

Comparison of Asphalt and Concrete Pavement Solar Reflectance

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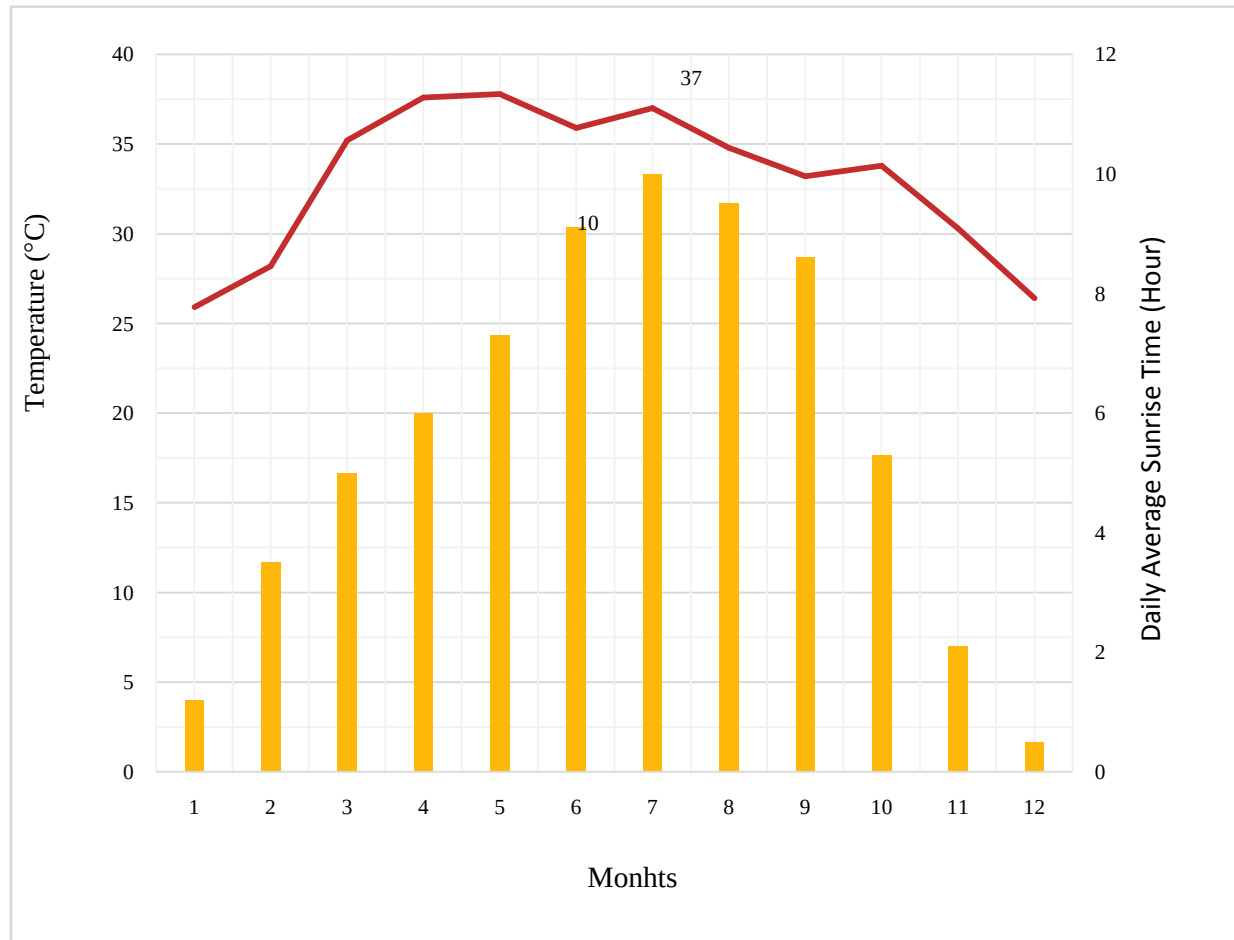


Fig. 4.2 Monthly maximum temperature and the average daily sunlight hours in Trabzon, (MGM, 2016).



(a) (b) (c)



Fig 4.1. (a) High reflected paved concrete pavement, (b) concrete pavement, and (c) asphalt pavement.



Fig.4.1 Single-headed pyranometer (a, c), Data Logger (b, d) (The value on the screen is based on $W.m^{-2}$).

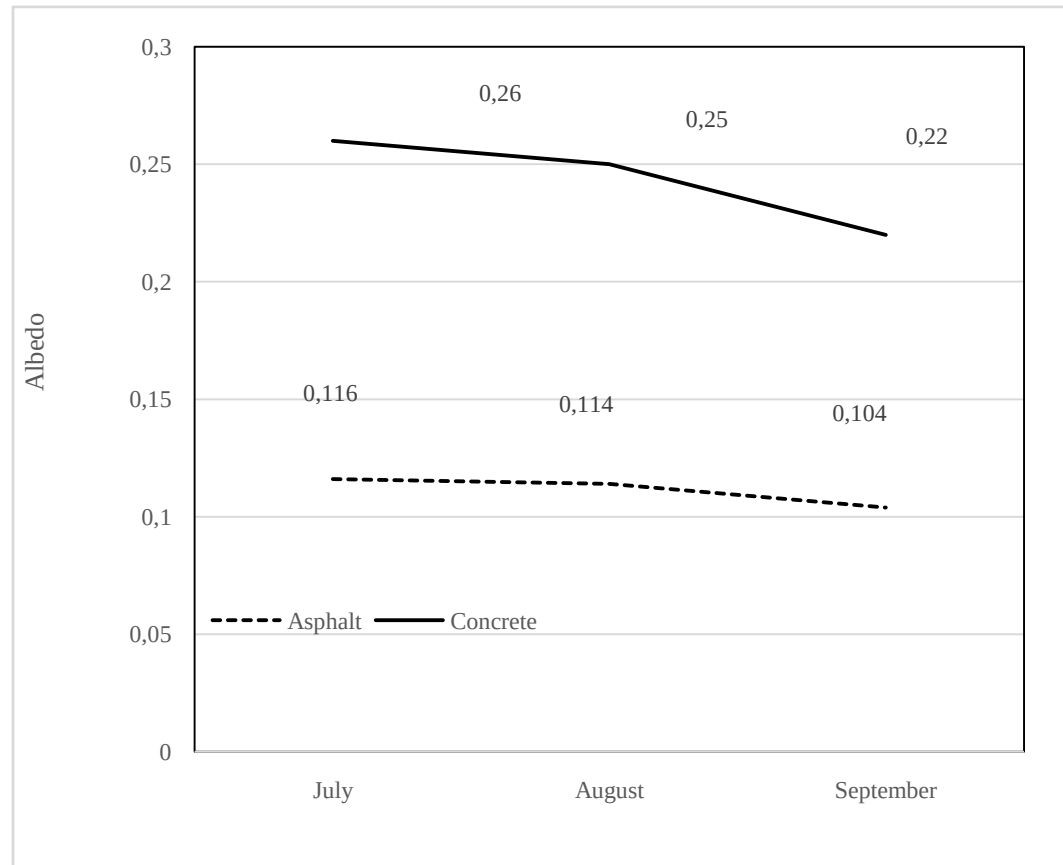


Fig.4.2 Monthly mean albedo values

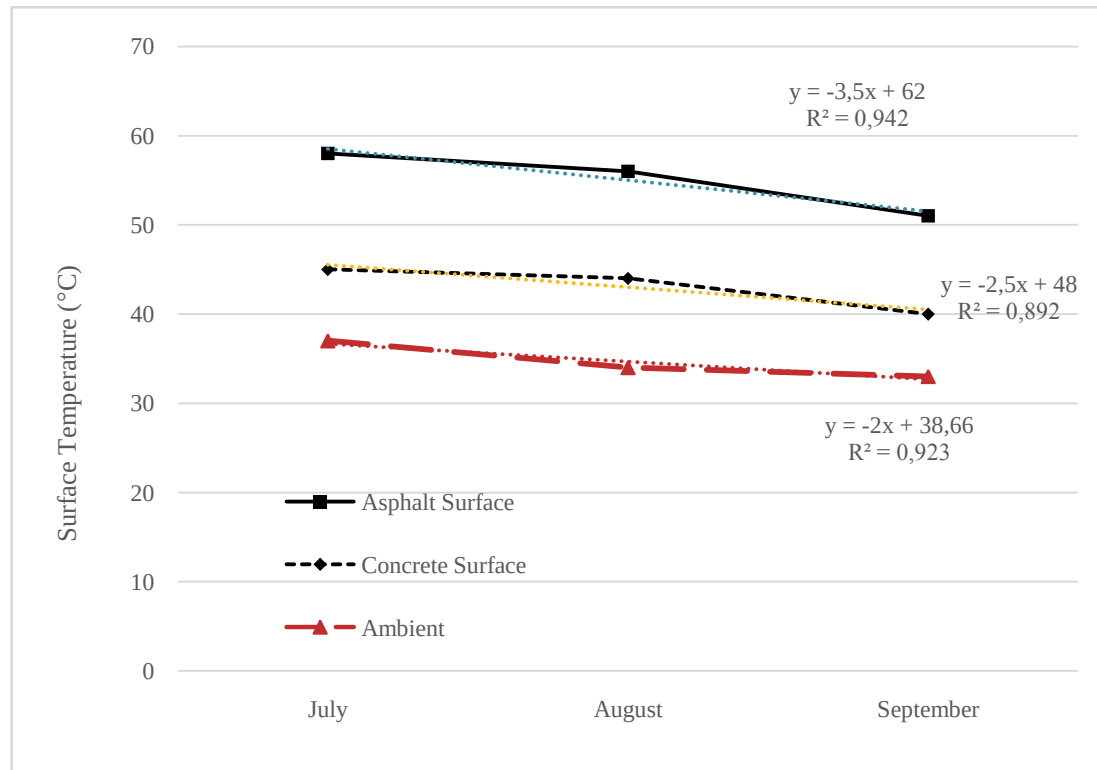


Fig. 4.3. Average monthly maximum surface temperatures of pavements

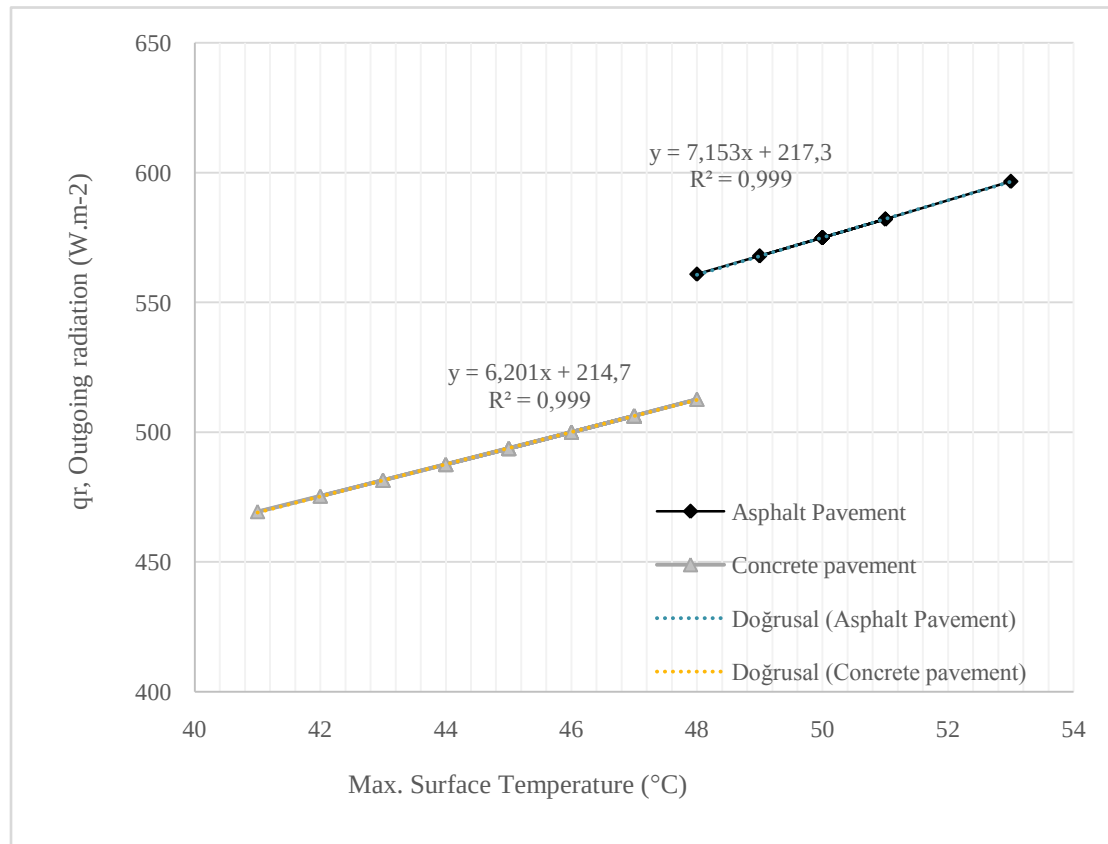


Fig. 4.5 The relationship between outgoing radiation and pavement surface temperatures

Table 4.1 Albedo values of pavements for 30-days

Day	Albedo values of pavement		
	HRP	CP	AP
1.	0.24	0.13	0.05
2.	0.25	0.14	0.06
3.	0.25	0.14	0.05
4.	0.24	0.13	0.06
5.	0.23	0.13	0.06
6.	0.28	0.17	0.07
7.	0.28	0.17	0.09
8.	0.29	0.16	0.09
9.	0.29	0.17	0.09
10.	0.29	0.16	0.09
11.	0.27	0.15	0.06
12.	0.22	0.14	0.05
13.	0.23	0.16	0.05
14.	0.25	0.15	0.07
15.	0.25	0.14	0.05
16.	0.30	0.20	0.06
17.	0.33	0.21	0.08
18.	0.30	0.20	0.08
19.	0.32	0.15	0.09
20.	0.30	0.16	0.09
21.	0.26	0.13	0.05
22.	0.29	0.14	0.07
23.	0.28	0.14	0.05
24.	0.29	0.13	0.05
25.	0.26	0.13	0.07
26.	0.30	0.17	0.07
27.	<u>0.34</u>	<u>0.22</u>	<u>0.09</u>
28.	0.34	0.16	0.09
29.	0.33	0.17	0.07
30.	0.30	0.16	0.06

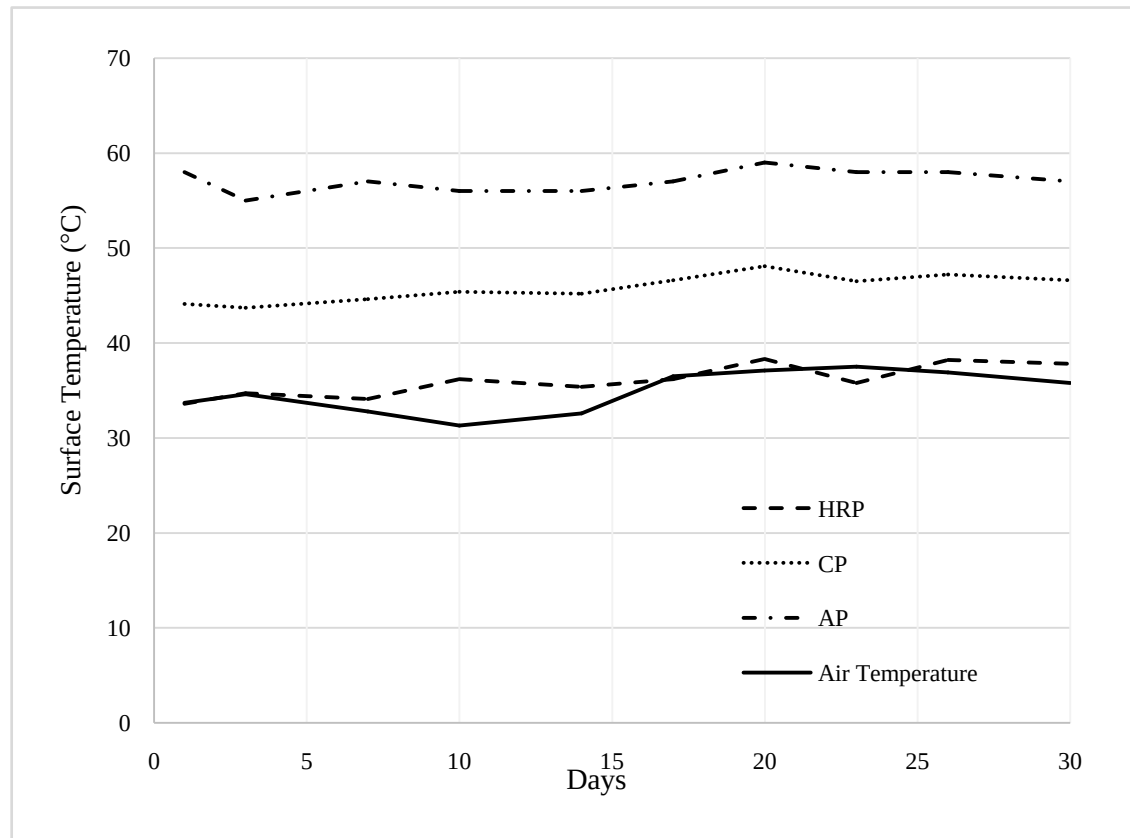
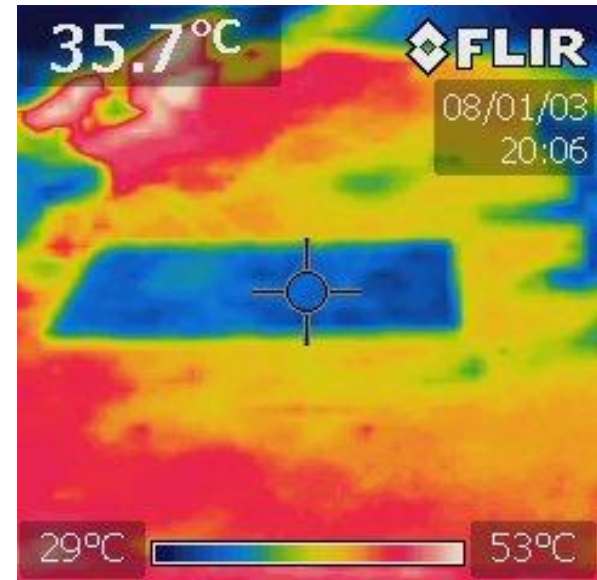


Fig. 4.3 The surface temperature of pavements



(a)



(b)

Fig. 4.4 (a) HRP view, and (b) thermal camera view.

(a)



(b)



Fig.4.2.Photo image of the university campus and asphalt concrete pavements where the works were taken.

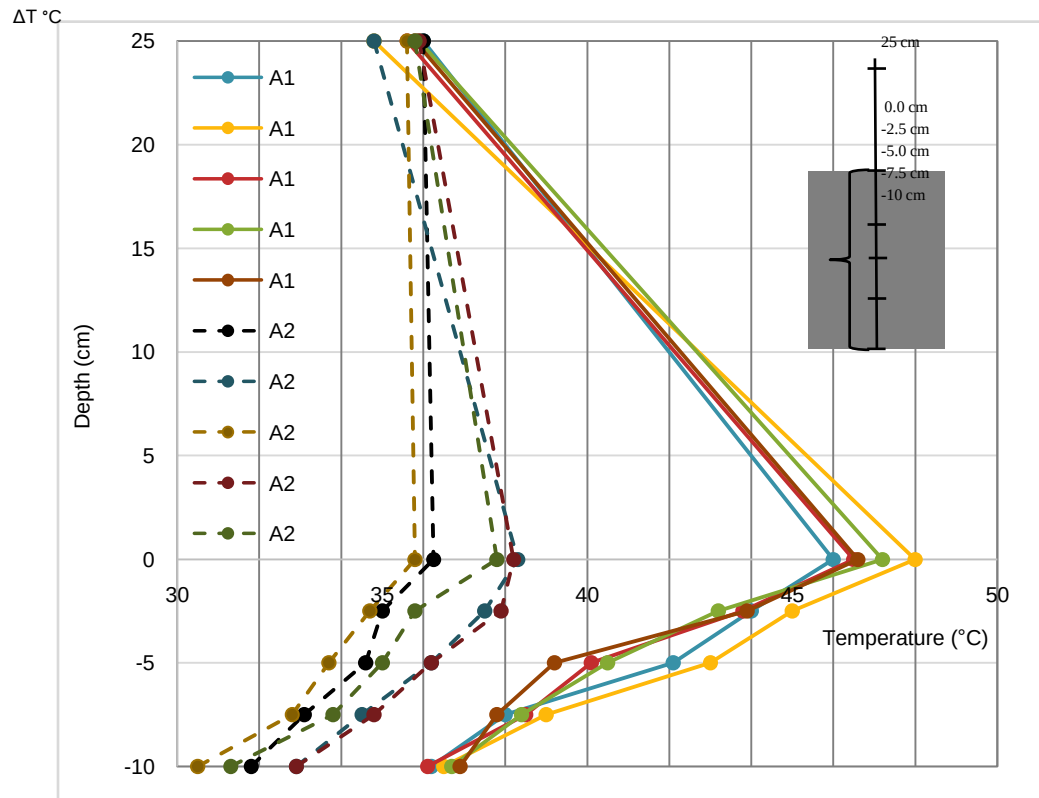
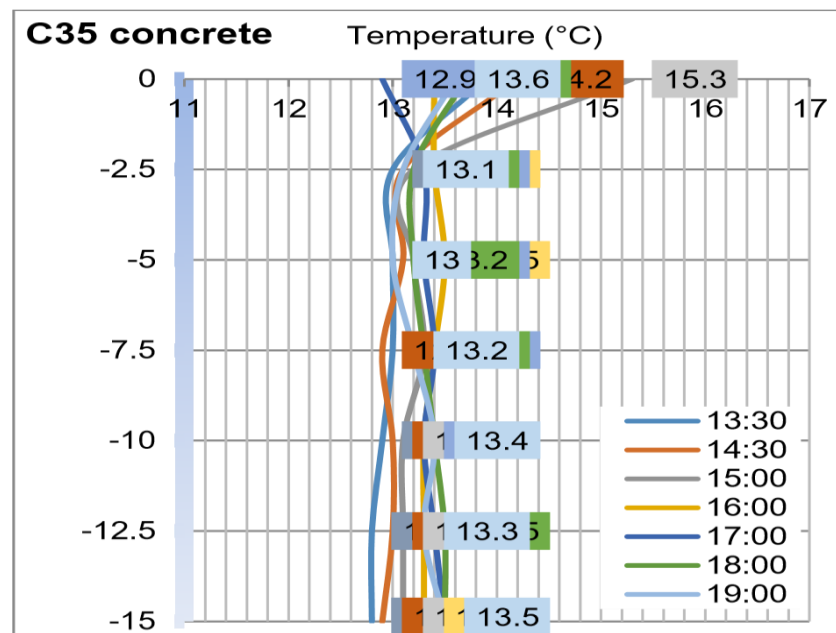
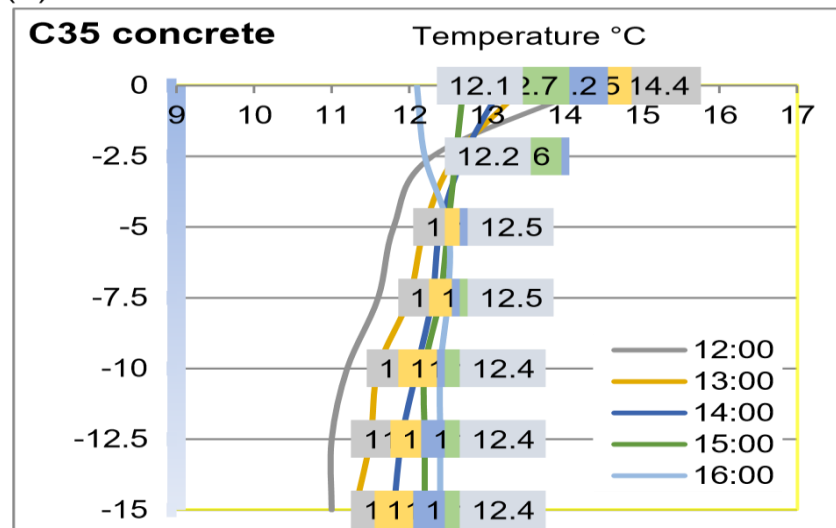


Fig. 4.5 Temperature variation through thickness



(a)



(b)

Fig. 4.5. Concrete pavement temperature variation (a) open to sunlight, (b) shadowed by trees.

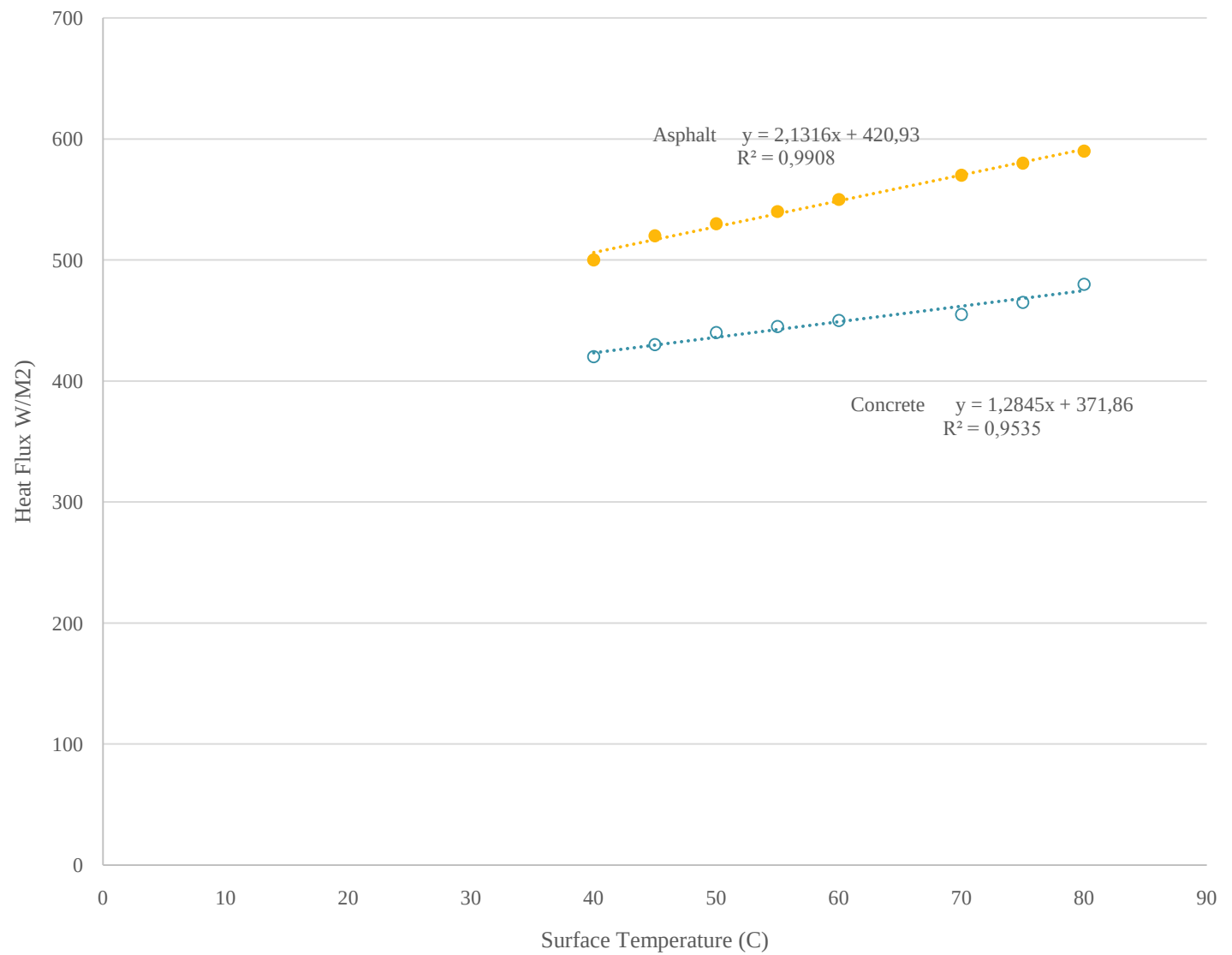


Fig. 4. 6. Heat Flux versus surface temperature.

Derz kesimine sebep olan güneş ışınlarının yansıtmasının azaltılmasına yönelik Albedo çalışması

