

Ginzburg-Landau Vortices



Filesize: 5.43 MB

Reviews

The most effective book i ever read through. It can be rally fascinating throgh looking at time period. Your lifestyle span will be enhance when you complete looking over this publication.
(Maribel Kerluke)

GINZBURG-LANDAU VORTICES

DOWNLOAD



Book Condition: New. Publisher/Verlag: Springer, Basel | The original motivation of this study comes from the following questions that were mentioned to one of us by H. Matano. Let $G = B^2$. 1. Consider the Ginzburg-Landau functional $E_\varepsilon(u) = \int_G |\nabla u|^2 + \frac{1}{2\varepsilon^2} (|u|^2 - 1)^2$ which is defined for maps $u \in H^1(G; \mathbb{C})$ also identified with $H^1(G; \mathbb{R}^2)$. Fix the boundary condition $u|_{\partial G} = X$ on ∂G and set $H_\varepsilon = \{u \in H^1(G; \mathbb{C}) : u|_{\partial G} = X\}$. It is easy to see that (2) is achieved by some u_ε that is smooth and satisfies the Euler equation in G , $-\Delta u_\varepsilon = \frac{1}{\varepsilon^2} u_\varepsilon (|u_\varepsilon|^2 - 1)$ (3) $\int_G |\nabla u_\varepsilon|^2 \rightarrow \pi$ as $\varepsilon \rightarrow 0$. The maximum principle easily implies (see e.g., F. Bethuel, H. Brezis and F. Helein (2)) that any solution u_ε of (3) satisfies $|u_\varepsilon| \sim 1$ in G . In particular, a subsequence (u_{ε_j}) converges in the $W^{1,2}(G)$ topology to a limit u . | I. Energy estimates for S^1 -valued maps.- 1. An auxiliary linear problem.- 2. Variants of Theorem I.1.- 3. S^1 -valued harmonic maps with prescribed isolated singularities. The canonical harmonic map.- 4. Shrinking holes. Renormalized energy.- II. A lower bound for the energy of S^1 -valued maps on perforated domains.- III. Some basic estimates for u_ε .- 1. Estimates when $G = B^2$ and $g(x) = x/|x|$.- 2. An upper bound for $E_\varepsilon(u_\varepsilon)$.- 3. An upper bound for $\int_G |\nabla u_\varepsilon|^2$ on "good discs".- IV. Towards locating the singularities: bad discs and good discs.- 1. A covering argument.- 2. Modifying the bad discs.- V. An upper bound for the energy of u_ε away from the singularities.- 1. A lower bound for the energy of u_ε near a_j .- 2. Proof of Theorem V.1.- VI. u_ε converges: u_ε is born!.- 1. Proof of...



[Read Ginzburg-Landau Vortices Online](#)



[Download PDF Ginzburg-Landau Vortices](#)

You May Also Like



Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1624-1625)

Proquest, Eebo Editions, United States, 2010. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.EARLY HISTORY OF RELIGION. Imagine holding history in your hands. Now...

[Download eBook »](#)



Sulk: Kind of Strength Comes from Madness v. 3

Top Shelf Productions, United States, 2010. Paperback. Book Condition: New. 160 x 114 mm. Language: English . Brand New Book. Jeffrey Brown explores the world of fantasy and science fiction, and turns it on its...

[Download eBook »](#)



Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1625)

Proquest, Eebo Editions, United States, 2010. Paperback. Book Condition: New. 246 x 189 mm. Language: English Brand New Book ***** Print on Demand *****.EARLY HISTORY OF RELIGION. Imagine holding history in your hands. Now you...

[Download eBook »](#)



Would It Kill You to Stop Doing That?

Book Condition: New. Publisher/Verlag: Little, Brown Book Group | A Modern Guide to Manners | A laugh-out-loud guide to modern manners by acclaimed humorist, author, and Vanity Fair columnist Henry Alford. | A few years...

[Download eBook »](#)



Violet Rose and the Surprise Party

Book Condition: New. Publisher/Verlag: Nosy Crow | With activities, 3D press-out models and over 175 stickers! Plus free games and printables online! | When busy rabbit, Violet Rose, discovers that her friend Lily has a...

[Download eBook »](#)