

APPENDIX A

RESULT OF NUMERICAL LOCAL NESSELT NUMBER

Table A.1: Numerical data of local Nusselt number at $N=2$ and $Re=100$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	12.92	0.01	14.582	0.01	15.797	0.01	17.539	0.01	19.749
0.1	9.173	0.1	9.719	0.1	11.895	0.1	12.99	0.1	14.635
0.2	5.889	0.2	7.056	0.2	8.332	0.2	9.408	0.2	11.077
0.3	4.908	0.3	5.586	0.3	6.272	0.3	7.056	0.3	8.332
0.4	4.802	0.4	5.292	0.4	5.929	0.4	6.468	0.4	7.355
0.5	4.753	0.5	5.145	0.5	5.684	0.5	6.223	0.5	6.958
0.6	4.655	0.6	5.047	0.6	5.537	0.6	6.027	0.6	6.664
0.7	4.557	0.7	4.949	0.7	5.439	0.7	5.929	0.7	6.517
0.8	4.488	0.8	4.851	0.8	5.341	0.8	5.831	0.8	6.377
0.9	4.41	0.9	4.802	0.9	5.243	0.9	5.733	0.9	6.272
1	4.401	1	4.753	1	5.145	1	5.635	1	6.174

Table A.2: Numerical data of local Nusselt number at $N=2$ and $Re=400$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	13.930	0.01	16.071	0.01	19.610	0.01	19.101	0.01	21.031
0.1	9.042	0.1	11.902	0.1	13.861	0.1	15.234	0.1	17.113
0.2	6.863	0.2	8.134	0.2	9.702	0.2	11.47	0.2	12.747
0.3	5.439	0.3	6.272	0.3	7.154	0.3	8.232	0.3	9.212
0.4	5.145	0.4	5.782	0.4	6.468	0.4	7.256	0.4	7.929
0.5	4.998	0.5	5.537	0.5	6.125	0.5	6.864	0.5	7.439
0.6	4.905	0.6	5.392	0.6	5.929	0.6	6.576	0.6	7.145
0.7	4.802	0.7	5.292	0.7	5.831	0.7	6.423	0.7	6.949
0.8	4.704	0.8	5.194	0.8	5.733	0.8	6.276	0.8	6.802
0.9	4.655	0.9	5.096	0.9	5.635	0.9	6.178	0.9	6.704
1	4.606	1	4.998	1	5.537	1	6.081	1	6.606

Table A.3: Numerical data of local Nusselt number at $N=2$ and $Re=700$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	15.854	0.01	17.892	0.01	18.893	0.01	21.045	0.01	23.532
0.1	10.792	0.1	12.745	0.1	13.982	0.1	15.814	0.1	17.751
0.2	7.546	0.2	8.823	0.2	10.295	0.2	11.762	0.2	13.234
0.3	5.684	0.3	6.762	0.3	7.742	0.3	8.918	0.3	10.193
0.4	5.155	0.4	5.929	0.4	6.664	0.4	7.742	0.4	8.722
0.5	5.008	0.5	5.684	0.5	6.321	0.5	7.154	0.5	8.036
0.6	4.913	0.6	5.537	0.6	6.125	0.6	6.865	0.6	7.644
0.7	4.812	0.7	5.439	0.7	6.027	0.7	6.713	0.7	7.448
0.8	4.714	0.8	5.341	0.8	5.929	0.8	6.566	0.8	7.301
0.9	4.665	0.9	5.243	0.9	5.831	0.9	6.468	0.9	7.203
1	4.616	1	5.145	1	5.733	1	6.372	1	7.105

Table A.4: Numerical data of local Nusselt number at $N=2$ and $Re=1000$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	18.032	0.01	19.503	0.01	20.825	0.01	22.987	0.01	24.937
0.1	12.823	0.1	13.726	0.1	15.112	0.1	16.942	0.1	19.013
0.2	8.826	0.2	10.293	0.2	11.664	0.2	13.035	0.2	14.767
0.3	6.868	0.3	7.848	0.3	9.016	0.3	10.197	0.3	11.662
0.4	5.880	0.4	6.664	0.4	7.546	0.4	8.526	0.4	9.702
0.5	5.341	0.5	6.027	0.5	6.867	0.5	7.742	0.5	8.722
0.6	5.194	0.6	5.831	0.6	6.566	0.6	7.352	0.6	8.134
0.7	5.096	0.7	5.733	0.7	6.419	0.7	7.154	0.7	7.842
0.8	4.998	0.8	5.635	0.8	6.272	0.8	7.007	0.8	7.742
0.9	4.923	0.9	5.537	0.9	6.174	0.9	6.909	0.9	7.644
1	4.802	1	5.439	1	6.076	1	6.811	1	7.546

Table A.5: Numerical data of local Nusselt number at $N=2$ and $Re=1300$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	19.921	0.01	21.105	0.01	22.761	0.01	24.763	0.01	26.880
0.1	13.043	0.1	15.371	0.1	16.843	0.1	18.390	0.1	21.017
0.2	9.846	0.2	11.172	0.2	12.746	0.2	14.41	0.2	16.174
0.3	7.352	0.3	8.624	0.3	9.843	0.3	11.278	0.3	12.742
0.4	6.076	0.4	7.154	0.4	8.338	0.4	9.408	0.4	10.586
0.5	5.586	0.5	6.566	0.5	7.448	0.5	8.335	0.5	9.313
0.6	5.397	0.6	6.272	0.6	7.056	0.6	7.742	0.6	8.526
0.7	5.292	0.7	6.125	0.7	6.869	0.7	7.448	0.7	8.134
0.8	5.194	0.8	5.978	0.8	6.713	0.8	7.353	0.8	8.036
0.9	5.096	0.9	5.888	0.9	6.615	0.9	7.252	0.9	7.938
1	4.998	1	5.782	1	6.517	1	7.154	1	7.840

Table A.6: Numerical data of local Nusselt number at $N=3$ and $Re=100$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	14.121	0.01	15.521	0.01	17.001	0.01	18.795	0.01	20.725
0.1	9.015	0.1	10.742	0.1	12.517	0.1	14.216	0.1	16.288
0.2	6.612	0.2	7.219	0.2	8.521	0.2	9.618	0.2	11.364
0.3	5.702	0.3	5.742	0.3	6.464	0.3	7.232	0.3	8.521
0.4	4.899	0.4	5.398	0.4	6.055	0.4	6.685	0.4	7.491
0.5	4.853	0.5	5.257	0.5	5.869	0.5	6.350	0.5	7.132
0.6	4.756	0.6	5.150	0.6	5.654	0.6	6.158	0.6	6.806
0.7	4.659	0.7	5.059	0.7	5.552	0.7	6.057	0.7	6.652
0.8	4.580	0.8	4.957	0.8	5.458	0.8	5.955	0.8	6.558
0.9	4.481	0.9	4.935	0.9	5.353	0.9	5.853	0.9	6.475
1	4.401	1	4.851	1	5.251	1	5.751	1	6.299

Table A.7: Numerical data of local Nusselt number at $N=3$ and $Re=400$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	15.498	0.01	16.884	0.01	18.674	0.01	20.307	0.01	22.010
0.1	10.940	0.1	12.817	0.1	14.516	0.1	16.332	0.1	18.160
0.2	7.0175	0.2	8.376	0.2	9.958	0.2	11.798	0.2	13.031
0.3	5.552	0.3	6.413	0.3	7.389	0.3	8.435	0.3	9.498
0.4	5.253	0.4	5.943	0.4	6.665	0.4	7.404	0.4	8.091
0.5	5.158	0.5	5.657	0.5	6.254	0.5	7.004	0.5	7.591
0.6	5.002	0.6	5.585	0.6	6.057	0.6	6.704	0.6	7.291
0.7	4.924	0.7	5.470	0.7	5.952	0.7	6.554	0.7	7.091
0.8	4.858	0.8	5.353	0.8	5.858	0.8	6.404	0.8	6.941
0.9	4.753	0.9	5.207	0.9	5.754	0.9	6.304	0.9	6.841
1	4.715	1	5.158	1	5.651	1	6.204	1	6.741

Table A.8: Numerical data of local Nusselt number at $N=3$ and $Re=700$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	17	0.01	18.5	0.01	20	0.01	22	0.01	24
0.1	11.6	0.1	13.5	0.1	15	0.1	16.5	0.1	18.5
0.2	7.7	0.2	9	0.2	10.5	0.2	12	0.2	13.5
0.3	5.8	0.3	6.9	0.3	7.9	0.3	9.1	0.3	10.4
0.4	5.26	0.4	6.05	0.4	6.8	0.4	7.9	0.4	8.9
0.5	5.11	0.5	5.8	0.5	6.45	0.5	7.3	0.5	8.2
0.6	5.01	0.6	5.65	0.6	6.25	0.6	7	0.6	7.8
0.7	4.91	0.7	5.55	0.7	6.15	0.7	6.85	0.7	7.6
0.8	4.81	0.8	5.45	0.8	6.05	0.8	6.7	0.8	7.45
0.9	4.76	0.9	5.35	0.9	5.95	0.9	6.6	0.9	7.35
1	4.71	1	5.25	1	5.85	1	6.5	1	7.25

Table A.9: Numerical data of local Nusselt number at $N=3$ and $Re=1000$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	19.222	0.01	20.501	0.01	22.165	0.01	24.012	0.01	26.231
0.1	13.336	0.1	14.826	0.1	16.537	0.1	18.420	0.1	20.145
0.2	9.095	0.2	10.572	0.2	11.997	0.2	13.365	0.2	15.021
0.3	7.257	0.3	8.023	0.3	9.256	0.3	10.409	0.3	11.943
0.4	6.023	0.4	6.815	0.4	7.798	0.4	8.789	0.4	9.912
0.5	5.451	0.5	6.152	0.5	7.854	0.5	7.946	0.5	8.945
0.6	5.32	0.6	5.956	0.6	6.731	0.6	7.563	0.6	8.386
0.7	5.23	0.7	5.859	0.7	6.553	0.7	7.398	0.7	8.198
0.8	5.147	0.8	5.752	0.8	6.446	0.8	7.158	0.8	7.947
0.9	5.104	0.9	5.654	0.9	6.387	0.9	7.056	0.9	7.832
1	4.910	1	5.555	1	6.243	1	6.952	1	7.713

Table A.10: Numerical data of local Nusselt number at $N=3$ and $Re=1300$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	21.023	0.01	22.301	0.01	24.093	0.01	26.054	0.01	28.094
0.1	14.815	0.1	16.525	0.1	18.153	0.1	19.808	0.1	22.462
0.2	10.152	0.2	11.478	0.2	13.432	0.2	14.734	0.2	16.575
0.3	7.587	0.3	8.853	0.3	10.098	0.3	11.595	0.3	13.640
0.4	6.212	0.4	7.312	0.4	8.513	0.4	9.608	0.4	10.885
0.5	5.798	0.5	6.767	0.5	7.646	0.5	8.526	0.5	9.534
0.6	5.543	0.6	6.498	0.6	7.232	0.6	7.974	0.6	8.709
0.7	5.421	0.7	6.253	0.7	7.092	0.7	7.609	0.7	8.303
0.8	5.312	0.8	6.109	0.8	6.856	0.8	7.570	0.8	8.234
0.9	5.246	0.9	6.125	0.9	6.753	0.9	7.414	0.9	8.183
1	5.185	1	5.986	1	6.651	1	7.332	1	8.121

Table A.11: Numerical data of local Nusselt number at $N=4$ and $Re=100$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	14.585	0.01	15.956	0.01	17.550	0.01	19.470	0.01	21.401
0.1	9.629	0.1	11.001	0.1	12.944	0.1	14.695	0.1	16.583
0.2	6.153	0.2	7.380	0.2	8.713	0.2	9.843	0.2	11.586
0.3	5.125	0.3	5.8425	0.3	6.568	0.3	7.389	0.3	8.713
0.4	5.023	0.4	5.535	0.4	6.201	0.4	6.765	0.4	7.688
0.5	4.971	0.5	5.3813	0.5	5.945	0.5	6.509	0.5	7.278
0.6	4.869	0.6	5.2788	0.6	5.791	0.6	6.304	0.6	6.971
0.7	4.766	0.7	5.1763	0.7	5.689	0.7	6.201	0.7	6.816
0.8	4.695	0.8	5.0738	0.8	5.586	0.8	6.099	0.8	6.663
0.9	4.592	0.9	5.0225	0.9	5.484	0.9	5.996	0.9	6.565
1	4.510	1	4.973	1	5.381	1	5.894	1	6.458

Table A.12: Numerical data of local Nusselt number at $N=4$ and $Re=400$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	15.980	0.01	17.312	0.01	19.010	0.01	20.921	0.01	22.730
0.1	11.52r	0.1	13.102	0.1	14.936	0.1	16.810	0.1	18.685
0.2	7.175	0.2	8.5075	0.2	10.15	0.2	11.996	0.2	13.336
0.3	5.689	0.3	6.560	0.3	7.483	0.3	8.613	0.3	9.635
0.4	5.381	0.4	6.0475	0.4	6.765	0.4	7.589	0.4	8.293
0.5	5.228	0.5	5.7913	0.5	6.406	0.5	7.179	0.5	7.781
0.6	5.125	0.6	5.6375	0.6	6.201	0.6	6.872	0.6	7.473
0.7	5.023	0.7	5.535	0.7	6.099	0.7	6.718	0.7	7.268
0.8	4.928	0.8	5.4325	0.8	5.996	0.8	6.564	0.8	7.115
0.9	4.869	0.9	5.335	0.9	5.894	0.9	6.462	0.9	7.012
1	4.818	1	5.227	1	5.791	1	6.359	1	6.912

Table A.13: Numerical data of local Nusselt number at $N=4$ and $Re=700$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	17.685	0.01	19.003	0.01	20.676	0.01	22.758	0.01	24.876
0.1	11.913	0.1	13.945	0.1	15.718	0.1	17.036	0.1	19.031
0.2	7.893	0.2	9.225	0.2	10.765	0.2	12.343	0.2	13.842
0.3	5.945	0.3	7.0725	0.3	8.098	0.3	9.328	0.3	10.664
0.4	5.392	0.4	6.2013	0.4	6.970	0.4	8.098	0.4	9.123
0.5	5.238	0.5	5.945	0.5	6.611	0.5	7.483	0.5	8.405
0.6	5.135	0.6	5.7913	0.6	6.406	0.6	7.175	0.6	7.995
0.7	5.033	0.7	5.6888	0.7	6.304	0.7	7.021	0.7	7.799
0.8	4.937	0.8	5.5863	0.8	6.201	0.8	6.868	0.8	7.636
0.9	4.879	0.9	5.4838	0.9	6.099	0.9	6.765	0.9	7.534
1	4.828	1	5.3813	1	5.996	1	6.663	1	7.431

Table A.14: Numerical data of local Nusselt number at $N=4$ and $Re=1000$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	19.935	0.01	21.101	0.01	22.798	0.01	24.691	0.01	26.717
0.1	13.583	0.1	15.242	0.1	17.014	0.1	18.646	0.1	20.655
0.2	9.225	0.2	10.763	0.2	12.214	0.2	13.623	0.2	15.381
0.3	7.175	0.3	8.214	0.3	9.438	0.3	10.667	0.3	12.652
0.4	6.157	0.4	6.975	0.4	7.893	0.4	8.918	0.4	10.159
0.5	5.586	0.5	6.308	0.5	7.175	0.5	8.098	0.5	9.123
0.6	5.433	0.6	6.098	0.6	6.868	0.6	7.688	0.6	8.508
0.7	5.331	0.7	5.993	0.7	6.714	0.7	7.483	0.7	8.287
0.8	5.228	0.8	5.893	0.8	6.565	0.8	7.329	0.8	8.098
0.9	5.125	0.9	5.793	0.9	6.458	0.9	7.226	0.9	7.995
1	5.023	1	5.688	1	6.355	1	7.124	1	7.893

Table A.15: Numerical data of local Nusselt number at $N=4$ and $Re=1300$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	21.660	0.01	22.928	0.01	24.821	0.01	26.733	0.01	28.830
0.1	15.238	0.1	16.992	0.1	18.657	0.1	20.3983	0.1	22.697
0.2	10.254	0.2	11.685	0.2	13.338	0.2	15.076	0.2	16.915
0.3	7.688	0.3	9.023	0.3	10.295	0.3	11.793	0.3	13.333
0.4	6.355	0.4	7.4825	0.4	8.713	0.4	9.845	0.4	11.074
0.5	5.843	0.5	6.8675	0.5	7.790	0.5	8.713	0.5	9.738
0.6	5.638	0.6	6.568	0.6	7.382	0.6	8.098	0.6	8.918
0.7	5.535	0.7	6.4063	0.7	7.175	0.7	7.729	0.7	8.508
0.8	5.433	0.8	6.2525	0.8	7.021	0.8	7.688	0.8	8.405
0.9	5.330	0.9	6.150	0.9	6.919	0.9	7.585	0.9	8.303
1	5.228	1	6.075	1	6.816	1	7.483	1	8.287

Table A.16: Numerical data of local Nusselt number at $N=5$ and $Re=100$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	14.809	0.01	16.136	0.01	17.987	0.01	20.010	0.01	22.232
0.1	9.513	0.1	11.219	0.1	13.293	0.1	15.265	0.1	16.438
0.2	6.180	0.2	7.416	0.2	8.755	0.2	9.888	0.2	11.644
0.3	5.157	0.3	5.871	0.3	6.592	0.3	7.416	0.3	8.755
0.4	5.047	0.4	5.562	0.4	6.235	0.4	6.798	0.4	7.725
0.5	4.995	0.5	5.408	0.5	5.94	0.5	6.545	0.5	7.313
0.6	4.895	0.6	5.305	0.6	5.815	0.6	6.335	0.6	7.004
0.7	4.789	0.7	5.202	0.7	5.715	0.7	6.235	0.7	6.859
0.8	4.717	0.8	5.099	0.8	5.615	0.8	6.125	0.8	6.695
0.9	4.614	0.9	5.047	0.9	5.515	0.9	6.025	0.9	6.592
1	4.532	1	4.996	1	5.405	1	5.925	1	6.489

Table A.17: Numerical data of local Nusselt number at $N=5$ and $Re=400$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	16.057	0.01	17.475	0.01	19.323	0.01	21.342	0.01	23.226
0.1	11.435	0.1	13.359	0.1	15.231	0.1	17.503	0.1	18.545
0.2	7.216	0.2	8.549	0.2	10.197	0.2	11.934	0.2	13.397
0.3	5.715	0.3	6.592	0.3	7.519	0.3	8.568	0.3	9.682
0.4	5.407	0.4	6.077	0.4	6.798	0.4	7.551	0.4	8.334
0.5	5.253	0.5	5.824	0.5	6.435	0.5	7.141	0.5	7.819
0.6	5.157	0.6	5.665	0.6	6.231	0.6	6.831	0.6	7.516
0.7	5.047	0.7	5.562	0.7	6.128	0.7	6.681	0.7	7.304
0.8	4.944	0.8	5.459	0.8	6.025	0.8	6.531	0.8	7.149
0.9	4.895	0.9	5.356	0.9	5.922	0.9	6.431	0.9	7.046
1	4.841	1	5.253	1	5.815	1	6.321	1	6.943

Table A.18: Numerical data of local Nusselt number at $N=5$ and $Re=700$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	17.706	0.01	19.259	0.01	21.201	0.01	23.359	0.01	25.686
0.1	12.056	0.1	14.193	0.1	16.010	0.1	17.701	0.1	19.363
0.2	7.931	0.2	9.277	0.2	10.815	0.2	12.36	0.2	13.912
0.3	5.974	0.3	7.107	0.3	8.137	0.3	9.373	0.3	10.711
0.4	5.418	0.4	6.232	0.4	7.004	0.4	8.137	0.4	9.167
0.5	5.263	0.5	5.974	0.5	6.645	0.5	7.519	0.5	8.446
0.6	5.163	0.6	5.824	0.6	6.435	0.6	7.212	0.6	8.034
0.7	5.057	0.7	5.717	0.7	6.335	0.7	7.0555	0.7	7.828
0.8	4.953	0.8	5.614	0.8	6.231	0.8	6.901	0.8	7.674
0.9	4.908	0.9	5.511	0.9	6.125	0.9	6.798	0.9	7.571
1	4.851	1	5.408	1	6.025	1	6.695	1	7.468

Table A.19: Numerical data of local Nusselt number at $N=5$ and $Re=1000$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	19.824	0.01	21.290	0.01	23.103	0.01	25.876	0.01	27.695
0.1	13.798	0.1	15.785	0.1	17.243	0.1	19.212	0.1	21.350
0.2	9.270	0.2	10.820	0.2	12.257	0.2	13.699	0.2	15.454
0.3	7.215	0.3	8.248	0.3	9.476	0.3	10.712	0.3	12.263
0.4	6.188	0.4	7.004	0.4	7.931	0.4	8.961	0.4	10.215
0.5	5.6135	0.5	6.335	0.5	7.218	0.5	8.137	0.5	9.167
0.6	5.459	0.6	6.129	0.6	6.901	0.6	7.725	0.6	8.549
0.7	5.356	0.7	6.026	0.7	6.745	0.7	7.519	0.7	8.244
0.8	5.253	0.8	5.923	0.8	6.592	0.8	7.364	0.8	8.137
0.9	5.158	0.9	5.82	0.9	6.489	0.9	7.261	0.9	8.034
1	5.047	1	5.717	1	6.386	1	7.158	1	7.931

Table A.20: Numerical data of local Nusselt number at $N=5$ and $Re=1300$

Tube 1		Tube 2		Tube 3		Tube 4		Tube 5	
X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu	X/L	Nu
0.01	21.805	0.01	24.095	0.01	27.294	0.01	29.556	0.01	34.021
0.1	15.278	0.1	17.355	0.1	20.083	0.1	24.457	0.1	28.731
0.2	10.331	0.2	12.328	0.2	15.391	0.2	19.122	0.2	23.103
0.3	7.725	0.3	9.432	0.3	12.011	0.3	15.522	0.3	19.547
0.4	6.386	0.4	8.241	0.4	10.509	0.4	13.012	0.4	16.275
0.5	5.871	0.5	7.376	0.5	9.282	0.5	11.511	0.5	14.620
0.6	5.665	0.6	6.842	0.6	8.576	0.6	10.598	0.6	12.761
0.7	5.562	0.7	6.688	0.7	8.133	0.7	9.824	0.7	12.142
0.8	5.459	0.8	6.533	0.8	7.811	0.8	9.341	0.8	11.532
0.9	5.356	0.9	6.437	0.9	7.732	0.9	9.112	0.9	11.841
1	5.253	1	6.327	1	7.612	1	8.976	1	10.544