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Hong Kong Laureate Forum Selection Committee

Dear Selection Committee,

I am writing with great enthusiasm to recommend **Akbota Nurpeisova**, a third-year mathematics student at SDU University, for participation in the Hong Kong Laureate Forum. Having taught her Mathematical Physics Equations since September 2024 and currently supervising her research, I can confidently attest to her exceptional mathematical intuition and research potential.

Akbota Nurpeisova earned the **only A** in my rigorous Mathematical Physics Equations course, demonstrating remarkable problem-solving skills that surpassed even graduate-level expectations. Her ability to connect abstract theory with practical applications became particularly evident in our ongoing collaborative work on "*Explicit Green's Functions for Polyharmonic Boundary Value Problems*".

In this project, she achieved a significant breakthrough by deriving **Explicit Green's Functions for the Navier Problem in the Biharmonic Equation**. What makes this accomplishment extraordinary for an undergraduate is how she:

- Mastered advanced techniques in functional analysis and PDE theory independently
- Developed creative approaches to handle non-local boundary conditions
- Demonstrated computational rigor while maintaining physical intuition

Beyond technical skills, Akbota possesses qualities that make her ideal for the Forum:

- **Interdisciplinary mindset:** She naturally connects pure mathematics with engineering applications
- **Resilient curiosity:** When faced with complex tensor calculations, she developed her own visualization method
- **Leadership potential:** Regularly organizes study groups to help peers understand Green's function applications

Her work directly aligns with the Forum's mission to foster cross-generational scientific dialogue. Participation would not only reward her exceptional achievements but also provide crucial inspiration as she prepares for graduate studies - I believe she could become Kazakhstan's first Fields Medal contender in applied analysis.

Please do not hesitate to contact me at nurbek.kakharman@sdu.edu.kz for any additional information. Thank you for considering this outstanding young mathematician.

Warm regards,

Dr. Nurbek Kakharman
Assistant Professor of Mathematics
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