

**Review on the dissertation work of Artem V. Sinitsa on the proposed thesis:  
«Analytical expressions for a solution of inverse convective heat and moisture  
transfer equations in the frequency domain for layered media terrain» for  
receiving his PhD degree in specialty 8D06103 – «Mathematical and  
Computer Modeling»**

The PhD Candidate Artem V. Sinitsa has completed his dissertation work by achieving all tasks and main goal posed in the beginning of his PhD studies. During the implementation period, Artem used to perform sequential investigations towards the analytical expressions gradual discoveries in sense of inverse analysis problem posed for selected system of differential equations that describe a multi-physical non-stationary phenomenon in both real and frequency-time domains. To achieve the posed goal, the PhD Candidate has virtuously applied various modern methods and unified them into a designed methodology utilized towards accurate determination of key physical and domain-geometrical parameters for multi-layered structures via non-destructive control approach. There were conducted a series of Supervisor – PhD Student meeting during which a set of fruitful observations were made that lead to preparation of several research papers that were further published in highly citable sources that reflects the essentiality level of obtained results.

During the conductance of empirical evaluation of theoretically derived results, Artem has used the real-measured data, processed accordingly in compliance with the designed methodology by homogenization the measured values in terms of variety of posed boundary conditions that also verifies practicality and reliability of the derived epistemology. It should be noted additionally that discovered notions serve as a solid foundation for further potential research both in sense of pure and applied mathematical investigations.

I may conclude that the presented dissertation thesis reflects valuable findings that were formalized in accordance with all necessary provisions and requirements, especially it reflects inviolability of major principles of independence, inner unity, scientific novelty, authenticity, practical value and academic integrity. Thus, the presented dissertation work should be approved for the defense procedure in receiving the PhD degree of Artem V. Sinitsa in specialty 8D06103 – «Mathematical and Computer Modeling».

**PhD Research Supervisor**



(Signature, date)

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