans grouped by termination type.



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Supplementary Figure 4: Comparison of local angle measurement ($\theta_l = 102^\circ$) against channel reach-scale angle measurement ($\theta_r = 42^\circ$). Base imagery from Esri's World Imagery basemap (© Esri, Maxar, Earthstar Geographics, and the GIS User Community).

